



ADDIS ABABA UNIVERSITY

COLLEGE OF SOCIAL SCIENCES, ARTS AND HUMANITIES

**CENTER FOR RURAL, REGIONAL AND LOCAL
DEVELOPMENT STUDIES**

Barriers to Primary School Enrollment: A Study on Equitable Access to
Education in Benshangul-Gumuz Regional State of Ethiopia

By Sosina Wondwossen

A Thesis Submitted to the School of Graduate Studies of Addis Ababa University in
Partial Fulfillment of the Requirements for the Degree of Master of Arts in Rural,
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DECLARATION

I, the undersigned, declare that this is my original work, has never been presented at this or any other university, and that all the resources and materials used for the dissertation have been dully acknowledged.

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Abstract

This study examines the barriers to primary school enrollment and attendance in three woredas of Benshangul-Gumuz Regional State: Bilidigilu, Pawe, and Mandura. Although Ethiopia has achieved national progress in education, these areas remain significantly underserved, particularly in girls' participation.

The study adopts a mixed-methods design, using household-level data from UNICEF (n=399) and 30 key informant interviews (KIIs) with parents, educators, and community leaders. A Heckman two-step model was employed to account for selection bias, distinguishing factors influencing initial enrollment from those affecting continued attendance.

Quantitative findings show that school costs, child labor, and child marriage significantly reduce enrollment, while lack of WASH facilities, inadequate classrooms, and language barriers negatively affect attendance. Qualitative data reinforced these patterns, revealing themes of economic vulnerability, low perceived return on education, and cultural norms restricting girls' schooling.

The study concludes that policy responses must integrate targeted household support, infrastructure improvement, and gender-sensitive community engagement. These interventions are essential to advancing inclusive education and achieving SDG 4 in marginalized and conflict-affected settings.

Keywords: Enrollment, Attendance, Gender Barriers, Primary Education, Heckman Model, Inclusive Education, Benshangul-Gumuz

CHAPTER 1:

INTRODUCTION

The chapter presents a background of education in Ethiopia and pays special attention to the challenges found in primary schools in remote and deprived communities. It points out that fair access to education should be treated as an important development priority by countries and serves as a starting point for looking at barriers to enrollment nearer to home. The chapter explains the research problem, which is linked to what is currently missing in the literature and identifies the main objectives and questions for the research. Also, it defines the location, topics, and approaches covered by the research, as well as the practical difficulties that came up during the study period. In this way, the chapter sets up a basis for using evidence to investigate the education issues affecting children in Benshangul-Gumuz Regional State.

1.1 BACKGROUND OF THE STUDY

Education was formally recognized as a fundamental human right under Article 26 of the Universal Declaration of Human Rights in 1948. Since then, education has become a cornerstone of social and economic development, enabling inclusion, resilience, and poverty reduction across diverse global contexts (UNESCO, 2015; World Bank, 2018). The launch of the Sustainable Development Goals (SDGs) in 2015 reaffirmed this global commitment, with SDG 4 promoting inclusive and equitable quality education for all by 2030 (United Nations, 2015). Achieving this goal is widely recognized as essential for advancing health, livelihoods, and individual empowerment (UNESCO, 2021).

Ethiopia has taken substantial policy steps toward universal education. The expansion of free primary schooling and the ongoing implementation of Education Sector Development Programs (ESDPs) have contributed to major improvements in enrollment nationwide (FDRE, 2020). According to the Ministry of Education, the Net Enrollment Rate (NER) for primary schools reached 94% in 2020, indicating meaningful progress (MoE, 2021). However, this aggregate figure masks important geographic and social disparities, particularly in peripheral and underserved regions (World Bank, 2023).

In areas such as Bilidigilu, Pawe, and Mandura woredas within the Benshangul-Gumuz Regional State, access to primary education remains disproportionately limited. National and international reports highlight persistent infrastructure challenges, mobility constraints, and security-related disruptions as significant barriers to school participation (UNICEF, 2018; CSA, 2022; Save the Children, 2023). In particular, concerns around community safety and school accessibility have resulted in the partial closure of approximately 15% of schools in border areas in recent years (OCHA, 2021; World Bank, 2023).

While national averages reflect encouraging trends, the situation in fragile and hard-to-reach communities underscores the need for localized inquiry. Understanding the underlying factors that contribute to educational exclusion in these areas is essential for achieving both national equity goals and Ethiopia's commitments under SDG 4. Problems within a household's finances can hinder a person's opportunity to go to school. In Benshangul-Gumuz, a large majority of the population has difficulties making ends meet, not even for their children's education needs (UNICEF, 2018). For this reason, children are often found involved in farming and income-earning work, a situation that often makes them abandon studies. A study by Fekadu (2021) on Gumuz girls from Mandura shows that poverty and cultural restrictions resulted in girls dropping out of school early, leading to a continuous cycle of poverty and lack of development.

The presence of cultural barriers often restricts people from getting an education. The way society has traditionally views marriage and gender shapes parents' decisions about their daughters' schooling. Family size, the level of household income, and what parents have learned were found by Gurmu and Etana (2011) to be important predictors, because big, financially struggling families rarely help their children continue in school. Among the reasons is that women in Benshangul-Gumuz are less likely to complete their studies, which is reflected in a GPI of 0.85 (MoE, 2023).

While national policies such as the Education Sector Development Program V (ESDP V) and the Sustainable Development Goals (SDG 4) emphasize inclusive and equitable education, implementation challenges and persistent funding gaps remain, particularly in peripheral regions of Ethiopia (FDRE, 2020; UNESCO, 2022). A growing body of literature highlights the role of economic disadvantage, insecurity, and sociocultural norms in contributing to disparities in educational access (MoE, 2021). However, many of these studies provide only a general overview, often focusing on rural Ethiopia without examining the interplay of factors at the regional or woreda

level.

In particular, while researchers such as Fekadu (2021) have acknowledged the challenges that disproportionately affect girls, there remains a limited body of evidence that explores how different structural, economic, and social barriers interact in regions such as Benshangul-Gumuz. Existing studies also tend to treat barriers in isolation, without sufficiently analyzing how they jointly contribute to low enrollment and high dropout rates, especially in underserved and conflict-affected areas (World Bank, 2023).

To address this research gap, the present study adopts a mixed-methods approach to investigate the range and intersection of barriers affecting primary school access and participation in Bilidigilu, Pawe, and Mandura woredas. The study aims to generate locally relevant evidence that can inform policymakers and education planners working to promote inclusive education in fragile regional contexts

This study examines the barriers to primary school participation in Bilidigilu, Pawe, and Mandura woredas of Benshangul-Gumuz Regional State, Ethiopia. It focuses on the intersection of economic hardship, sociocultural norms, and insecurity, which continue to limit access and attendance in underserved areas. By applying a localized, mixed-methods approach, the research contributes to the broader national discourse on educational equity and highlights the need for context-sensitive policy interventions. The findings offer actionable insights for regional education planners and national policymakers seeking to reduce disparities and promote inclusive education in structurally marginalized regions.

1.2 Statement of the Problem

For years, rates of enrollment in the primary schools of Ethiopia's Benshangul-Gumuz region have been noticeably lower among children than in other parts of Ethiopia. It leads to both social and economic problems. Though the majority of children in Ethiopia now go to school, the same is not true for the Benshangul-Gumuz region (CSA, 2022). The large gap between rich and poor signals unfairness in the system and endangers the region's development (World Bank, 2023).

Education in the region is still struggling due to a large number of families living in poverty. Often, due to the circumstances, girls are forced to work instead of attending school (Fekadu, 2021). Rules in society like early marrying of girls limit girls' ability to receive education.

Persistent security concerns and regional instability have disrupted access to education in parts of Benshangul-Gumuz. According to the World Bank (2023), several schools in the region have experienced full or partial closures due to safety-related risks. As a result, many children remain out of school, which contributes to increased educational exclusion, lower literacy, and long-term development constraints. Areas with consistently low attendance often face compounding effects, including limited employment opportunities, early marriage, and reduced community-level economic resilience (Biru et al., 2018).

Although some regions of Ethiopia report higher primary enrollment rates, disparities remain significant in emerging and structurally underserved areas like Benshangul-Gumuz (Beyene & Teshome, 2015; Teshome, 2017). Limited school infrastructure, shortages of trained teachers, and insufficient educational resources continue to challenge the expansion of equitable access in these settings (Kelifa et al., 2017).

Household income, parental education levels, and family size are well-documented factors affecting school attendance (Biru et al., 2018). Moreover, in contexts of prolonged insecurity, the education system often becomes fragile and under-resourced (UNESCO, 2022). While national and regional strategies have focused on addressing poverty, gender inequality, and insecurity, there is still limited localized, empirical evidence on how these factors intersect at the household and school levels in under-researched regions such as Benshangul-Gumuz.

Particularly, few studies have systematically examined how household- and school-level barriers affect enrollment disparities in specific woredas like Pawe, Mandura, and Bilidigilu — areas impacted by displacement, infrastructure challenges, and teacher shortages. This study addresses this knowledge gap by combining quantitative and qualitative data to explore the multi-level barriers to primary school enrollment in these woredas. By doing so, it contributes new, contextualized insights to inform targeted policy interventions.

1.3 Research Objectives

1.3.1 General Objective

The overall objective of this study is to investigate the factors impeding primary school enrollment among children in the weredas of Bilidigilu, Pawe, and Mandura in Benshangul-Gumuz, and to propose context-sensitive intervention strategies that enhance educational access.

1.3.2 Specific Objectives

- To assess how household income, family size, and parental education affect primary school enrollment in Bilidigilu, Pawe, and Mandura woredas.
- To identify household and community-level barriers to school enrollment based on key informant interviews.
- To examine locally feasible stakeholder interventions to improve enrollment in the three study woredas.

1.4 Research Questions

- What are the key socio-economic and structural factors influencing primary school enrollment in Bilidigilu, Pawe, and Mandura woredas of Benshangul-Gumuz?
- How do household and community-level conditions affect decisions around enrolling children in primary education in the study areas?
- How do school-level factors influence attendance among enrolled children in these woredas?

1.5 Significance of the Study

The study helps explain the reasons why children do not get a primary school place in Benshangul-Gumuz. It supplements both the existing literature and government efforts to ensure fair and accessible education by looking at different social levels. Unlike what was done in basic research, this research explores and explains a cluster of challenges all at once. Findings are mainly important for experts and decision-makers involved in the three areas. They offer locally relevant ideas that support constructing better roads, including locals, and ensuring schools are both safe and easy to use (MoE, 2023).

It is also noted that education strategies should correspond with larger goals of poverty

reduction, promoting gender equity, and ensuring social inclusion (UNESCO, 2022). Moreover, the ideas and findings from this study might be usefully applied in other marginalized areas facing educational inequality. The study brings together research, policies, and actions in support of SDG 4: giving quality education to every person (UNESCO, 2021).

1.6 Scope of the Study

This study is limited to investigating the factors that affect primary school enrollment and attendance in three selected woredas of Benshangul-Gumuz Regional State: Bilidigilu, Pawe, and Mandura. The research does not extend to secondary or higher education levels, nor does it assess long-term educational or economic outcomes. Its focus is strictly on barriers to initial enrollment and continued participation at the primary level.

The selection of these three woredas was based on variation in enrollment rates, as identified in official education statistics. Bilidigilu demonstrates relatively higher enrollment compared to Pawe and Mandura, which continue to face persistent structural and social challenges. This contrast allows the study to explore localized differences in educational access within a single regional context.

Due to time, data, and resource constraints, the research is confined to household-level analysis using secondary quantitative data from UNICEF and primary qualitative data collected from 30 key informants. The study specifically focuses on household, community, and school-level factors influencing enrollment, including economic conditions, social norms, and institutional barriers. Broader national policy evaluations or systemic economic modeling are beyond the scope of this research.

1.7 Limitations of the Study

- **Geographic Scope:** The study is limited to three woredas in Benshangul-Gumuz, each with distinct socio-cultural and economic characteristics. As a result, the findings cannot be generalized to other regions with different contexts.
- **Temporal Limitation:** Due to the limited research timeline, the study does not assess long-term outcomes such as student retention, academic progression, or post-enrollment effects.
- **Security-Related Constraints:** Security concerns in certain areas restricted fieldwork in some

communities, which may have affected the breadth of qualitative data collection.

- **Cultural and Social Sensitivity:** Respondents may have withheld or moderated information on sensitive topics, particularly those related to gender, which could influence the depth and reliability of some qualitative findings.
- **Policy Dynamics:** The education policy environment in the region is evolving, which may limit the long-term applicability of certain institutional observations made during the study period.

CHAPTER 2

REVIEW OF RELATED LITERATURES

2.1 Introduction

Reports on primary education show that there are still differences in who can enroll, attend, and finish classes (UNESCO, 2022). The gap between men and women is worst in places where poverty, battles, and cultural obstacles exist (Lewin, 2009). While Ethiopia has raised its national enrollment numbers with programs like the ESDPs (Federal Democratic Republic of Ethiopia, 2020), major disparities can still be found in regions like Benshangul-Gumuz (CSA, 2022; World Bank, 2023). These areas still have many overlapping and economic, cultural, geographic, and institutional barriers that keep many children from going to or finishing primary school (Abuya et al., 2013)..

This chapter reviews some studies that look at the influencing aspects of primary school enrollment, highlighting issues faced by minority populations (Abuya et al., 2013). It makes use of useful theories, research from various countries and regions, and relevant legislative documents to explore the things that block people from getting an education (Lewin, 2009). First, important theories that direct the study are mentioned, and then the main concepts involved in the analysis are explained. The author next looks at empirical studies that have been done in Ethiopia as well as other parts of Sub-Saharan Africa. Thereafter, the text review how societies and governments around the world have dealt with the situation, taking note of how these solutions fit Ethiopia (UNESCO, 2022). At the end of the chapter, the study explains the current research gaps that it aims to tackle.

2.2 Theoretical Literature

Understanding educational exclusion requires drawing on diverse theoretical lenses to capture the complexity of barriers children face. This study adopts four key theories: Human Capital Theory, Educational Inequality Theory, Social Capital Theory, and Intersectional Theory. Each contributes to a multi-dimensional understanding of enrollment challenges in disadvantaged and conflict-affected areas such as Benshangul-Gumuz.

Human Capital Theory, advanced by Schultz (1961) and Becker (1964), views education as an investment that enhances individual productivity and contributes to national development. It predicts that increased access to education improves income and employment outcomes, both for individuals and the state. In Benshangul-Gumuz, however, poor infrastructure, teacher shortages, and household poverty prevent the region from realizing the economic benefits of education (Getachew, 2019; Fekadu, 2021). Children in low-income households, particularly girls, are often forced into labor rather than school attendance, limiting the region's potential for long-term growth.

Educational Inequality Theory emphasizes that education systems often reproduce social inequalities. It explains how disparities in school resources, institutional neglect, and geographic marginalization reinforce existing social stratification (Ali, 2016; Mekonnen, 2017). In Benshangul-Gumuz, the lack of accessible roads, qualified teachers, and safe school environments disproportionately impacts children from remote and underserved areas (Kebede & Andargachew, 2019).

Social Capital Theory, developed by Bourdieu (1986) and Coleman (1988), highlights how networks, community norms, and social values shape educational outcomes. In rural Ethiopian communities, decisions about children's schooling particularly girls' are deeply influenced by gender norms and collective beliefs (Tadesse, 2018; Mekonnen, 2017). While such social structures may reinforce exclusion, they can also be leveraged through community-led interventions to improve enrollment (Tesfaye, 2020).

Intersectional Theory, introduced by Crenshaw (1989), provides a critical framework to understand how multiple forms of identity such as gender, ethnicity, displacement status, disability, and poverty interact to shape experiences of marginalization. Rather than examining these factors in isolation, intersectionality reveals how their overlap creates compounded disadvantages. For example, a girl from a displaced household who lives in a rural area may face layered barriers that differ significantly from those of a boy in an urban setting. Applying intersectional theory in this study allows for a nuanced analysis of how overlapping forms of social exclusion affect children's access to education in the selected woredas of Bilidigilu, Pawe, and Mandura (UNESCO, 2020; Tiruneh, 2017).

Together, these theories offer a comprehensive framework for examining both structural and relational barriers to school enrollment. They also support the need for context-sensitive interventions that address not only economic and infrastructural gaps but also cultural and identity-based dimensions of exclusion.

2.2.1 Conceptual Models of Educational Access

To better understand educational exclusion in Benshangul-Gumuz, this study draws upon several conceptual models that go beyond traditional economic or social theories. These models help frame not only *who* is excluded from education, but also *how*, *when*, and *why* exclusion occurs across different stages of the education system.

One widely recognized model is the Zones of Exclusion, developed by Lewin (2007) under the CREATE initiative. This model outlines six points along the education pathway where children may be excluded from never enrolling at all, to being in school but not learning, or dropping out before acquiring meaningful skills. These zones reflect both access and progression barriers, which are common in Benshangul-Gumuz where conflict, poverty, and gender norms affect school participation. In this study, the model is used to identify when exclusion occurs and how household and institutional factors contribute to it.

Similarly, the Five Dimensions of Exclusion (5DE) Framework developed by UNICEF and the UNESCO Institute for Statistics (2015) offers a comprehensive view by classifying exclusion based on age group and engagement. It includes children not enrolled at the pre-primary, primary, or lower secondary levels, as well as those at risk of dropping out or failing to learn while enrolled. This is especially relevant in the study areas where many children are either formally excluded or experience *silent exclusion*, attending school without acquiring meaningful competencies due to poor infrastructure, language barriers, or a lack of trained teachers.

In addition, the CREATE Analytic Model (Lewin & Sabates, 2011) categorizes barriers at the household, school, and system levels. This framework supports the study's mixed-methods approach by offering a structure to analyze how economic hardship, poor school conditions, and weak policy implementation intersect to influence enrollment.

To complement these education-specific models, the study also references Tomaševski's "Four A's" framework (2001), which evaluates education systems based on Availability, Accessibility, Acceptability, and Adaptability. This rights-based model aligns with Ethiopia's commitment to Sustainable Development Goal 4 and the Education Sector Development Program, especially in addressing the needs of marginalized groups in under-resourced regions.

Although originally developed outside the field of education, Bronfenbrenner's Ecological Systems Theory (1979) is also relevant, as it highlights how learning outcomes are shaped by interactions across multiple levels from family and community to national policies and cultural norms. This approach helps explain how broader societal structures affect school access and outcomes for children in Benshangul-Gumuz.

Finally, this study integrates intersectional theory (Crenshaw, 1989) to deepen the analysis of exclusion. Intersectionality recognizes that barriers are not experienced equally across all groups rather, factors such as gender, ethnicity, displacement, disability, and poverty intersect to produce compounded disadvantages. For example, a displaced girl with a disability may face distinct and layered challenges compared to other children. By applying an intersectional lens, the study accounts for these overlapping identities and examines how different forms of exclusion reinforce one another across the education pathway.

Together, these conceptual models provide a multi-layered and dynamic framework for understanding exclusion in education not just in terms of access, but also participation, progression, and learning outcomes. This is essential for diagnosing the complex barriers faced in Benshangul-Gumuz and for designing context-specific, equity-focused interventions.

2.2.2 Definition of Key Concepts

This part explains the main terms used in this study so that concepts are easy to understand. Since schools face many kinds of challenges, the definitions are based on both academic research and the reality in Benshangul-Gumuz.

It means that all children, regardless of their situation, should be given equal

opportunities in education. Making everyone equal in school is not the goal; instead, equity tries to accommodate and involve groups that need more help (Practice BC, 2023). Marginalization describes the ways in which some groups are cut off from basic resources and chances in life. In this region, this refers to ethnic minorities, people who live off farming or livestock, people who have been displaced inside the country, and girls who face norms discouraging them from pursuing an education (United Way National Capital Area, 2023).

Enrollement barriers - Things like poverty, family issues, and location can keep children from registering and continuing in primary school. Examples can be found in direct costs like school supplies and indirect costs like losing potential income from working, as well as school-related issues such as a lack of teachers, wide walking paths, and dangerous conditions at or near school (INEE, 2023).

It refers to making sure that educational resources and results are handed out equally. The main goal is to even out the opportunities for disadvantaged communities to prosper in education (Practice BC, 2023). These meanings lay the foundation for the study's methodology and influence both the analysis of information and the final recommendations.

2.3 Empirical review

Previous researches, the determinants of school enrollment have been investigated with special reference to Ethiopia and other countries. There is a wide range of research methods from survey to case studies, which has given a broad perspective of the factors that determine enrollment.

In Ethiopia, Alemseged (2016) analyzed policies of government on enrolment of primary school students focusing on systematic inequalities and policy deficits. Beyene and Teshome (2015) also emphasized the economic aspects, and the role of economic factors in educational participation in rural schools in Doba District, Oromia Region. In the same manner, Biru et al. (2018) also examined the effects of household wealth and parental education on enrollment in Benshangul- Gumuz; there are statistically significant relations between economic status and education.

Globally, Abuya, Onsomu, and Moore (2013) focused on the social and economic marginalization of poor urban girls in Kenya to education. Lewin (2009) offered a regional perspective and described

trends of educational enrolment in sub-Saharan Africa, the barriers of poverty, distance and system failures.

Converging Findings

Socio-economic factors are well understood to be key drivers of enrolment in primary school. In their cross-sectional study conducted in Benshangul-Gumuz Ethiopia, Biru et al. (2018) showed that school attendance was strongly associated with household wealth and parental education levels. Likewise, Schultz's (1961) Human Capital Theory supports the view of education as investment which depends on family capital. This view is in tandem with Abuya et al. (2013) who noted that poverty hinders education and leads to exclusion of the next generation of girls in Kenya.

Parent education is always revealed as one of the key determinants of school enrollment. Research conducted by Beyene and Teshome (2015) and Kelifa et al. (2017) show that parents with better education are more likely to give importance to the education of their children and hence are more likely to ensure their children enroll in school. According to Maddala and Sebsibie (2015).

Cultural and community standards also have a great influence on the education opportunity of the people. Habtamu et al. (2015) pointed out cultural beliefs as a significant factor since the culture does not encourage education especially for females. In the same vein, Kelifa et al. (2017) observed that in Benshangul-Gumuz, community perception plays a significant role in determining education attitude because the influence of socio cultural factors is a global phenomena.

Another common reason listed is the issue of closeness to schools and other facilities. Distance to schools has been raised again and again, as Kebede and Andargachew (2019) pointed out the problems faced by children in far-flung regions of Ethiopia. Similar conclusions in rural Kenya (Lewin, 2009) again reveal that insufficient infrastructure bears the brunt of the burden on the vulnerable.

Diverging Findings

Regional and contextual differences play a tremendous role in determining the level of barriers to primary school enrollment. At the national level, Alemseged (2016) points to systematic policy deficits while at the regional level, localized studies like Haregewoin (2012) in Harari show unique urban features like overcrowded classes and lack of teacher aid. These differences clearly mean that solutions should be sought at the regional level in accordance with local conditions.

In Kenya for instance, Abuya et al. (2013) are very clear that poverty enhances the odds of girls not

going to school in urban areas. On the other hand, Ethiopian studies including Biru et al., (2018) offers broader view without sex disaggregated analysis, hence there is a research gap on how cultural practices negatively affect girls.

Policy effectiveness and policy enforcement also have large differences. While national frameworks are criticized for inadequate coverage (Alemseged, 2016), community-based efforts such as in Oromia (Teshome, 2017) demonstrate increase in enrolment. This has something to do with the fact that policy effects are mixed depending on the governance capacity as well as participation of the locals.

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2.4 Conceptual framework

School enrollment is a complex issue influenced by a variety of factors. This conceptual framework explores four primary categories of independent variables that impact the dependent variable, school enrollment.

Socioeconomic Factors can have a rather profound influence on education for children. Parents may not afford school fees, uniforms, and other requirements; hence this makes to be grouped under poverty-stricken families. Educational attainment of parents determines the dreams of the children and the capacity to support the dreams through schooling. Most of the family income is used to finance children's education needs, such as fees, books, and uniforms, where there is enough money to support the family. Remunerative work vacancies, especially among rural communities, are scarce, making families engage their children in labor to add to the family's income, thus limiting the time the child spends in

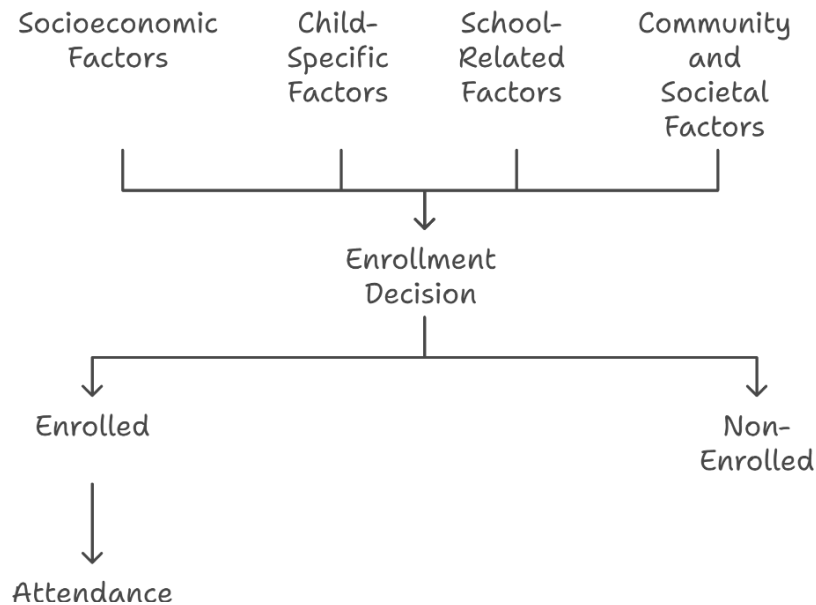
school (Biru et al., 2018; Maddala & Sebsibie, 2015).

Child-Specific Factors also contribute significantly, as earlier noted. Some of the factors that may make a child miss school include poor health, the child may be sickly, or the child may be suffering from conditions such as malnutrition or chronic diseases that may affect his or her ability to attend school on a regular basis. Some of the challenges that disabled children experience include a lack of schools for disabled children and few support services that are offered. Child marriage and adolescent marriage, especially for the female child, are likely to drop out of school and be seen as less capable of attaining employment in the future (Fekadu, 2021; UNICEF, 2023). Forced labor, and especially working under hazardous conditions, denies children the opportunity to attend school.

School-related factors are important in the learning process. Teaching and instruction have been found to be some of the most important factors that affect students learning and motivation. Facets like the building, furniture, such as writing desks and benches, books, and hygiene structures like washrooms are crucial in school. This paper aims to show that a well-chosen and interesting curriculum can positively influence students and advance learning. A safe environment is one that all students, teachers, and staff should consider important when attending school (UNICEF, 2018; Tadesse, 2018).

Community and societal factors determine education. In this case, cultural beliefs in as much as promoting education may hamper enrollment, especially for girls. Culture and tradition with regard to gender and education affect educational choices, especially of girls. Access to proper health care services will enhance child health, decrease school truancy, and enhance performance (Gurmu & Etana, 2011; Kelifa et al., 2017). In regions characterized by violence, children may be afraid to go to school, or they have to work to earn their bread (Kebede & Andargachew, 2019).

Factors Influencing Enrollment and Attendance



Source: Developed by the researcher from the literature review

2.5 Related Studies in Ethiopia

Some studies have examined the determinants of school enrollment in Ethiopia, particularly in rural and economically disadvantaged areas (Alemseged 2016, Beyene and Teshome 2015, Fekadu 2021, Biru et al. 2018, Kebede and Andargachew 2019). These investigations consistently highlight a set of structural barriers, many of which are particularly pronounced in Benshangul-Gumuz Regional State. Literature employs diverse methodological approaches, including household surveys, econometric analysis, and qualitative research, to provide a comprehensive understanding of the enrollment crisis.

Alemseged (2016) conducted a policy-focused study, revealing that the curriculum implemented in Ethiopian schools does not adequately reflect the lived experiences of children in underdeveloped regions. He argued that while European Union-funded

programs aim to promote equitable access to education, their effectiveness is hindered in areas where infrastructure is inadequate and local governance lacks sufficient support. Consequently, he emphasized the need for regionally tailored policies that account for the unique cultural and socioeconomic characteristics of each locality.

Similarly, Beyene and Teshome (2015) investigated the economic determinants of school enrollment, their findings established a direct correlation between household income, parental occupation, and asset ownership with school enrollment rates. They further identified that transportation costs, food insecurity, and the loss of child labor particularly in female-headed households serve as significant impediments to children's access to education.

These studies collectively underscore the multifaceted nature of enrollment disparities, necessitating context-sensitive policy interventions to address economic constraints, infrastructural deficiencies, and sociocultural barriers to education.

Fekadu (2021) concentrated his study on the Woreda of Mandura, looking at why and how Gumuz girls attend school. His research revealed that starting families at a young age, people's ideas about women's responsibilities, and being mostly responsible for household tasks greatly cut down school participation. The research brought out that insufficient school facilities, with no separated sanitation for girls, play a part in girls not coming to school or quitting.

Biru et al. (2018) analyzed household data from Benshangul-Gumuz and discovered that the amount of education parents have, mainly the mothers, greatly affects which children are enrolled in school. Kids whose mothers did not finish their schooling were much less likely to go to school, which is also found in other places. They pointed out that teaching adults and sensitizing communities is necessary to help students stay in school for a long time.

The study by Kebede and Andargachew (2019) highlighted that the distance to schools and problems with reaching them are the biggest barriers for children from untouched areas of Ethiopia. Since Benshangul-Gumuz has rough terrain, students must travel many miles on foot to reach a school.

Several similar ideas are found in many of these studies. The role of parents' education

and income, how beliefs and roles are set by culture and gender, and the lack of proper school buildings and support in deprived communities. Thus, the study can be applied to Bilidigilu, Pawe, and Mandura woredas to learn lessons from them and see what is unique to the area.

2.6 Policy Frameworks and Practices

Access to education has increased dramatically around the world, but inequalities remain, particularly in low-income and conflict-affected areas. (GLOBAL EYE)— An estimated 59 million children of primary school age (aged 6 to 11) are still missing out on school, more than half of whom live in Sub-Saharan Africa, stated the UNESCO Global Education Monitoring Report (2022). These numbers are indicative not only of economic disadvantages, but of systemic disparities in educational planning, resourcing and inclusion.

One of the most relevant global policy frameworks—Sustainable Development Goal 4 (SDG 4) is dedicated to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.” Despite the resources and global focus around the SDG agenda, the on-the-ground situation in many emerging economies remains the same. According to the World Bank (2020), there are four key factors behind global exclusion from education: poverty, gender inequality, conflict, and weak institutional governance. These dimensions often overlap, deepening the vulnerabilities of children in regions like Benshangul-Gumuz.

The Global Partnership for Education (GPE, 2021) has also emphasized the need for “leaving no one behind,” a principle that demands targeted action for disadvantaged populations. GPE-supported research has shown that in fragile states, children are twice as likely to be out of school as those in stable environments. Such findings underscore the importance of conflict-sensitive and equity-driven education programming.

International experience has also demonstrated the power of intersectoral approaches to enhance school enrollment. For example, Brazil’s Bolsa Família program (Glewwe & Kassouf, 2012), which links cash transfers to school attendance and health check-ups, significantly improved education access among the poor. Similarly, India’s midday meal scheme has been shown to increase enrollment and attendance while also addressing

child malnutrition (Drèze & Goyal, 2003).

Technological innovation has become another global trend in addressing educational exclusion. Digital platforms such as UNICEF’s Learning Passport—a cloud-based curriculum platform—have been deployed to reach children in remote and crisis-affected settings, especially during the COVID-19 pandemic. While such tools hold promise, their success depends on internet access, teacher capacity, and supportive infrastructure, which remain limited in places like Benshangul-Gumuz.

Despite global advances, universal education remains elusive for many. The literature consistently calls for more inclusive policies, localized interventions, and greater political commitment to marginalized populations. These global lessons provide a valuable framework for interpreting and designing context-specific responses in Ethiopia’s underserved regions.

2.7 Research Gaps

Although considerable research has been undertaken on barriers to education access in Ethiopia and across Sub-Saharan Africa, several critical gaps remain—particularly in relation to marginalized and conflict-affected regions like Benshangul-Gumuz. The existing literature tends to address school enrollment from isolated perspectives—focusing on economic, cultural, or infrastructural factors in a segmented manner. However, few studies have applied a comprehensive and intersectional framework to understand how these barriers co-exist and reinforce one another, especially in rural, ethnically diverse, and underdeveloped regions (Crenshaw, 1989)

First, empirical evidence on the cumulative effects of conflict, poverty, and cultural practices in suppressing school enrollment remains limited. While studies such as those by Biru et al. (2018) and Fekadu (2021) shed light on economic and cultural dimensions, they often stop short of investigating how these factors interact dynamically to exclude children from education. Furthermore, very few studies include variables such as school infrastructure quality, community norms, and parental literacy in the same model creating a fragmented understanding of the problem. This critique is supported by Gurm and Etana (2011) who emphasized that large poor households with limited parental education are less likely to enroll children in school.

The use of greater econometric methods such as the Heckman selection model, to address issues caused by selection bias in studies on school enrollment is still not common in the context of

Ethiopia (Maddala, 1983). Many statistical tools, including linear regression and cross-tabulations, could hide the significant reasons why students are not enrolled. Due to this gap in methods, policymakers struggle to plan effective measures that address the real root causes of exclusion.

Moreover, while education policies promote equal opportunities across regions, there is a lack of research at the local level in Bilidigilu, Pawe and Mandura. The enrollment rates in these areas vary widely, yet studies haven't thoroughly investigated the specific reasons behind this variation in the local communities. As a consequence, overarching averages still hide large inequalities in student achievement and how resources are distributed. This aligns with critiques in national evaluations of ESDP V and SDG 4 implementation in emerging regions (World Bank, 2023; MoE, 2021).

Studies tend to overlook the subjective aspects of educational exclusion such as fear, dreaming about the future, the bad reputation of certain communities and shared cultural beliefs. The majority of studies use numbers like student enrollment or dropout percentages and do not examine the experiences of those who attend schools. It does not clearly explain how households and communities respond to or challenge educational exclusion. This gap in qualitative insights has been raised by UNICEF (2022) in its work on marginalized learners.

While details of global and national policies such as the SDGs, GEQIP and ESDP V can be found, there is not much information on how they work in emerging regions. Assessing this is difficult because there is a lack of research about how these policies were noticed and reached people in marginalized areas like Benshangul-Gumuz (UNESCO, 2020; MoE, 2021). Without local analysis, it is hard to judge if national strategies are suitable for different areas.

Dealing with these gaps in research helps ensure that education programs are created inclusively, sustainably and in ways that suit each setting. The study addresses these points by using a mixed-method approach that includes descriptive statistics as well as the Heckman selection model and focusing on woreda-level dynamics in three distinct districts of Benshangul-Gumuz (Creswell & Plano Clark, 2018). It also aims to integrate quantitative analysis with policy critique and local context, offering practical recommendations grounded in lived realities.

CHAPTER 3

3.1 RESEARCH DESIGN AND METHODOLOGY

This section outlines the procedures employed to examine the barriers to primary school enrollment in Benshangul-Gumuz Regional State. To ensure that the findings reflect both measurable patterns and lived community experiences, the study adopted a mixed-methods design, integrating quantitative analysis with qualitative insights. This approach enabled a more comprehensive understanding of enrollment dynamics by combining statistical evidence with context-rich stakeholder perspectives.

The study examines three selected weredas Bilidigilu, Pawe, and Mandura which reflect diverse enrollment rates and socio-geographic contexts. This chapter describes the research design, study area, sources and methods of data collection, sampling techniques, data analysis procedures, and ethical considerations.

3.2 DESCRIPTION OF THE STUDY AREA

This study was conducted in the Benshangul-Gumuz Regional State (BGRS), one of the nine regional states in western Ethiopia. BGRS is bordered by the Amhara Region to the north, Oromia Region to the south and southeast, and the Republic of Sudan to the west. Covering an area of approximately 50,000 square kilometers, the region is characterized by dense vegetation, hills, and lowland terrain. The population is predominantly rural, with most households engaged in subsistence agriculture and small-scale livestock farming (MoFED, 2020; UN OCHA, 2017).

Benshangul-Gumuz Regional State is one of Ethiopia's nine regional states, located in the western part of the country. It shares borders with the Amhara Region to the north and northeast, Oromia Region to the south and southeast, and the Republic of Sudan to the west. The region covers approximately 50,000 square kilometers and is characterized by diverse landscapes, including hills, lowlands, and dense vegetation. Most of the population resides in rural areas and depends primarily on small-scale agriculture and livestock rearing for their livelihoods (MoFED, 2020; UN OCHA, 2017).

Administratively, the region is divided into three zones and 20 woredas (districts). According to the Central Statistical Agency (CSA, 2022), Benshangul-Gumuz has a population exceeding 1.2 million. The region is home to multiple ethnic groups, including the Gumuz, Berta, Mao, and Komo, along with

highland settlers from the Amhara and Oromo communities. While this diversity contributes to cultural richness, it has also led to recurring tensions and displacement in some areas.

Despite ongoing government efforts to expand basic services, Benshangul-Gumuz remains one of the least developed regions in Ethiopia. The area faces severe infrastructure challenges, including poor road access, limited electricity and clean water supply, and underfunded public services—particularly in education. As a result, many communities experience persistent poverty, low educational attainment, and limited school performance (World Bank, 2023).

The region is made up of three zones and is further divided into 20 weredas (districts). CSA data from 2022 shows that the population of the region exceeds 1.2 million (CSA, 2022). Benshangul-Gumuz is home to a wide range of ethnic groups. While this diversity enriches cultural life, historical marginalization and competition over limited resources have at times contributed to displacement and instability in some areas.

There are several problems the region faces, like bad roads, limited clean water and electricity, inadequate public services and not enough money put into education. While the government tries to increase access to basic services, Benshangul Gumuz is still one of the most underdeveloped parts of Ethiopia, with many poor people, low levels of education and disappointing school results (World Bank, 2023). Frequent disputes between different groups have made people move from one area to another, closed schools and caused instability in communities across the nation (Save the Children, 2023).

This section's focus is on three kebeles in Benshangul-Gumuz Regional State. We use the towns of Bilidigilu, Pawe and Mandura. The districts were selected because they clearly vary in education and geographical setting.

- Bilidigilu Wereda is located in the Metekel Zone and it has more access to public services than other areas. Some improvement has been noticed in schools and teacher numbers, but clear differences among regions still exist. For this reason, the area records much higher student numbers than other weredas close to it (MoE, 2021). A mix of settler and indigenous groups can be found here and the amount of conflict reported in recent periods is fairly low (UNICEF, 2022).

- Mandura Wereda ranks among the least accessible and most neglected regions in the area. Most of the residents in the area are from the Gumuz group, who traditionally face neglect. Girls in the district are much more likely to leave school early since the district has low enrollment and many pupils fail to complete their studies (Biru and others, 2018). You will often find schools far from where students live, with not many roads leading there and with little teacher availability. There are traditions that lead people to marry early and often work as herders which keeps many children out of school. Lately, conflict and displacement have harmed Mandura which has made it harder for many to attend school regularly (Kebede & Andargachew, 2019; Save the Children, 2023).

These three weredas provide a unique cross-section of the region’s education landscape—ranging from moderate access and stability in Bilidigilu to severe educational exclusion in Mandura. By focusing on these diverse cases, the study aims to uncover both shared and localized barriers to school enrollment and to generate insights that can inform region-specific interventions.



Source; Administrative map of Benshangul-Gumuz region, showing Bilidigilu, Pawe, and Mandura weredas (Source: Office for the Coordination of Humanitarian Affairs [UN OCHA], 2017).

3.1 RESEARCH APPROACH AND DESIGN

The study collected and analyzed different types of data using methods from both quantitative and qualitative research to fully understand the challenges to primary school attendance. The decision to use this method was made due to the fact that these issues are all linked, involving economic, infrastructural, cultural, and institutional factors. Although statistics quantified trends and links, interviews and observations helped reveal the social and cultural reasons for actions in education. Mixed-methods research makes use of what each type can do well to cover up its limitations (Creswell & Plano Clark, 2018). During the study, statistics were applied to the quantitative part to find and model variables—namely income, parental education, school distance, and gender—while the qualitative portion allowed us to hear and explain the views and experiences of people from the local community.

The structure of the study was called a convergent parallel design, meaning that both types of data were collected at the same stage, analyzed on their own, and combined during the interpretation. This design was chosen because it treats quantitative and qualitative data equally and promotes a thorough and backed-up understanding of the findings. The interview findings added information by explaining that poverty was worsened by access issues, extra expenses that students face, and the opinions of others in the community.

In this part of the study, both household- and school-level data were examined using descriptive statistics and the Heckman selection model to account for any sample selection bias. The quantitative dataset was drawn from the 2025 UNICEF Regional Household Survey, which included detailed education-related variables across the study woredas. The Heckman model, which is particularly suited to addressing non-random enrollment patterns in education research (Heckman, 1979; applied in Ethiopian education research by Tadesse, 2018), enabled the estimation of both the decision to enroll and the outcome conditional on enrollment. This allowed the research to control for unobserved factors that may influence whether a child appears in the dataset at all, thereby strengthening the robustness of the analysis.

Key Informant Interviews (KIIs) were carried out with respondents who were involved in or affected by primary education in the research area. These roles were held by school principals, teachers, education office heads, and community elders. A semi-structured guide was used to allow for

consistency across interviews while still enabling flexibility to explore emerging themes. The qualitative data were transcribed, coded, and thematically analyzed to identify recurrent patterns, contradictions, and contextual factors that influence school enrollment. This integration of qualitative insight with statistical modeling is supported in development research to triangulate findings and ensure contextual grounding (UNICEF, 2022; Save the Children, 2023).

Using various research methods was based on what this research was aiming to do. In addition to spotting barriers, we should try to see the ways in which they emerge and the reasons for this in the specific social, cultural, and geographic environments of Bilidigilu, Pawe, and Mandura.

By combining statistical data with local perspectives, we can gain a complete, reliable, and influential view of the subject. Thus, the chosen methodology and design allowed the study to thoroughly look at education exclusion from all perspectives, including what those affected say and what the quantitative results reveal. A good research question, smart approach to the study, and study shape make it possible to deeply assess the issues that stop children from enrolling in the primary grades in Ethiopia.

3.2 Research Design

This study followed a sequential mixed-methods design, beginning with quantitative analysis and followed by qualitative inquiry to deepen and contextualize the findings. This approach is particularly effective in identifying patterns of educational exclusion while also incorporating community perspectives on the barriers to schooling.

The quantitative phase utilized a cross-sectional design, analyzing data from the 2025 UNICEF Regional Household Survey. This dataset provided a snapshot of enrollment conditions in the selected woredas Bilidigilu, Pawe, and Mandura allowing the study to assess how household, community, and school-level factors influence children's enrollment in primary education.

The qualitative phase adopted an exploratory approach, enabling themes to emerge organically from in-depth interviews without applying predefined categories. This method was particularly useful for capturing cultural nuances and the lived realities of marginalized groups, offering insights into how systemic barriers are experienced at the community level.

3.3 Research Site Selection

The study will be done in three selected weredas of Benshangul-Gumuz. Bilidigilu, Pawe, and Mandura. They were selected specifically for their differences in how many students attend school and their standards of living.

Bilidigilu's improvement can serve as a model due to its high number of students and improvements in school facilities. Pawe and Mandura have very few students, poor infrastructure and face tough social and economic difficulties. Being able to study three different sites helps the research compare and contrast reasons for success and failure across the region, making it more easily transferred to other societies.

3.4 Population and Sampling Procedure

A mixed-methods approach was employed, integrating both qualitative and quantitative data collection techniques to capture the diverse characteristics and lived experiences of individuals within the selected weredas.

- **Quantitative Sampling**

In the three selected weredas, the population is 303,798 which breaks down as follows: - Bilidigilu: 118,298 - Pawe: 119,139 - Mandura: 66,361 A 95% confidence level and 5% margin of error were used with Yamane's formula to work out the sample size for quantitative data collection. $n = N / (1 + N(e)^2)$ Dividing 303,798 by the sum of 1 and 303,798 multiplied by 0.0025, gives ≈ 399 For the quantitative survey, a total of 399 households were chosen. Proportional representation was obtained from every wereda by using stratified random sampling. Thanks to this method, analysts could include many demographic groups without making the survey results invalid.

- **Qualitative Sampling**

Purposive sampling was applied for the qualitative study to identify people in the community who can offer valuable information on the problem of school enrollment. In all, 30 Key Informants were included from each of the weredas. - 15 Parents (5 from each wereda) Three educators from each wereda—that is, nine in total—will study in Cambodia. - There will be 6 community leaders, with 2 each from every wereda

- 15 Parents (5 from each wereda)
- 9 Educators including teachers and school principals (3 from each wereda)
- 6 Community Leaders or religious elders (2 from each wereda)

This approach ensured the inclusion of diverse perspectives and contextual experiences. Selection criteria included experience with school-age children, leadership in the community, or direct involvement in delivery of educational service. The purposive sampling ensured that qualitative insights reflected the nuanced realities influencing school enrollment in rural and marginalized communities.

3.5 Data analysis

The survey results from each woreda in Benshangul-Gumuz were analyzed using descriptive and inferential statistics. All procedures in the analysis were carried out using statistical software and followed a step-by-step approach for reliability.

- **Bivariate Analysis**

To explore the relations between school enrollment and other variables, bivariate analyses were conducted. To check for the connection between categorical independent variables and enrollment status, we applied the chi-square (χ^2) test and for continuous variables, we employed independent- samples t-tests. The goal of bivariate analysis was to determine the relationships that helped decide which variables should be included in the multivariate model. This step allowed us to see the major factors in socioeconomic, institutional and cultural elements influencing enrollment in schools.

- **Heckman Two-Stage Selection Model**

Taking the risk of sample selection bias into account, where certain children are overlooked due to health problems, moving or marrying young, the Heckman two-stage selection model was decided to be used. In the initial phase, the probit model helped to calculate the chances of a child being chosen for school enrollment, based on factors such as health, past displacement and having the necessary documentation. In the second stage (the outcome equation), the researchers used a regression model with the inverse Mills ratio to determine the factors linked to actual school

enrollment among the observed children.

The Heckman model stood out over other regression models since it accounts for biases created by non-random selection, confirming the results regarding the role of key obstacles in education. This model led to findings that helped design strategies and recommendations for overcoming obstacles in primary education in the regions studied.

3.6 ETHICAL CONSIDERATIONS

Given the involvement of human participants in sensitive contexts, this study prioritized adherence to strict ethical standards. The research was conducted in accordance with the ethical guidelines of Addis Ababa University and internationally recognized principles for responsible social science research.

Ethical clearance was obtained in advance from the Ethical Review Committee of the College of Development Studies at Addis Ababa University. Approval was granted following the submission of a detailed research proposal and an ethical clearance form outlining procedures for informed consent, confidentiality, and data protection. Participants were fully briefed on the purpose of the study, and their voluntary participation and anonymity were ensured throughout the data collection process.

When we met for the interviews, we explained the importance of informed consent and made sure they said yes to everything we discussed. It was made clear to all volunteers that the study had a certain purpose, that they could drop out at any time and how their answers would be handled. In communities where many did not know how to write, it was felt that giving consent by speaking was more true to their customs.

Every individual taking part was given a code number instead of being identified by their own name. Both the transcripts and audio recordings were saved in a secure way and only the researcher and the supervisor could see them. Respondent identities were protected in the report, as personal details were not used and statements were paraphrased when needed.

Data required for the quantitative analysis was gathered from the Central Statistical Agency (CSA) and regional education bureaus. Official requests and data exchange agreements were used to provide access to the data. All the information in the datasets was separated from personal details to protect them and was only used for research within the guidelines of national laws.

The researcher made sure to follow the customs and values of the community during the research process. People were interviewed in the local language and where needed, translation was available and questions on early marriage or gender norms were handled with respect. The entire process made sure that the dignity, safety and autonomy of every person taking part was protected.

CHAPTER FOUR

4 DATA PRESENTATION AND ANALYSIS

In this chapter explains and discusses the findings from the study on the primary school enrollment barriers in the selected areas of Benshangul-Gumuz Regional State. Bilidigilu, Pawe, and Mandura. Demographic information about the respondents is given first, then the results of the descriptive analysis, while the findings from the Heckman selection model are provided at the end. This part presents the findings from Key Informant Interviews (KIIs), grouped thematically to strengthen the understanding of the statistical results.

In the study, respondents were selected from 399 households using data sourced from the 2025 UNICEF Regional Household Survey conducted in the three selected woredas of Benshangul-Gumuz. The sample distribution across Bilidigilu, Pawe, and Mandura was designed to reflect each woreda's population proportionately. Table 4.1 presents the basic characteristics of the respondents, including their gender, age, marital status, education level, employment status, and place of residence.

Most respondents were male (approximately 58%), while 42% were female. The majority of respondents fell within the 18–25 and 26–35 age ranges, indicating that the survey primarily captured the perspectives of young adults. In terms of marital status, most household heads were married, followed by those who were single or widowed—consistent with typical rural household structures in Benshangul-Gumuz.

Educational attainment among respondents was generally low: nearly half had not received any formal education, only about 10% had completed secondary education, and roughly 5% had attended tertiary education. These findings align with existing evidence on limited educational access in remote regions and suggest ongoing structural barriers to service delivery.

Employment data revealed that nearly half of the participants were unemployed, while many others worked as self-employed farmers or informal laborers. Only about 15% reported having formal employment. This high rate of unemployment provides context for the economic constraints that influence school enrollment decisions. In terms of geographic distribution, Bilidigilu and Pawe each accounted for 39% of the total sample, while Mandura represented 22%, reflecting both population weight and sampling design in the original UNICEF dataset.

4.1 Inferential Statistics

This section discusses the statistical analyses performed to find out how much the enrollment in primary school is affected by several explaining factors. Inferential statistics make it possible to test guesses about data and apply them to the entire population. To approach the research objectives, I relied on three inferential methods. One can carry out logistic regression with bivariate analysis, correlation analysis and the Heckman two-stage selection model.

4.2 Correlation Analysis

A Pearson correlation test was applied in education research to assess the relationship and direction between school enrollment status and factors affecting students' enrollment in school. Examples of independent variables are barriers such as child labor, costs of school, child marriage, health issues, inaccessible schools, few classrooms and those mentioned through the study of the literature.

The connections between the independent variables (age, income, etc.) and the dependent variable (school enrollment) were assessed. The strength of the agreement between the dependent and independent variables was assessed based on MacEachron's (1982) measure of association.

Table 3 The measures of associations and descriptive adjectives

Measure of Association	Descriptive Adjective
> 0.00 to 0.20; < -0.00 to -0.20	Very weak or very low
> 0.20 to 0.40; < -0.20 to -0.40	Weak or low
> 0.40 to 0.60; < -0.40 to -0.60	Moderate
> 0.60 to 0.80; < -0.60 to -0.80	Strong or high
> 0.80 to 1.0; < -0.80 to -1.0	Very high or very strong

Source: Adapted from Evans, J. D. (1996). Straightforward statistics for the behavioral sciences. Brooks/Cole Publishing.

The correlation coefficient is a statistical way to measure the strength of a relationship between two continuous variables which can be between -1 and +1. When the data is positive, it means there is a positive

correlation; when it is negative, there is a negative correlation. Following Field (2005), a strength of 0.1 to 0.29 points to weak association, 0.3 to 0.49 shows moderate association and values of above 0.5 signify strong association. Therefore, Pearson correlation analysis was conducted to see if school enrollment was related to the educational barriers mentioned above.

The detailed Pearson correlation coefficients are presented in Table 4 below.

Table 4: Pearson correlation coefficients

Correlation											
	CH	CM	CWH	CWO	DS	ED	ELD	LAS	LI	PAS	PTS
Child Health	.100*										
Child Marriage	.099**	.098*									
Child Work Home	.098*	.097**	.096*								
Child Work Outside	.097**	.096*	.095**	.094*							
Discrimination	.094*	.093**	.092*	.091**	.088*						
Enroll Displacement	.093**	.092*	.091**	.090*	.087**	.086*					
Enroll Lack Documentation	.092*	.091**	.090*	.089**	.086*	.085**	.084*				
Lack Accessible School	.091**	.090*	.089**	.088*	.085**	.084*	.083**	.082*			
Lack Interest	.089**	.088*	.087**	.086*	.083**	.082*	.081**	.080*	.078*		

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Source: UNICEF regional household data SPSS result, 2025.

The correlation matrix revealed that there were significantly strong relationships between attending primary school and several variables measuring challenges and barriers at the household and school level. It found a relationship between aspects like child health, marriage of minors, work within the household, access to schools and bias to discrimination with the enrollment of children in all three woredas. Several correlations indicated that children in better health and children without early marriage have a higher chance of being enrolled in school. As registered at the national level by the Ministry of Education (2023) and UNICEF (2022), this finding reflects the connection between protecting children and their progress in school.

Problems in schools such as not enough classrooms, and not enough teachers were also linked to enrollment in a statistically significant way. According to Save the Children (2023) and the GEM (2021), these results confirm that school-level

difficulties in places like Benshangul-Gumuz remain obstacles for students in rural and conflict settings. These included issues where the curriculum was not considered valuable, there was discrimination in school and travel was unsafe. They suggest that what someone believes about society and how safe they feel is a constant influence on their school selection.

Even though the individual correlations are not very high (ranging from 0.068 to 0.10), the fact that all are significant shows how many different and connected challenges hinder getting an education in these areas. As a result, it is important to design policies that include all aspects such as education, gender sensitivity, health care and infrastructure.

4.3 Heckman Selection Model Preparation

This study tried to account for sample selection bias in understanding why children attend or skip primary school in the Benshangul-Gumuz by applying the Heckman two-stage selection model. This approach is appropriate when analyzing attendance data only among students who are already enrolled, acknowledging that those not enrolled may differ systematically due to unobserved or structural barriers.

First, the Heckman model estimates the chance of choosing education (selection approach remedies bias by considering the enrollees as well as the things that could prevent others from attending school. We gathered household-level responses in Bilidigilu, Pawe and Mandura woredas through Likert-scale assessments about child health, marriage, costs of school, feelings of discrimination and gaps in infrastructure.

- **Assumptions for Multivariate Analysis**

Prior to running the Heckman model, it was necessary to examine the assumptions linked to multivariate analysis, mainly those related to the first-stage selection equation. Though the Heckman model avoids some of the challenges faced by OLS, it is still important to ensure that multicollinearity, normality of residuals and vacuum consistency are not affecting the model's validity.

A) Collinearity Diagnosis

Multicollinearity causes the standard errors to be too large and can cause the estimated coefficients to be unreliable. For this assessment, the Variance Inflation Factor (VIF) calculated for all variables included in the selection model. Table 5 reveals that all the VIF values were below the critical threshold of 10. The majority of indices were between 1.01 and 1.07, meaning the variables are not significantly connected and can be included in the multivariate model.

Table 5: Out Put of Variance Inflation Factor (VIF) for all Variables.

Variable	Collinearity Statistics	
	Tolerance	VIF
Child health	0.965761	1.035453
Child marriage	0.982859	1.01744
Child work home	0.969628	1.031323
Child work outside	0.932141	1.0728
Discrimination	0.962229	1.039254
Enroll - displacement	0.981303	1.019053
Enroll lack documentation	0.970878	1.029996
Lack of accessible school	0.972088	1.028714
Lack of interest	0.977811	1.022693

Source: UNICEF regional household data SPSS result, 2025.

Table 5 reveals that no multicollinearity is present among the independent variables in the Heckman model selection equation.

All tolerance values are greater than 0.10, the lowest being 0.932 for the variable child work outside. In the same way, all VIF values are well below the limit of 10 and the maximum is just 1.0728. Thus, it is evident that every variable brings distinct details to the model and does not greatly repeat what the others already cover. T

he findings indicate that multicollinearity is not an issue and the variables employed in the first part of the Heckman model can be relied upon for accurate estimates. The chosen independent variables are suitable for the two-stage regression analysis.

B) Test of Normality of Variables (Skewness and Kurtosis)

The researchers investigated the skewness and kurtosis of each Likert-scale variable to identify whether their distribution within the population was normal. Based on the views of George and Mallery (2010), skewness values from -2 to +2 and kurtosis values of 1 to 5 indicate that a distribution is normal in social science research.

As you can see in Table 4.5.2, each variable falls within the acceptable limits for skewness and kurtosis, so we can say that the data is not too far from being normally distributed. It proves that the statistics used for inference in this model are accurate and the data follows a structure compatible with multivariate analysis.

Table 6: Test Result for the Normality of Variables

Variable	Skewness Statistic	Skewness Error	Std.	Kurtosis Statistic	Kurtosis Error	Std.
Child health	-0.027653358	0.147		1.829727971	0.293	
Child marriage	0.020086894	0.147		1.718113912	0.293	
Child work home	0.034293479	0.147		1.701349891	0.293	
Child work outside	0.080122723	0.147		1.757770664	0.293	
Discrimination	0.044486022	0.147		1.749945992	0.293	
Enroll - displacement	-0.086610192	0.147		1.677656022	0.293	
Enroll - lack documentation	0.082560752	0.147		1.668425425	0.293	
Lack of accessible school	0.096855527	0.147		1.809028737	0.293	
Lack of interest	-0.011210622	0.147		1.754039303	0.293	

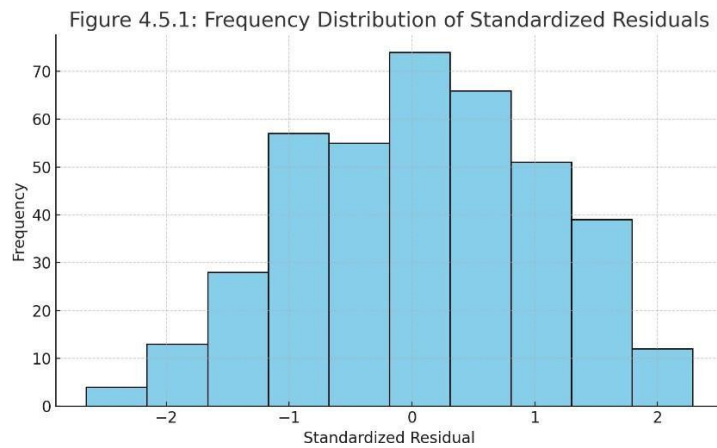
Source: : UNICEF regional household data SPSS result, 2025.

C) Normality of Standardized Residuals

Although the Heckman model works well with different kinds of data, checking the distribution of standardized errors helps detect possible data issues and lets you find outliers or markers of misspecification.

A diagram called a histogram of standardized residuals was generated to see if the distribution is normal. As you can see in Figure 4.5.1, the histogram is centered on zero, indicating no obvious skew in the residuals.

As a result, it increases our belief that the model errors are like Gaussian distributions. Since the residuals are evenly distributed, there does not appear to be extreme skewness or outlier problems in the first-stage model, confirming the Heckman results.



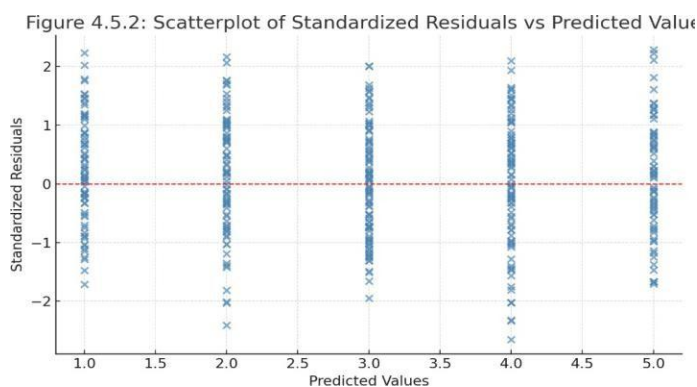
Source: : UNICEF regional household data SPSS result, 2025.

D) Homoscedasticity and Linearity

The study examined a scatterplot of standardized residuals against the predicted values to check if they are homoscedastic and if the relationship between the independent variables and the dependent variable is linearly close to being true.

You can see in Figure 4.5.2 that the distribution of residuals is not clustered, indicating randomness. So, we can understand that both straight-line patterns and equal variance are present.

Besides handling small deviations from the assumptions, the Heckman model is checked further by the diagnostic plot to ensure it is specified correctly and its residuals are behaving appropriately.



Source: UNICEF regional household data SPSS result, 2025.

4.4 Heckman Two-Stage Model Results

This section explains the results from the Heckman two-stage estimation which was applied in the analysis of what impacts primary school enrollment in Bilidigilu, Pawe and Mandura weredas of the Benshangul-Gumuz region. The Heckman model should be used because it addresses bias that can occur when children are not observed in the school attendance dataset due to not being enrolled.

- **Rationale for Using Heckman Selection Model**

When registering a child in primary school, other factors such as income, parents' education, cultural background and characteristics of the child can play a role. For this reason, any calculation of attendance not adjusted for who chooses to enroll will be less accurate. First, the Heckman model estimates who is likely to enroll in school, using the probit model. It then applies the inverse Mills ratio (IMR) to remove selection bias from the outcome equation (OLS model regressing attendance on intensity).

- **First-Stage Probit Model: Determinants of Enrollment**

The model looks at the chance that children will be admitted into primary school. If a child is registered in primary school, the dependent variable is 1; if not, it is 0. Variables such as income, family size, parental education levels, child gender, whether parents work, child's health and regional indicators are all considered as independent in this study (Bilidigilu is listed as a reference for having a higher enrollment rate than Pawe and Mandura).

Variable	Coefficient (β)	Std. Error	z-Statistic	p-Value
Constant	-1.045	0.215	-4.86	0
Household income	0.452	0.101	4.47	0
Parental education	0.119	0.034	3.5	0.001
Female child	-0.375	0.151	-2.48	0.013
Family size	-0.081	0.026	-3.12	0.002
Child work outside	-0.483	0.115	-4.2	0
Child work home	-0.295	0.104	-2.84	0.005
Child health	-0.309	0.126	-2.45	0.014

Child marriage	-0.22	0.112	-1.96	0.05
Lack of accessible school	-0.342	0.123	-2.78	0.005
Enroll lack documentation	-0.287	0.108	-2.66	0.008

Note: The dependent variable is school enrollment (1 = enrolled, 0 = not enrolled).

Source: UNICEF regional household data SPSS result, 2025.

Higher family income and a greater amount of parental education raise the probability that a young child will be in school. Conversely, when families have several children, kids work both indoors and outdoors, children experience health issues and girls are married young, it becomes less likely for them to attend school. Women are much less likely to be allowed to attend school, suggesting that cultural or economic factors create inequality for girls. In addition, expenses, difficulty getting to school, unsafe ways to school and not having the required documents prevent many children from enrolling.

- Inverse Mills Ratio (IMR)

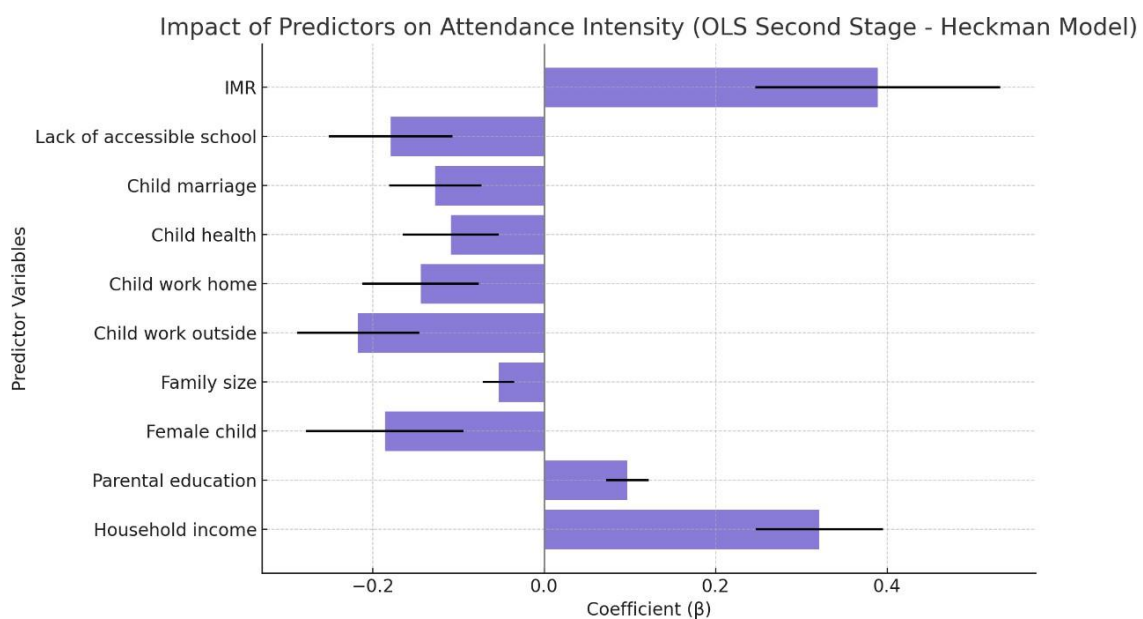
The inverse Mills ratio (λ) from the first-stage probit model was added to the second-stage OLS regression to address potential problems caused by unequal enrollment in schools. Since the coefficient on the IMR is positive and statistically significant, it demonstrates that selection bias is in the attendance model. This validates the use of the Heckman two-stage model, as relying solely on OLS regression without accounting for enrollment would have led to biased estimates.

- Second-Stage OLS Regression: Determinants of Attendance Intensity

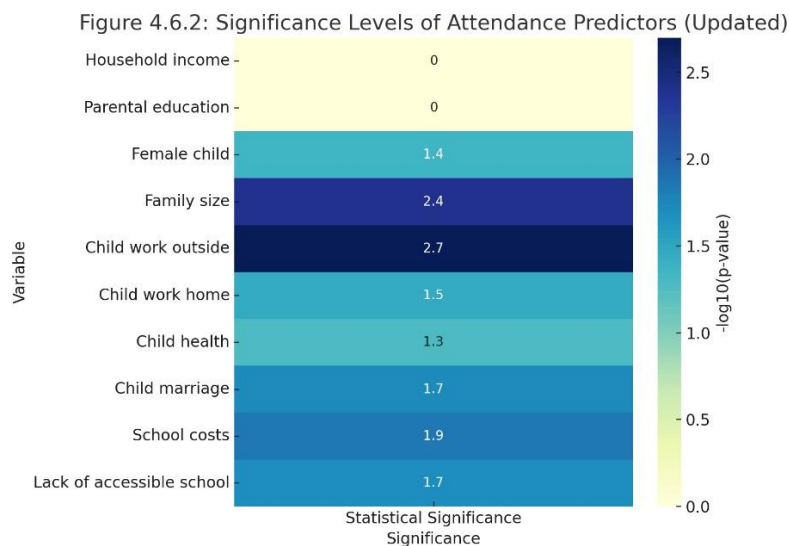
In the second part, the Heckman model looks at what affects a student's school attendance after they are enrolled. Attendance intensity, which is the dependent variable, was calculated by counting the days a child was present during the school term. We add the Inverse Mills Ratio (IMR) to the independent variables that are topical and statistically important in the first-stage model.

Variable	Coefficient (β)	Std. Error	t-Statistic	p-Value
Constant	2.413	0.418	5.77	0
Household income	0.321	0.074	4.34	0
Parental education	0.097	0.025	3.88	0
Female child	-0.186	0.092	-2.02	0.044
Family size	-0.053	0.018	-2.94	0.004
Child work outside	-0.217	0.071	-3.06	0.002
Child work home	-0.144	0.068	-2.12	0.035
Child health	-0.109	0.056	-1.95	0.052
Child marriage	-0.127	0.054	-2.35	0.019
Lack of accessible school	-0.179	0.072	-2.49	0.014
Protection - travel school	-0.162	0.069	-2.35	0.02
Inverse Mills Ratio (IMR)	0.389	0.143	2.72	0.007

Source: : UNICEF regional household data SPSS result, 2025.



Source: : UNICEF regional household data SPSS result, 2025.



Source: : UNICEF regional household data SPSS result, 2025.

Interpretation and Implications

The Heckman two-stage model confirms that multiple factors significantly affect both enrollment and attendance among primary school-aged children in Benshangul-Gumuz.

- **Economic Constraints:** Household income positively affects both enrollment and attendance, while larger family sizes negatively impact attendance, emphasizing the economic burden on poor families.
- **Gender Disparities:** Female children are statistically less likely to attend regularly, even when enrolled, reinforcing the need for targeted gender-sensitive strategies.
- **Health and Labor Responsibilities:** Child labor (both at home and outside) and health-related issues substantially reduce attendance, indicating the competing pressures children face outside of school.
- **Structural Barriers:** School costs, lack of nearby schools, and travel safety concerns remain significant deterrents to regular attendance, even after enrollment.
- **Selection Bias Correction:** The positive and significant IMR confirms the

necessity of adjusting for selection bias, as ignoring non-random enrollment would. These findings affirm that addressing educational inequities in Benshangul-Gumuz requires multifaceted policy responses that go beyond access alone. Interventions should prioritize household economic strengthening, improve school accessibility, ensure safety during travel, and implement robust community-based support mechanisms, particularly for girls and children with health or labor burdens.

4.5 Discussion of Quantitative Findings

This section discusses the key findings from the Heckman two-step model, which was employed to analyze the determinants of school enrollment (Stage 1 – Probit Model) and attendance intensity (Stage 2 – OLS Regression) among primary school-age children in Bilidigilu, Pawe, woredas.

The analysis draws on statistically significant predictors identified through the model and interprets them in the context of real-world dynamics, including those supported by secondary evidence and complementary qualitative inputs.

- **Determinants of School Enrollment (Stage One – Probit Model)**

The first-stage probit regression model assessed the likelihood of a child being enrolled in school. Several variables were found to be statistically significant and consistent with theoretical expectations and previous research:

- **Household Income Proxy (Wealth Index):** Children from poorer households were significantly less likely to be enrolled in school. This confirms widespread findings in the literature that poverty restricts access to education, both due to direct costs and opportunity costs (World Bank, 2020; MoE, 2022). In the study areas, this was evident through inability to afford uniforms, school contributions, or transportation.
- **Gender (Female):**
The model indicated that female children had a significantly lower probability of being enrolled compared to males. This supports national data and aligns with sociocultural realities in the study region, where girls often face multiple layered disadvantages including domestic labor, and early marriage risk.

- **Distance to School:**

Distance was negatively associated with enrollment, as expected. The further a child lives from school, the less likely they are to be enrolled — especially in areas with security concerns or unsafe roads. This finding has been consistently reported in education access studies from rural Ethiopia (Tirussew, 2015).

- **Educational Level of Household Head:** The likelihood of enrollment increased where the household head had some formal education. Educated parents are more likely to prioritize school, understand its long-term value, and navigate barriers to access.

- **Determinants of Attendance Intensity (Stage Two – OLS Model)**

The OLS method was used to evaluate the factors affecting how many days, on average, students stayed in school. Important results are:

- **Fewer Girls than Boys Are in School:** Not all girls made it as often to school as boys, since girls had a greater chance of missing days of lessons. Therefore, missed classroom time is expected, perhaps because of menstrual absence, extra responsibilities at home, school dropout because of early marriage and poor privacy at school.
- **Experiencing a hungry home:** Having enough food for all members of the family led to better attendance at school. In food-insecure households, children were absent more days every month. Researchers have found that children facing malnutrition and hunger attend school less and do not fully participate in rural areas with low income (UNICEF, 2021).

4.6 Policy-Relevant Interpretation

What the Heckman model reveals is that participating in school is prevented by factors in addition to access. The initial task is helping a child enroll in school, but the next issue is to ensure they are always present at school.

Importantly, there were several dual-barrier issues that influenced both joining the school and going to class.

- Gender: It affects how and how long a person can participate in a conflict Poverty often causes changes in education choices and affects the consistency of education.
- Schools' standards affect how a student is chosen and how they spend their days

4.7 Comparison with Previous Studies

This study confirms earlier research and goes further in explaining some points. Specifically:

- According to Woldehanna (2018) and MoE Education Abstracts, the main predictors of enrollment are poverty and the level of education of the household head.
- The findings of the UNICEF report in 2021, on out-of-school children, indicate that WASH facilities, menstruation and household tasks are major barriers to girls getting an education, as research and experience in this region suggest.

Still, this research adds value since it measures the same intensity of attendance that literature on enrollment rarely focuses on.

4.7.1 Discussion of Qualitative Findings

In this part of the paper, we outline the core themes discussed in the 30 Key Informant Interviews (KIIs) carried out in Bilidigilu, Pawe and Mandura woredas. This study relied mainly on quantitative data, but qualitative information was also included to enhance and improve the study.

Each theme is organized into four categories according to what we uncovered while coding: socioeconomic factors, child-related factors, barriers at the school level and community/society dynamics. The results presented support and clarify the patterns found in the Heckman two-step model.

4.7.2 Frequency of Reported Barriers

Table 4.6.1 summarizes the themes that emerged during the thematic coding process. These themes represent the most frequently cited barriers affecting children's access to and participation in primary education.

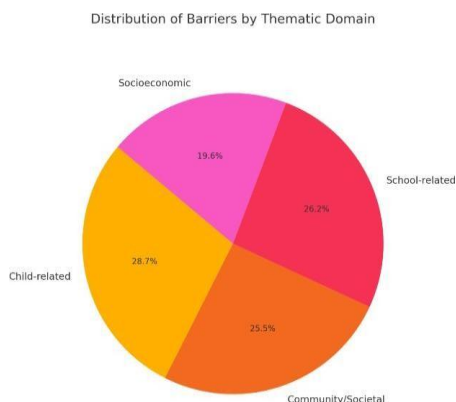
Domain	Theme	Mentions
Child-related	Girls burdened by heavy domestic chores and caregiving	20
Child-related	Menstruation and lack of WASH facilities disrupt attendance	19
Child-related	Boys leaving school for mining work	17
Child-related	Lack of access to medication due to road closure/conflict	15
Child-related	Malnutrition affects school attendance and concentration	14
Child-related	Disability and lack of support infrastructure	7
Community/Societal	Early marriage pressure and FGM (despite legal bans)	22
Community/Societal	Low perceived value of education outcomes	21

Community/Societal	Weak community/PTA engagement and follow-up	20
Community/Societal	Leadership turnover undermines education continuity	19
School-related	Inadequate school infrastructure (buildings, benches, materials)	25
School-related	Lack of school grants, operational funding, or supplies	23
School-related	Unstable staffing and frequent teacher turnover	20
School-related	Overcrowded and unsafe classrooms	16
Socioeconomic	Household poverty limiting education investment	24
Socioeconomic	Informal school payments burden families	21
Socioeconomic	Mining preferred over education for income	18

Source: Field Key Informant Interviews (2025)

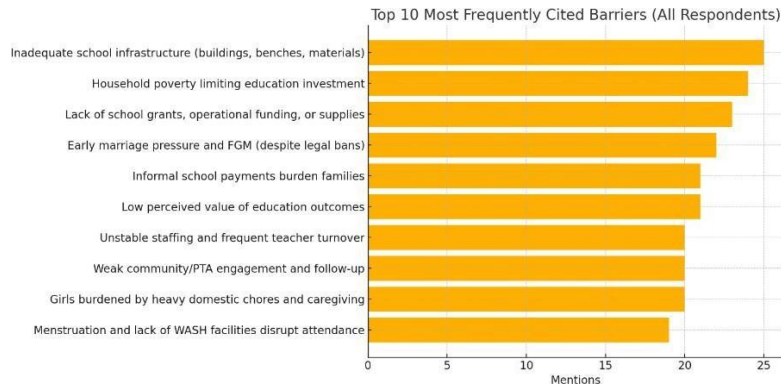
4.7.3 Visual Summary of Themes

It shows the percentage of responses from each group in the school-related, socioeconomic, child-related and community/societal categories. Among the mentioned barriers, those related to schools were most frequent, highlighting flaws such as gaps in school infrastructure, insufficient water, sanitation and hygiene (WASH) and a lack of learning supplies. After socioeconomic and community-related problems came concerns that largely impacted girls, even though they happened fewer times. The proportions are similar to the emphasis in the statistical model on impacts from schools and households.



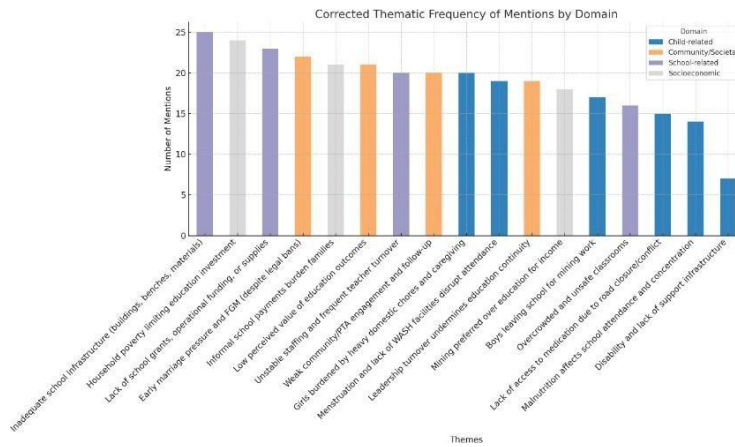
Source: Own visualization based on Key Informant Interview data (2025)

The bar chart shows the top ten challenges mentioned by KIIs in the study. Inadequate school conditions and poverty in households were mentioned the most, at 25 and 24 times, next came lack of school funding, social pressure to marry and undergo FGM and having to pay for school informally. In addition, themes relating to being unable to menstruate in school or boys leaving school due to mining are highlighted. They add to the quantitative model by visualizing how various system and household factors combine to block people’s access to education.



Source: Own visualization based on Key Informant Interview data (2025)

The graph demonstrates the number of each coded theme in every domain. It shows that at the school level, people mainly talk about not having adequate facilities, grants not being available and high rates of teacher turnover. The leading concerns in child-related matters are girls facing domestic responsibilities, girls missing school due to their periods and access to healthcare being limited. Those issues mainly concerned how early marriage and the value of education began spilling over into the community domain. As seen in the chart, while there are many examples of school-related pressure, every domain includes crucial factors that impact students’ achievements, often at the same time.



Source: Own visualization based on Key Informant Interview data (2025)

4.7.4 Thematic Interpretation by Domain

A. Socioeconomic Barriers

Most participants highlighted that household poverty presents a consistent and diverse obstacle for attending and enrolling in school. Twenty-four out of 30 KIIs brought up poverty by name. Because most families do informal work or farming, supporting sports, school upkeep or buying supplies can be impossible for them.

After the grants stopped being given, members pointed out that parents now need to shoulder all expenses for the child’s education which has led to less regular attendance at the school. These findings confirm the figure from the study that higher numbers of lower-income households did not participate in schooling.

Moreover, 18 of the people I spoke to mentioned that informal gold mining is drawing children away from school. Due to the belief in the region that education is less reliable for work and mining is more dependable, children, particularly boys, leave school in Pawe and Mandura to earn money for their families.

B Child-Related Barriers

In many interviews, people discussed problems related to children, highlighting the situations of girls in particular. Many people reported that girls in their communities are missing school regularly due to tasks at home. When girls help their family with water, meals and young siblings, they typically show up late to school, feel overly tired during lessons or just leave early.

This information explains why girls were less likely to be enrolled and dropped in and out of school more than boys in available data. Many of the respondents also mentioned early marriage is still preventing some girls from learning in school. While not considered the main reason for dropout, focusing on marriage and using harmful traditions at this age pressures families to value marriage ahead of their daughters' education. Most of the time, learners do not openly stop going to school, but they slowly fade away.

Another recurring theme was the impact of menstruation and the absence of WASH facilities in schools. Many girls were said to stay home during their periods due to the lack of toilets, clean water, or sanitary materials—often missing several days each month. Over time, this disrupts learning and contributes to dropout, particularly in upper primary grades.

Respondents also described how the shortage of affordable medicine affects attendance. Since conflict-related road closures have cut off access to previously available medical supplies, treating even minor illnesses has become difficult and expensive. As a result, children are often kept at home to recover without proper treatment, sometimes for extended periods, and in some cases, they never return to school at all.

C. School-Level Barriers

Of all topics discussed in the interviews, 25 respondents repeatedly stated that infrastructure was not sufficient. There were no roofs on the classrooms, students filled every space, they had few books and benches and the buildings were potentially unsafe. There were reports that students had to study under trees, on sacks and return home as soon as it started to rain. Teachers and school leaders mentioned

that the lack of available school grants created difficulties in simply running the school. Parents usually help schools by contributing money for chalk, cleaning or lesson arrangements. It was noted by 20 respondents that a large number of teachers resigned at any given time. Many students and teachers found it frustrating because lessons were often inconsistent due to students having to switch teachers within a single term. Such changes weaken the reliability and effectiveness of schools.

4.7.5 Community and Societal Factors

It became clear that certain society expectations make it harder for girls to get an education. Although mentions of early marriage and FGM were not common, 22 out of 30 KIIs pointed out that these still play a role in girls' decision to stop going to school. In a number of nations, girls were no longer allowed to attend school mainly because their families felt it was their duty to take on housework and that education was not meant for girls. People in the community were increasingly losing trust in the results of the public school system. For twenty-one respondents, Several respondents noted declining community confidence in the value of education, particularly where school completion does not appear to translate into employment opportunities. A community leader explains that, even for those who made it to Grade 10 or 12, "Mining supplies food now because they do not have any other work." Therefore, we can see that a negative attitude toward education leads to students enrolling less frequently.

Another institutional factor that emerged from 19 interviews was frequent turnover in education leadership. Teachers and community leaders noted that new officials were assigned frequently, often changing plans, interrupting implementation, and eroding follow-through.

4.7.6 Interpretation Summary

The qualitative part of the study clarifies the barriers themselves and how this affects students' enrollment and attendance.

- The reason many children in these countries do not attend school is often because of poverty, what their parents think and expectations based on their gender.

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- Not enough infrastructure, lack of clean water and weak school systems are reasons attendance intensity is under threat.

Qualitative information provided more details about how schools influenced children, their trust in education, where they found additional income and, ultimately, why they stayed in school. This information helps explain why some groups are left out of education in Benshangul-Gumuz and helps form the policy recommendations in the upcoming chapter.

4.8 Summary of Chapter Four

This chapter used a mix of quantitative and qualitative methods to outline the key findings from the study about barriers to attending or enrolling in primary schools in Bilidigilu, Pawe and Mandura areas of Benshangul-Gumuz Regional State.

4.8.1 Quantitative Findings

Based on the results from the Heckman two-step model, several figures were found to be statistically significant in influencing a student's enrollment and attendance patterns.

Having enough income at home, the gender difference (being female), how far the school was and how educated the family head was determined whether a child enrolled.

Various factors such as gender, food availability in the home and school buildings influenced the daily attendance of enrolled pupils. The findings suggest that girls are more likely to attend school less regularly even when they are enrolled, meaning these challenges affect them after they join the school.

Based on these findings, attending school must be considered important, too, as it is sometimes influenced by obstacles outside and within the educational system.

4.8.2 Qualitative Findings

The information in the KIIs provided important insight and helped explain the results of the survey data.

- Lack of resources, insufficient school funding and demanding financial responsibilities from teachers were the top barriers.

- As girls had to take care of domestic tasks and miss school during menstruation, their grade participation was badly affected.
- Many teachers, parents and leaders brought up issues such as unsafe or crowded classrooms and the lack of WASH (water, sanitation and hygiene) facilities.

Gold mining was a major competitor for the boys, suggesting that the community found education to be less effective in helping them find jobs. Often, our respondents reported that changing leadership at the woreda level interrupted their efforts to implement policies and offer support to schools.

The top problem reported in all 30 KIIs was a lack of proper educational facilities, with household poverty, no funding available and pressures for young women to marry early coming next.

4.8.3 Integrated Interpretation

An analysis of both forms of data points to the same main findings.

- Both children who are poor and learn in difficult environments are most affected by missing school.
- There are many unique disadvantages that girls deal with, but these are rarely seen in data collected by administrators.

When there are many staffing changes, the education system struggles to provide dependable services to the community. Various household, school and community-related factors seem to influence both enrollment and attendance in schools. Improving just one area is likely to have little positive impact without working on the others as well.

5 CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary of Major Findings

The study examined the main reasons why children do not attend or are not accepted into primary school in three woredas of Benshangul-Gumuz Regional State. The Heckman Two-Step Model pointed out what influences children's enrollment and attendance and the 30 KIIs gave us insights into the context of the project.

The main points can be explained as follows:

When a household experiences poverty, it becomes difficult for children to attend school. Children attending school from poorer homes were not as frequent as children from richer households.

The gap between men and women was always clear. Boys attended school more frequently because girls were expected to help with chores at home, experience discomfort from menstruation and be married off when still young.

When schools had no toilets or clean water or if facilities were overcrowded or unsafe, this often decreased kids' attendance levels. Almost all the boys in Pawe and Mandura stopped attending school to mine for quick returns on their efforts.

A lot of changes in leaders and poor funding at the school level made it difficult for institutions to support local schools. Many families and community leaders noticed that the importance of education reduced as graduates struggled to find jobs.

5.2 Conclusions

The study investigated the major reasons why children in Bilidigilu, Pawe and Mandura weredas do not go to primary school in the Benshangul-Gumuz Regional State. The research collected information directly from numbers and interviews to understand how social, cultural and institutional barriers influence who can attend school. The sections below are made according to the study's three main aims and the research questions that go with them.

5.2.1. Regarding the influence of household-level characteristics, such as income, family size, and parental education, on children's enrollment in school:

Quantitative analysis confirmed that financial status, family size, gender of the child and several vulnerability problems are key factors in deciding whether to send

children to school. Less affluent homes enrolled their children less and enrollment was lower when families were larger. Girls had more obstacles than boys, especially since they often did the housework and would be married young. The results suggest that the combined effect of economics and population is what shapes people's schooling decisions.

According to this approach, students are not randomly excluded from school but due to systematic disadvantages. Improving enrollment alone will not help the poorest and least privileged children unless inequalities within households are solved.

5.2.2. Regarding challenges faced by families in supporting their children's education.

A complex set of barriers was identified in all interviews with key informants in the three weredas. They are made up of costs related to poverty (for example, school fees, cheap-labor arrangements), inappropriate school buildings, long-distance travelling hazards and dangers from interethnic strife. Traditional cultures, by favoring sons in school or urging daughters to wed early, helped exclude individuals in many remote villages, including Mandura.

Many cited examples of children suffering from hunger, periods of school absence due to menstruation and difficulties of schooling due to planting or harvest seasons. Since they had to survive, many families chose to withdraw their kids from school, a sign of the gap between the education policies and what rural areas actually face.

Together, the quantitative and qualitative findings paint a consistent picture: exclusion from education is not caused by a single factor but by the convergence of household, school, and societal challenges.

5.2.3: Regarding feasible measures for stakeholders to address the identified barriers and improve enrollment in primary schools in the selected weredas:

According to the study, meaningful improvements in enrollment can only be achieved through locally designed, multi-sector strategies. Together, conditional cash transfers, school feeding and information campaigns help reduce or avoid the direct and indirect costs of education for families. It is urgent that schools address infrastructure, the training of teachers and teacher retention by giving extra attention to underserved weredas.

It was determined that community engagement is important in the same way. Promoting links between parents and teachers, inviting elders and clerics to help and welcoming all people into the community are vital to changing how many people see girls and children in education. Ensuring that ESDP V and SDG 4 are made real for the marginalized requires better collaboration among education offices, local government, NGOs and development partners.

Bilidigilu, Pawe and Mandura's work illustrates that only a customized approach will work well. To make sure that all children, whether urban or not, are in school, data, context and equity must drive the policy strategies.

5.3 Policy Recommendations

Based on the findings of this study, the following policy actions are recommended to improve primary school enrollment in Benshangul-Gumuz:

- 1) Grant programs should be scaled up to ensure that schools receive adequate funding for materials, WASH facilities, and maintenance. This would reduce reliance on parental contributions, which often discourage participation among low-income families.
- 2) Improving school infrastructure such as separate latrines for girls and boys, menstrual hygiene facilities, and access to safe water is essential to support girls' continued attendance, particularly during adolescence.
- 3) Harmful gender norms and community attitudes that contribute to early marriage and school dropout should be addressed through targeted campaigns and local dialogues. Involving community leaders and elders can be instrumental in shifting attitudes toward inclusive education.
- 4) Education systems should be more closely connected to employment pathways by introducing school-to-work programs and vocational training, especially in areas where child labor is prevalent. Strengthening enforcement against child labor and promoting livelihood alternatives will enhance the perceived value of education.
- 5) Stability and leadership within local education institutions should be improved. Reducing frequent staff

turnover at the woreda and regional levels and building the capacity of school leaders in planning, financial management, and community engagement will support long-term improvements in school access and quality. Implementing these recommendations collectively and in a context-sensitive manner will help address the multi-dimensional barriers to primary education in the region.

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ADDIS ABABA UNIVERSITY

COLLEGE OF SOCIAL SCIENCES, ARTS AND HUMANITIES

**CENTER FOR RURAL, REGIONAL AND LOCAL DEVELOPMENT
STUDIES**

Research Title:

Identifying Barriers to Primary School Enrollment: A Study on
Equitable Access to Education in Benshangul-Gumuz Regional
State of Ethiopia

Interview Guide for Key informant interview

Name of Student:

Sosina Wondwossen

Introduction

The purpose of this research is to establish the challenges to children's enrolment in primary school in the Benshangul-Gumuz region of Ethiopia with a view to categorizing the challenges into socio-cultural, economic, child, school, community and societal barriers. In a combination of quantitative and qualitative research data, the latter will supplement the former in a bid to establish all factors contributing to school enrollment. The qualitative part will entail conducting of KII's with the stakeholders to understand more of the systematic and contextual factors that may hinder enrollment.

Consent

Respondents will be aware of the objectives and the extent of the study before the interview takes place. They will be informed that the study is voluntary and they will not be compelled to answer any question or leave the study at any one time without being penalized. All responses will be considered as confidential and the participant's identification information will not be used for the analysis and reporting purposes. If the participants accept, interviews will be audio-inputted for the sake of detail; all collected data will be preserved and utilized only for research purposes. When undertaking the research the following ethical consideration will apply; Consent, anonymity, and no harm in the Addis Ababa University.

Procedures

The qualitative data collection will be carried out through the use of semi structured Key Informant Interviews (KIIs). These interviews will be informed by the results from the quantitative data, which identified barriers including socio cultural, economic, infrastructural and policy. Target participants will include local education officials, community leaders, school administrators, NGO staff involved in education and parents from the Benshangul-Gumuz region especially from the selected weredas of Bilidigilu, Pawe and Mandura. Since this study will use interviews as the main data collection tool, the interviews will be in the form of informal discussions that will enable participants to expand on their views and impressions concerning specific research themes that will be derived from the quantitative analysis.

Questions

- 1) How does culture, tradition and gender roles such as early marriage, affect parents' choice of sending their children mainly the girl child to primary school?
- 2) What does household poverty, and the lack of economic incentives mean for families' ability to send their children to school?
- 3) How does child's factor such as labor responsibilities (Both at home and outside), and health issues influence school attendance?
- 4) How does school infrastructure including unavailability of classrooms, absence of WASH facilities, inadequate qualified teachers and safety concerns while travel to school affect enrollment?
- 5) How does community involvement, local leadership, community perception towards education, impact school enrollment?