

FUNDING EDUCATION FOR THE POOR



ASHESI UNIVERSITY

Will the free Senior High School policy reduce poverty in Ghana?

UNDERGRADUATE THESIS

BY

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Supervised by: Dr. Edgar Cooke

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DECLARATION

I hereby declare that this thesis is my original work and that no part of it has  
been presented for another degree in this university or elsewhere.

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I hereby declare that the preparation and presentation of the thesis were supervised in  
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## ABSTRACT

Several government policies have been implemented in the quest to enhancing educational access in Ghana. A recent one is the free SHS system that was introduced in 2017. The goal of the free SHS system is to reduce poverty by eliminating household need to pay fees for senior high education, especially for the poor who it had been shown are not accessing education because of the costs. This paper investigated whether the free SHS system will reduce poverty in Ghana.

Using 2017 cross-sectional data from GLSS round seven, the study employed a quantitative approach through descriptive analysis and simulations in achieving the aims of the research. The descriptive analysis revealed that there still exists a bias between poor and the non-poor, rural and urban areas as well as deprived and least-deprived regions in Ghana with regards to their consumption of secondary education.

The simulated effect of the free SHS policy was a 2.56% and 0.76% decrease in poverty headcount rate for urban and rural households respectively. The total poverty rate also decreased by 0.86% from 23.4% to 23.2%. The fall in poverty levels implies that the increase in consumption on secondary education (because of the subsidy) lowered poverty rates as more people can afford education. Despite the decrease in poverty rates, the issue of targeting government subsidies remains a problem. There still exists some disparity as poor and rural households receive the least amount of the government subsidy.

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## LIST OF ABBREVIATIONS

BECE	Basic Education Certificate Examination
EFA	Education for All
GDP	Gross Domestic Product
GER	Gross Enrollment rate
GLSS	Ghana Living Standards Survey
GNP	Gross National Product
GSS	Ghana Statistical Service
LEAP	Livelihood Empowerment Against Poverty
MDG	Millennium Development Goal
NER	Net enrollment rate
PTA	Parent Teacher Association
SDG	Sustainable Development Goal
SHS	Senior High School
TVET	Technical and Vocational Education and Training
UNESCO	United Nation Educational, Scientific and Cultural Organization
UNICEF	United Nations International Children's Emergency Fund

## DEFINITION OF TERMS

**Basic Education Certificate Examination:** An examination taken by junior high school graduates for certification and selection to senior high schools and technical institutions

**Capitation grant:** A grant worth \$3.30 for each child enrolled in every public kindergarten, primary and junior high school (Gaddah & Munro, 2011)

**Double Track System:** An initiative under the free SHS policy which creates two semesters for two batches (Gold and Green) in a year for first-year SHS students. Each batch attends school for 81 days per semester and spends 41 days as vacation

**Education for All:** A global movement led by UNESCO to meet the learning needs of all children, youth and adults by 2015

**Free Senior High School:** A Government initiative to address inequality and ensure equal opportunities for all students through the removal of cost barriers in public senior high schools

**Ghana Living Standard Survey:** A national survey undertaken by the Ghana Statistical Service to provide data and information for measuring the welfare of the population

**Gini coefficient:** A statistical measure of inequality among a population. A coefficient of 100% or 0% shows a high or low level of inequality in the wealth or incomes of residents in an area

**Gross enrollment rate:** The percentage of students enrolled in the senior high school expressed, regardless of their age as a percentage of the official school-age population of students (UNESCO, 2019)

**Livelihood Empowerment Against Poverty:** A social cash transfer program that provides cash and health insurance to the extremely poor households in Ghana

Net enrollment rate: The total number of students enrolled at the formal secondary school going age group (15-18 years) expressed as a percentage of the total population in that age group (UNESCO, 2019)

Millennium Development Goals: They are eight goals with measurable targets and deadlines for improving the lives of the most impoverished people in the world

Poor: A person is poor if they earn below the upper poverty line; GHS 1,314 per year (GLSS, 2018)

PTA dues: Levies paid by parents who are members of an association of parents and teachers meant to aid in developmental projects in schools

Sustainable Development Goals: They are 17 goals to build on the successes of the MDGs by eradicating poverty, protecting the planet and ensuring peace and prosperity

Technical and Vocational Education and Training: Training to equip people with the technical and professional skills needed for the socio-economic and industrial development of the country (Ansah & Ernest, 2013)

Gross Domestic Product: Monetary measure of the market value of all the final goods and services produced in a country within a period, often annually

Gross National Product: The market value of goods and services produced by all citizens of a country, both domestically and abroad within a period

## CHAPTER ONE: INTRODUCTION

### 1.1 Introduction

Education remains one of the essential tools for achieving development in the world (King, 2011). It involves a process of learning by which knowledge is imparted, faculties are trained, and skills are developed (Farrant, 1980, as cited in Lecture & Best, 2008). According to Woodhall (2004), education is recognized internationally as a form of human capital investment that yields economic benefits and wealth by increasing the productive capacity of a nation's workforce. Each year, the World Bank's Development report focuses on a topic of central importance to global development. The 2018 Report, *Learning to Realize Education's Promise*, is the first to be entirely centered on education (World Bank, 2017). The fourth goal (inclusive and equitable quality education) of the 17 Sustainable Development Goals acts as a catalyst for development by improving health, meaningful livelihoods, economic security and the development of human capital (Narayan, 2017).

Despite the importance of education in development, the cost associated with education, however, remains one of the major obstacles that prevent many children, especially in poor households, from accessing education at all levels. According to the World Bank (2015), sustaining poverty reduction requires a commitment to reduce inequality and improve access to opportunities for all people. There have been initiatives like the Livelihood Empowerment Against Poverty (LEAP) and rural development in Ghana which has significantly reduced poverty in the country (World Bank, 2015). However, the rate of poverty in the country remains high, especially in Northern Ghana. The Ghana Living Standards Survey (GLSS) round seven report revealed that about 6.8 million Ghanaians, representing 23.4% of the population could not afford to spend more

than GHS 4.82 a day in 2016/2017 (GSS, 2018). Again, the report notes that 2.4 million Ghanaians, representing 8.2% of the population, live in absolute poverty as they cannot afford to spend up to GHS 3 a day on food (GSS, 2018). The poverty incidence has further worsened in Western, Volta, Northern, Upper East, and Upper West regions as these regions record poverty rates higher than the national average (GSS, 2018).

In 2015, many countries across the world committed to Education for All (EFA) and the Millennium Development Goals as a way of abolishing school fees and improving access to education for the poor (Ohba, 2009). In the same light, the current government of Ghana shares the vision of quality education for all and alleviating poverty. The government's agenda has been to redefine education to include free senior high school (SHS) and to capture Technical and Vocational Education and Training (TVET). The focus of this paper is to examine if the introduction of the free SHS policy will reduce poverty in the country.

## 1.2 Background

The development of education in Ghana is closely related to the social, political and economic transformations that have taken place in the colonial history of the country until now (Aheto-Tsegah, 2011). Formal education in Ghana dates to the time in history when Ghana was colonized by the British. Ghana's educational system was therefore developed using the standard style of education used by the British. Currently, Ghana operates with an educational structure consisting of two years kindergarten education, six years of primary education, three years junior high education, three years of senior high school education and four years of university education (Amissah, 2006). However, there are other institutions like Polytechnics, Teacher Training Colleges, Vocational Training

Colleges, and Nursing schools that offer certificate and diploma programs usually for two to three years. Around the 1980s, Ghana's education experienced a sharp decline following the 1980 economic crisis (Gaddah & Munro, 2011).

After the decline, the country's budget on education as a share of the Gross National Product (GNP) at the time further decreased from 6.4% to 1.4% between 1975 and 1983 (Demery, Chao, Bernier and Mehra, 1995). As a way of combating these challenges, an educational reform was launched in 1987 to change the structure of the school system; by providing equitable access at all educational levels, reducing the length of pre-tertiary education from 17 to 12 years and enhancing the learning period between teachers and students (Gaddah & Munro, 2011).

Following the reform, total government expenditure on education as a percentage of Gross Domestic Product (GDP) increased from 1.4% in 1983 to 3.8% in 1992 (Demery et al., 1995). The country also experienced the expansion of basic schools from 12,997 in 1980 to 18,374 in 2000 alongside improvements in attendance and completion rates (Akyeampong, Djamgmah, Oduro, Seidu and Hunt, 2007). The educational reform was divided into three phases: the introduction of the new junior secondary school system from 1987 to 1990, the introduction of the new senior secondary school system from 1991 to 1993, and the tertiary education reforms from 1994 to 1997 (UNESCO, 2006).

### 1.3 Problem Statement

Over the past two decades, access to basic education has improved in Sub Saharan African countries, but many children remain out of school (Lewin, 2009). Many Sub Saharan African countries like Kenya and Uganda have improved access at both the primary and secondary levels through free education policies. However, many

educational systems still charge fees which deter access. There are two schools of thought about the significant factors that prevent access in basic and secondary schools. The first school of thought identifies fees charged in public schools as one of the main barriers to education access especially among the poor (USAID, 2007). Another school of thought believes that other private and indirect costs aside from fees such as the cost of transportation, management costs, costs of textbooks, opportunity costs of schooling and Parent Teacher Association (PTA) dues and expenses charged by schools deter students, especially the poor, from accessing education (USAID, 2007).

To combat the financial obstacles associated with education, the Free Compulsory Universal Basic Education (FCUBE) program was adopted by the Ministry of Education in Ghana in 1992. The program was envisaged to address issues of poor teaching and learning outcomes, gender bias, weak management systems, the relevance of education in employment, ineffective mobilization and use of financial and non-financial resources. (UNESCO, 2006). There was a shortcoming of the FCUBE in that it initially covered only tuition and fees. Since the cost of education included other costs aside from fees (cost of uniform, books, transportation, parent-teacher association fees), there was still a specific burden on poor households to send their wards to school (Aryeetey & Goldstein, 2000). To ensure that the policy widened its scope to benefit more poor students, the government, in 2005, initiated the Capitation grant concept, abolishing fees being charged in basic schools by providing each school with an annual grant, free uniforms and lunch for each child enrolled (Gaddah & Munro, 2011). The grant was worth \$3.30 for each child enrolled in every public kindergarten, primary and junior high school (Gaddah & Munro, 2011).

A study by Osei et al. (2009) shows that after a year of implementation of the Capitation grant, school enrollment increased by 16.7%. However, after testing the association between the level of Capitation grant and the enrollment rates for a pooled and random effects estimation, they found no significant effect of the grant on gross enrollment rates. Surprisingly, factors that were found to have a substantial effect on gross enrollment rates were the proportion of trained teachers and the Basic Education Certificate Examination (BECE) pass rates. Aside from the Capitation grants not having a significant effect on enrollment, the study also revealed that its impact in the three most impoverished regions in Ghana (Northern, Upper East, and Upper West Regions) was significantly lowest.

Aside from the FCUBE, there have been other educational policies aimed at improving access, equity, and quality education. The recent free SHS policy by the government of Ghana is no exception. The impact of government expenditure on educational outcomes, however, has been insufficient for achieving improved educational results of the poor. In a cross-sectional study of developing countries, Yuki (2003), after studying the impact of public spending on educational outcomes, found that the distribution of public spending does not favor the poor in absolute terms. In Africa, the share that the most deprived population received from education subsidies were 16.4% in Ghana in 1992, 19.9% in South Africa in 1993, 19.4% in Côte d'Ivoire in 1995, 17.0% in Kenya in 1992, 16.0% in Malawi in 1995, 13.0% in Tanzania in 1994 and 8.3% in Madagascar in 1994 (Yuki, 2003). This result agrees with what previously mentioned studies have shown about universal intervention programs like free secondary education and the extent to which they benefit the poor.



In the case of Ghana, the free SHS policy has raised several questions concerning the way it is implemented. Primarily designed to remove financial barriers and increase access to quality education for secondary school students, the free SHS policy has not entirely considered and provided for the financial needs of the poor in its implementation (Ibrahim, 2018). Even though the initiative has removed fee-related costs associated with secondary education, other non-fee costs remain a burden on poor parents who are unlikely to send their wards to secondary school. Issues concerning congestion have also been reported in senior high schools. The congestion has put pressure on infrastructure and learning facilities, a problem that has led to the introduction of the double track system.

#### 1.4 Research Question

While the literature reviewed so far has shown that free secondary education is essential in increasing enrollment, it, however, leads to relatively low enrollment for poor households. Also, studies discussed so far found no significant relationship between intervention programs like the Capitation grant and an increase in enrollment for some selected African countries. The thesis intends to find out *if the free SHS policy will reduce poverty in Ghana?*

#### 1.5 Research Objective

The aim of the research is to investigate whether the free SHS policy will reduce poverty in Ghana.

### 1.6 Significance of the Study

A significant factor that led to the introduction of the free SHS policy was the increasing costs associated with secondary school education. Thus, a critical goal of the free SHS policy is to remove all financial barriers hindering access to quality secondary school education in Ghana. The study is important because it will assess the impact of the initiative on reducing poverty in the country.

In past literature, universal government intervention programs like Ghana's free SHS policy have not been entirely effective as they do not provide substantial improvements in the welfare of the poor like similar initiatives targeted at the poor (Hanna & Olken, 2018). The implementation of the free SHS policy has sparked different public views. While some members of the public have welcomed the government's policy, others have criticized it. Critics of the initiative propose that it should instead seek to target the poor and vulnerable students in Ghana other than its universal and cross-cutting nature. To them, a targeted approach is the most effective way of implementing the policy for it to be meaningful while optimizing cost. Comparing lessons from other countries, the study will provide recommendations on suitable approaches that Ghana can adopt to make the free SHS policy more relevant for the poor.

Additionally, results from the study will be relevant for government officials in assessing and reviewing the impact of the free SHS policy as it will point out crucial areas of the initiative that need improvement or transformation. Finally, results from the study will provide relevant insights into the already existing body of knowledge about free education policies.

### 1.7 Organization of Study

This thesis is organized into five chapters. The first chapter, the introduction, include the background to the study, problem statement, objectives, the significance of the research and organization of the report. The second chapter, the literature review, reviews existing literature on free education and the impact of free education on the poor and the non-poor. The third chapter of the study, methodology, describes the steps to achieve the objectives of the thesis including the type of research, data collection methods and methods of data analysis. The fourth chapter focuses on processing, analysis and, presentation of findings. Finally, chapter five provides conclusions and recommendations based on the results of the research.

## CHAPTER TWO: LITERATURE REVIEW

### 2.1 Introduction

This chapter consists of the contributions of existing literature relevant to the research topic. This chapter has two major sections with subdivisions. The first section, the theoretical framework, discusses the theories that underpin this research. The second section of the chapter reviews existing literature on the free primary and secondary education policies in Ghana and other developing countries and their impacts on educational outcomes. Finally, the chapter discusses the challenges found in the existing literature and the gaps the research is intended to fill.

### 2.2 Theoretical Framework

The human capital theory underpins this study. The term human capital was first associated with Schultz, the first proponent of the theory in the early 1960s. The definition of human capital embodies three main elements; knowledge, skills, and abilities of employees (Bontis et al., 1999; CIPD, 2017; OECD, 2001; Schultz, 1961). The definition was redefined to include information, the health of individuals, innovation, motivation and constant learning and expertise that makes an organization distinctive (Becker, 1993; Bontis et al., 1999). A more recent definition from Thomas et al. (2013) is similar to definition from Dess and Picken (1999) who describe human capital as people, their performance and potential in an organization.

Despite the various dimensions of human capital explained by different authors, the theory heavily rests on the assumption that education is essential and necessary for development and improving the productive capacity of a population. The acquisition of

formal education is considered a productive investment in human capital, which the proponents of the theory have concluded as equal to or more relevant than physical capital (Olaniyan & Okemakinde, 2008). Thus, an educated population is regarded as a productive population (Olaniyan & Okemakinde, 2008). Over the years, countries like Hong Kong, Korea, Singapore, and Taiwan have achieved substantial rates of economic growth while making a substantial investment in education (Olaniyan & Okemakinde, 2008). The World Bank (1993) found an improvement in education as a very significant explanatory variable for East Asian economic growth. In a similar quest for growth and development, Ghana considers investment in human capital through education as a tool for the development of the country, thus introducing her free SHS policy to enable more children especially the poor to access quality education.

### 2.3 The Education Demand and Supply Theory

The demand and supply-side of financing education are a relevant aspect of this research. There are several demand-side and supply-side factors affecting access to universal education in Ghana and other developed and developing countries. Education demand has to do with channeling education resources to students and their parents, who directly demand education so that educational outcomes such as enrollment and attendance can be improved (Patrinos, 2007). Education supply, on the other hand, refers to the situation the government commits resources to improve access to education and its outcomes (Patrinos, 2007). Examples of demand-side financing of education include the use of conditional cash transfers, Capitation grants, and targeted vouchers to enhance access to education. Progressa (also known as Oportunidades) in Mexico and Brazil's Bolsa Escola are demand-side interventions programs that have won international

recognition for their success in improving education access, especially to the most impoverished population (Patrinos, 2007). Evaluation of Mexico's Oportunidades shows a consistently significant increase in enrollments by 8.4% from a base of 65% especially for girls in secondary school (Patrinos, 2007). Behrman et al. (2005) used a schooling transition model and discovered that the program effectively reduces school drop-out rates and improves student grades, particularly during the transition from primary to secondary school.

A typical example of supply-side financing of education is the Compensatory Education Program in Mexico. The intervention channeled funds and in-kind resources to the government to improve the supply and quality of education in schools especially in highly disadvantaged communities (Gertler, Patrinos & Codina, 2007). Results from evaluations showed a correlation between the program and reduced average repetition rates in rural primary schools (Benemérita Universidad Autónoma de Puebla, 2004). López-Acevedo (2002) found higher test scores in Spanish for the students in the compensatory schools than in comparable schools in Michoacán who were not receiving any benefits. However, further studies by Paqueo and López-Acevedo (2003) which examined the effect of the intervention on sixth graders' Spanish scores, found that the neediest students benefited less from the intervention than the less poor. Patrinos (2007) in his studies emphasized that supply-side financing of education in most cases is not enough, thus the need to consider funding of demand-side of education.

Maikish & Gershberg (2008) agreed with findings from Patrinos (2007) that a weak economy and ineffective distribution channels may constrain government revenue set out for education purposes. Thus, for spending to be effective, the government must

have measures like efficient expenditure management capacities, political will and good governance in place.

#### 2.4 Factors that Influence Access to Secondary Education

Several factors may allow or prevent children and youth from accessing secondary school education. These factors range from health reasons, gender influence, location/distance, financial reasons, household influences, and disability needs.

##### *2.4.1 Health and nutrition*

Health factors are critical in determining when and whether children enroll in school. Studies by Fentiman et al. (1999, 2001) found that the health status of students has severe implications on attendance, retention and dropout rates. Precisely, they discovered that hunger, malaria, headaches and poor eyesight are the significant causes of absenteeism and dropout. A study by Seidu (2003) in schools in the East Gonja District of Northern Ghana also found that school feeding programs served as an incentive, especially for girls to enroll, attend and remain in school till completion.

##### *2.4.2 Influence of households*

Several factors could affect a household's decision to take a child to school or not. In other words, there exist factors influencing the demand for education in homes. In the case of Bangladesh, a study by Prince (2017) used household characteristics as the explanatory variables affecting a household's decision to enroll a child at a formal school. According to Sulaiman et al. (2012), the basic variables that explained the demand for education were selected from the human capital theory of demand for education plus an additional variable; global awareness. The explanatory variables mainly comprised of

household characteristics, similar to the study by Prince (2017). Additionally, research by Kabubo-Mariara and Kirii (2006) included household characteristics as part of independent variables explaining a household's decision to send a child to school.

The likelihood of children's enrollment and educational achievement, in general, can be attributed to the educational level of parents, especially mothers in a household (Lloyd and Blanc, 1996 cited in CARE International, 2003). Also, the scholastic ability of children and their desire for education influences the decision of parents to send their wards to school (Hashim, 2005). A study by Khan et al. (2015) established a significant positive relationship between parents' educational level and academic achievements of students. Also, parental education is expected to have a positive impact on enrollment, and it is important because it reflects the income potential of the household and their attitude towards education (Ray, 2000; Gertler and Glewwe, 1990). Furthermore, educated parents are more able to assist their children in learning, as they are likely to recognize the value of their children's education and resist having to pull them out of school even when they have low income (Ray, 2000; Handa, 1996). The employment status of parents could influence their decision to send their children to school. If the parents in a household are both working and contributing to the household income, it might be possible for them to provide the necessary resources for their children to enroll in school and vice versa.

Household expenditure on education could influence its decision to send a child to school. If a household's spending on education is high, it shows that the household has possibly sent a child to school and vice versa. Total annual income and consumption of households could also influence their decision to send a child school. Incomes are



essential because a poor household may not afford to send a child to school unless there was access to credit (Kabubo-Mariara and Kirii, 2006). Thus, the higher a household's annual income or total consumption, the higher its ability to cater for the educational needs of a child and hence send him or her to school.

#### *2.4.3 Distance (Proximity)*

Distance or location is another factor that can influence access to education.

When schools are very distant from the home of students, especially in rural areas, it tends to discourage a lot of children from going to school (Ohba, 2009). In such a case, access to secondary education relies heavily on accessibility to schools. For some children, if they do not get a school which is nearby or one that promises excellent quality education, they end up not attending school at all (Ohba, 2009).

#### *2.4.4 Financial cost*

Financial cost regarding the affordability of direct and indirect school costs is one of the most significant challenges of gaining access to secondary education in sub-Saharan Africa (Ohba, 2009). For example, studies in the rural Makeni district of Kenya found that costs of the first-year preparation for day secondary school are about eight times the monthly income for employed parents, 12 to 17 times the monthly income of self-employed parents and 19 to 20 times the monthly income of peasant parents engaged in casual work. In the case of boarding schools, the costs of the first-year preparation for boarding school are 15 times the monthly income for employed parents, 23 to 33 times for self-employed parents and 38 to 40 times for peasant parents engaged in part-time work (Ohba, 2009).

Also, a study conducted by Acheampong et al. (2007) in the 1990s and 2000s suggests that the major obstacle to educational access was economic. Furthermore, findings from Canagarajah & Coulombe (1997) indicate that the high cost associated with schooling causes a lot of children out of school into the labor market as they cannot afford the costs of schooling. Considering that many secondary schools are fee-paying, cost eventually becomes a barrier to accessing education. This means that parents have to meet the direct cost (fees paid in school) and indirect cost (other expenses such as transportation cost, cost of feeding, levies paid in school, registration fees, cost of uniforms) associated with enrolling and retaining their wards in these schools. Lewin found that only a few people outside of the top two quintiles of household expenditure could afford unsubsidized secondary schooling in Sub Saharan Africa (Lewin, 2008).

#### *2.4.5 Gender*

Gender difference is another factor that poses a challenge to accessing secondary education. Girls' education is often deprioritized as so many girls do not have the same opportunities as boys to go to school. The 2007 CREAM report shows that in African countries like Kenya, girls in many communities are still viewed as housekeepers, thus, not deserving of being in school (Komora, 2014). Hence, equality and equity have not been fully achieved since there exist disparities in both rural and urban areas. The report also showed that, despite the introduction of the free primary education and other initiatives, there still exist massive poverty which decreases the financial capacity of parents to send their wards to school. Those with limited resources, therefore, prioritize sending their sons to school instead of girls since they believe they are likely to become breadwinners; source of income to their families. Also, according to the 2004 UNICEF

report, in many communities, it is a norm for girls to marry young, as young as 14 in some countries (Komora, 2014). Such early marriages, therefore, mean that girls have to stop schooling or not even start at all and be at home.

In a study to examine the obstacles to girls' participation in Free Day Secondary Education (FDSE) in Baringo, Kenya, results showed home-related factors and cultural factors as part of the significant barriers to accessing education. In a cross-sectional survey, 67.4% of respondents indicated that books were not enough and 76.5% reported that sanitary facilities were not available for girls (Yatich & Pere, 2017). This result concurs with results from Akyeampong & Rolleston (2009) who found in their study that not only indirect costs hinder access of impoverished children but opportunity costs as well. Again, 73.4% majority of respondents indicated that girls attend to home activities before going to school and most parents do not prefer sending their daughters to school in fear of losing their help at home (Yatich & Pere, 2017).

Yatich & Pere (2017) further found that early marriages are a barrier to girls' education. This finding coincides with results from Ohba (2009) which showed that girls in Samburu are withdrawn from school to engage in marriage before completing school. There is a keen interest in early marriages from parents because girls are seen as an indispensable source of income for their families in terms of bride price and household production.

Considering the cultural norms in Ghana, it is reasonable to assume that there would be some differences in the factors that influence a household's decision to send a boy or girl to school. Typically, girls are expected to do household chores, whether it be cooking, cleaning, or taking care of siblings. Boys, however, have less expected of them

when it comes to these activities and are encouraged to be in school. Also, the gender of a child is essential given the possibility of parental preferences for boys' over girls' education which arises from expected lower returns for girls due to lower female participation, employment discrimination and lower remittances from girls (Kabubo-Mariara & Kirii, 2006).

### 2.5 Abolishing Fees in Secondary School: The Argument

The discussion so far has made clear the need for abolishing school fees for students, especially at the secondary level. Fees act as a significant barrier that prevents children from accessing education, especially the poor and most vulnerable children like orphans (Hakielimu, 2017). In Ghana, a substantial portion of one-third of the total expenditure is allocated to education, and that of Ethiopia is about half of their total expenditure (Kattan & Burnett, 2004). Spending on education comes second to spending on food (Kattan & Burnett, 2004). The high expenditure on education, therefore, calls for the need for fees to be abolished so that more children, especially the poor, can attend school. According to a report by USAID, eliminating school fees will make it less costly for children to enroll in school, a good step towards achieving the EFA goals (USAID, 2007). Also, increased enrollment was realized in developing countries that implemented fees-abolishing initiatives. In Uganda, enrollment in primary school nearly doubled in the year after fees were abolished (Alhassan, 2016).

Similar increases in enrollment were realized in Cameroon, Kenya, Lesotho, Malawi, and Zambia after the abolishment of fees, most rapidly among disadvantaged children including orphans, girls and those in rural areas (USAID, 2007). In contrast, according to studies by Akyeampong (2009) and Rolleston (2009) on access and

retention in primary and secondary schools in Ghana, although the implementation of FCUBE increased enrollment in general, children from poor households continue to be underrepresented in enrollment (Akyeampong, 2009; Rolleston, 2009).

The argument for the abolishment of fees is that removing school fees despite being significant does not take the cost of education to zero. Even in schools where school fees are abolished, the poor and most vulnerable students still face other indirect charges like levies paid by parents for school maintenance, PTA dues, cost of transportation, opportunity cost of schooling and the cost of other schooling items (for instance, chop box, provisions, mattress) which act as a barrier preventing them receiving education (USAID: 2007). In poor households, the contribution of children to household income represents a large share of total revenue for those households (USAID, 2007). Abolishing fees, therefore, does not affect the opportunity cost of schooling (USAID, 2007).

## 2.6 Free Education and its Impact on Improving Access to education

Over the years, governments of developing countries like Ghana, Uganda, Tanzania, and Kenya have implemented free education policies and initiatives to remove financial barriers so that many children, especially the poorest, can access education. Free education came in the form of Capitation grants, school grants, scholarships, and government subsidies. The next part of this chapter focuses on Capitation grants and scholarships in Ghana as well as subsidized education in Kenya and their effects on improving access to education. By access, the section will look at the influence these free education initiatives have had on student enrollment rates, especially for children from poor households.

### *2.6.1 The effect of Capitation grants on student enrollment*

In 2005, Ghana implemented the Capitation grant scheme to facilitate the achievement of education for all, by financing the primary and junior secondary schools in Ghana in such a way that education is free for all (Acheampong, 2011). A UNICEF working paper in 2007 highlighted some benefits of the Capitation grant. Primary school gross enrollment experienced a nearly 10% increase which caused total primary enrollment to be 92.4% nationwide (Alhassan, 2016). Also, net primary enrollment increased from 62% to 69%, and overall basic school enrollment increased by 16.7% between the 2004/05 and 2005/06 academic year (Alhassan, 2016). However, Osei et al. (2009) after examining the impact of the Capitation grant on junior high students' enrollment rates, BECE pass rates and the performance gap between boys and girls found no significant relationship between Capitation grants and enrollment rates. Akyeampong (2011) found similar results when he explored whether Capitation grants enhanced access to primary, junior high and secondary education in Ghana using data from the two most deprived districts in North and South Ghana.

Fosu (2011) also investigated the impact of Capitation grants and school feeding programs on school enrollment, attendance, and retention in Ghana. Results from his study were in line with Osei et al. (2009) and Acheampong (2011) as he found no significant relationship between the Capitation grant and student enrollment. However, he found that the school feeding program had a positive and significant impact on school enrollment, attendance, and retention. Studies by Fentiman et al. (1999, 2001) also revealed that the health status of students has severe implications for attendance, retention, and dropout rates.

Further studies by Maikish and Gershberg (2008) found that the introduction of the Capitation grant caused an increase in enrollment among different populations and regions in Ghana. Boys experienced more rise in enrollment rates than girls and deprived districts also experienced relatively higher enrollment rates than non-deprived areas. The latter part of Maikish and Gershberg's findings contradicts findings from Kayabwe, Nabacwa, Eilor & Mugeni (2014) which showed that Capitation grants widened the gap between poor and affluent children even though it allowed more poor children to attend primary school.

The overall assessment of the Capitation grant and its impact on education outcomes indicate that it instantaneously increases student enrollment. However, the surge in enrollment instead falls drastically. The resulting drastic fall is because, as enrollment rates rise, the quality of teaching and learning decreases. The increased number of students causes congestion in classrooms and put pressure on learning materials since the increase in enrollment does not match the learning facilities available.

#### *2.6.2 Other forms of subsidies and their impact on enrollment*

Ohba (2009) assessed whether government subsidies on education (US\$164 per child per year for all the children in government secondary schools) enabled more children to attend school using 2007 and 2008 data from a rural district, Makueni in Kenya. He found that fees were reduced substantially but not completely abolished in these schools. Also, enrollment increased to about one person in every third household. However, many poor children were excluded as they had to bear the "cost" of free education; for instance, the subsidies applied to only students in boarding school. Poor children whose parents could not raise the cost of boarding school had challenges in

enrolling. Al-Samarrai (2003) found results similar to Ohba's when he explored the relationship between public spending and primary level education outcomes. The study found a weak link between public spending on education and enrollment rates.

Agreeing with Ohba (2009) and Al-Samaria (2003), Gaddah and Munro (2011) after examining the impact of public subsidies on education in Ghana found that 14.8% of the most impoverished students benefited whereas 26.3% of the richest benefited in 2005. They concluded that public spending on education does not favor the poor in absolute terms. Also, the poorest households gain more at the basic level of education while at the post-basic level, benefits from subsidies accrue disproportionately to wealthier families. For instance, in 2005, rural areas received a disproportionate share of public education benefits, getting 59.2 % of total education subsidies which decreased as the level of education increased. Findings from Wachiye (2017) further complements results from Gaddah & Munro (2011) because it was revealed from his studies that students from middle and low-income households in Kenya (Bungoma County) benefited more from free secondary education in Kenya as those from poor income households benefited the least. Also, the amount of tuition waiver that was provided by the government was inadequate for the educational needs of students especially the poor.

In further research to study how access to basic school education has evolved in Ghana, Akyeampong, Djangmah, Seidu & Hunt (2007) found that it is crucial that children start school at the appropriate age especially at first grade. This is because there is a high risk of older children dropping out and not having to pursue their post-basic level education. They get pulled away into the informal labor market especially in situations where poverty is high. Oketch & Rolleston (2007) also reviewed the literature



discussing three countries (Kenya, Tanzania, Uganda) for expanding access to education with regards to enrollment and equity of excluded groups. They found that the elimination of fees resulted in increased enrollment in all three countries.

More recently, Duflo, Dupas & Kremer (2017) examined the impact of government scholarships (the Innovation for Poverty Action scholarship) on the lives of young adults using secondary data including 2,064 youth between 2008 and 2016. It was found that secondary school completion rates increased by 30 percentage points. Furthermore, the study revealed that secondary school imparted significant gains in learning, healthier behaviors, and delayed marriage, particularly for females. Also, those who were granted the scholarship had higher earnings and were five percentage points more likely to be earning a positive income.

### 2.7 Targeting the poor and vulnerable

There have been several studies on targeting initiatives that help improve access to education for the poor and the most vulnerable in society. According to Lewin (2008), systems which adopt selective fee waivers are able to achieve increasing enrollment for the poor compared to completely fee-free secondary systems. In Nepal, children from poor households are exempted from paying fees at the secondary school level (Essuman, 2018). Also, in Bangladesh, financial obstacles to secondary school have been removed for girls with the introduction of free stipends. This resulted in more girls enrolling in secondary schools than boys (UNESCO 2012). Malawi in an attempt to reduce dropout rates among teenage girls used the cash transfer system to target teenage girls (UNESCO, 2012). Lee (2002) asserts that instead of providing subsidies in schools, direct transfers are more effective as they support those who need it. Raynor (2006) also provide

examples of how in the Bangladesh's government quest in 1982 to increase female enrollment and retention in secondary school introduced monthly stipends, and payments of book and exams fees as they progressed.

In Malaysia, the Poor Students Trust Fund was also implemented to cater for the educational needs of students from families below the poverty line. Govinda posits that there is a propensity for most secondary schools to be situated in urban areas (Govinda, 2003 as cited in Essuman, 2018). This, he recognized, has an effect of marginalizing the already marginalized from education. He further explains that in expanding access to secondary education, there is a need to balance quantity, quality, and equity. He cited examples of how some East Asian countries expanded secondary education. Thailand in 1991 implemented a targeted expansion where lower level education was made free for students in selected villages. In India, expansion focused on street children, ethnic minorities, rural households and child laborers. Each group had specific programs that targeted their particular needs. For example, the government constructed new educational centers closer to households in need as a critical way of reducing indirect costs such as transportation costs (Lee, 2002).

## 2.8 The Impact of Free Education on Quality of Education

### *2.8.1 What is quality education?*

People define quality and, in this case, quality education, in different ways. As such, there is no consensus on the definition of the concept of quality education. The lack of clarity in defining quality poses challenges when it comes to measuring quality education (Ankomah et al., 2005). Despite this difficulty, the general practice has been to use assessment studies to define the quality of education concerning learning

achievements of students and their learning environment (Rose et al., 2006; Saito, 2008). This way of defining quality education is inspired from a study by (Hanushek & Woxmann, 2007; World Bank Independent Evaluation Group, 2007) which revealed that good quality education in terms of learning outcomes in literacy and life skills can contribute to high productivity, high incomes, economic and social growth, improvement in health conditions, and the birth of innovative ideas.

Hallak (1991) explores the definition of quality from the perspective of parents and students. According to Hallak, quality education goes beyond a better school environment, qualified and trained teachers and adequate textbooks. It includes relevance to local needs, adaptability to local conditions (cultural, economic), special consideration for the marginalized (the poor, disabled people, orphans), flexibility in addressing cultural obstacles (especially among girls and women), and the integration of formal schooling into a more substantial and evolving learning environment. Quality education must have the ability to equip students to adapt to new environments and economic settings.

### *2.8.2 The effect of free education on quality*

Using primary data and thematic analysis, Epke (2012) explored the perception of quality education at the policy level in the Greater Accra region of Ghana. The study found out that Ghana measures the quality of education through input, process and outcome variables with a focus on enhanced student learning achievements. The study also found out based on the Basic Education Certificate Examination (BECE) results that quality education has been decreasing especially after the implementation of the Capitation grant. Studies from Osei et al. (2009), Maikish & Gershberg (2008) and

Kayabwe, Nabacwa, Eilor & Mugeni (2014) found that increases in enrollment rates due to the introduction of the Capitation grant had adverse implications on quality. This is because the surge in enrollments put excessive pressure on existing school facilities. As a result, some students are discouraged from attending school to stay at home. Some parents also get discouraged from sending their wards to school when they know that facilities cannot support a proper education for their children.

Also, in some instances, the influence of corruption was another problem that affected the management of the Capitation grant scheme. In assessing the impact of Capitation grant on student enrollment in selected junior high schools in the Sunyani Municipality, Asante (2011) discovered that corruption affected the efficient running of Capitation grant. The study revealed that figures from head headteachers showed that enrollment in schools increased by 45% between the 2005/2006 and the 2008/2009 academic years. However, data from district directors of education for the same period indicate an increase of 13%. These inconsistencies in enrollment figures should be worrying because they gave room for corruption.

In a paper to assess the influence of Capitation grant on primary school enrollment in the Amansie West District of Ashanti, Alhassan (2016) noted that there were inefficiencies in the management of Capitation resources due to the influence of corruption. He further recommended that checking corruption can be one of the most effective ways to increase enrollment because if mechanisms are put in place to check fraud in the disbursement of the Capitation grant, then a Capitation system could be more effective (Alhassan, 2016).

Results from a study on investigating the effectiveness and sustainability of Capitation grant in Northern Ghana found that the sustainability of the scheme was weak. The investigation further revealed that the cumbersome nature of grant disbursement frustrates school authorities applying for the grant and make them use unacceptable means of accessing the grant, thus introducing corruption in the process.

Furthermore, Kayabwe, Nabacwa, Eilor & Mugeni (2014) found that the impact of the universal primary education program, for instance, was negatively affected by insufficient grants, delays in payment, automatic promotion, inadequate infrastructure, inadequate teaching and learning materials, and a lack of provision of lunch at school. In similar studies by Oketch & Rolleston (2007) and Al-Samarrai (2003), they found that increased enrollment has resulted in concerns for deteriorating quality and increased demand for secondary education.

### 2.9 Challenges Associated with Free Secondary Education Implementation

According to a study by Godda (2018), the provision of free secondary education in the Singida municipality of Tanzania had birthed various implementation challenges which added more roles to the heads of public secondary schools. The problems included high student enrollment and the accompanying inadequate funds to meet the needs of schools. In other studies, Muhindi (2012) and Maikish & Gershberg (2008) found similar results to Godda's which revealed that secondary school subsidies were inadequate and not disbursed at the right time, a problem that resulted in a delay of planned activities. Moreover, Osei et al. (2009) found in their studies that even though Capitation grants have increased over the years since 2005, there were drawbacks in what was promised and what schools received from the Ghana Education Service. Regarding inadequacy, the

study found that the cost of compulsory school items and other direct payments by parents despite subsidization of fees discouraged some parents from sending their wards to school.

For instance, in the Nyeri South District in Kenya, the compulsory cost that a new student had to meet to attend secondary school amounted to an average of 12,622 shillings. A majority of 87.5% of students were unable to meet such compulsory costs. In investigating the challenges in the implementation of free secondary education policy in Bungoma County, Western Province of Kenya, Khakasa (2011) found that headteachers were least prepared for managing free secondary education since they rarely acquired the necessary training. This is in line with studies from Chepkonga (2006) and Kilonzo (2007) who found that principals need training in very key management areas such as accountancy, preparation of budgets and general management and that all primary head teachers need training in management.

In further studies, Adan & Orodho (2015) examined the constraints of implementing free secondary education in Mandera County, Kenya and found that the management capacity of the principals, time of funds disbursement to schools and parental support are the major factors that affect the implementation of free secondary education. However, socioeconomic factors like teenage pregnancy, school levies, and drug addiction impact negatively on the implementation process of free secondary education in schools. This observation supports findings from Wanyonyi (2004) which showed that factors such as early marriages, pregnancies, domestic duties, negligence by parents in terms of discipline and peer pressure affect the implementation of free basic education and caused dropouts in schools. Also, Acheampong (2011) found that a

management system unprepared to deal with the increase in enrollments through increased infrastructure and incentives may find that Capitation grants and other forms of subsidies create more problems for future attempts to improve student enrollment rates.

### Conclusion

Firstly, from the review, free secondary education is essential in increasing enrollment but leads to relatively low enrollment for poor households. Also, studies reviewed so far found no significant relationship between intervention programs like the Capitation grant and an increase in enrollment. Also, there is not enough literature on free secondary education as there is on free primary education in the major developing countries that were reviewed; Kenya, Uganda, Tanzania, and Ghana. Thus, findings from this research will significantly contribute to the existing literature on free secondary education.

Again, most of the free education policies that were previously implemented in Ghana mainly targeted basic education (primary and junior high school levels). A significant gap this research is going to fill is to contribute insights and findings on free secondary education in Ghana. Furthermore, previous free education policies that were implemented in Ghana and other developing countries like Kenya and Uganda were limited in scope as they focused mostly on deprived regions and districts. However, this study has focused on the entire country to yield results that can better be generalized.

## CHAPTER 3: METHODOLOGY

### 3.1 Introduction

The purpose of the study is to investigate whether the free SHS policy will benefit poor secondary school students in Ghana, specifically through a reduction in poverty. This chapter explains the research methods and tools that were used to collect and analyze data to achieve the objective of the thesis. The chapter is made up of the following subsections: research design, the scope of the study, data collection process, and data analysis.

### 3.2 Research Design

The purpose of the research design is to help answer the research question of a study so that the objectives of the research are achieved. The research design is a strategy that justifies the methods employed in a study and how those methods relate to the research questions and objectives (Jupp, 2011). This study uses a quantitative research approach. This research method uses numbers, statistical and mathematical computations to answer a research question measuring relationships, studying a phenomenon or predicting variables (Leedy 1993). A quantitative approach provides more objective and reliable results. The procedure is also crucial for this research because the research aims to describe different variables and make reasonable conclusions. The study also uses a descriptive research design to explain the trends and current states of the different variables used in this study (Fischer et al., 2014). Using a descriptive research design helped describe sample variables, present trends and the current state of critical variables that were relevant for this study. A descriptive analysis was essential to show a pattern in variables that directly relate to the education of secondary school students in Ghana.



### *3.2.1 Research Variables*

The specific variables used include those under education, household consumption of education, and poverty.

- Education

The objective of this thesis is to investigate whether the free SHS policy will reduce poverty in Ghana. It is therefore essential to explore education variables especially those concerning secondary level education. The first variable under consideration is secondary gross and net enrollment rates. This variable helped study the trends in enrollment over a specific period. Enrollment rates are presented in graphs, also showing annual patterns by gender.

Additionally, considering that expenditure on education is a significant reason why many poor people do not go to school and most importantly why the free SHS policy was introduced, spending on education is a variable of relevance in this study. This variable is presented in a table and shows the distribution of household expenditure on secondary school education, the share of household expenditure on education by gender, residence (rural or urban), region, and the different quintiles. The table also shows the components of total spending on education. It includes school and registration fees, cost of books, cost of food, cost of uniforms, transportation cost, cost of extra classes and PTA contribution.

- Household Consumption

To understand how households cater for the educational needs of students, it is crucial to understand their well-being. The well-being of households can be measured in two ways, either through household income or household consumption. This thesis employs household consumption to measure well-being because it is a better measurement for

poor households. Even though income is generally simpler to report, consumption is less vulnerable to under-reporting bias (Meyer and Sullivan, 2002). Using consumption also classifies the poor as those who lack the financial ability to cater for basic consumption needs, including food and non-food components below the upper (poverty) line and the lower (extreme poverty) line (GSS, 2018). An extreme poverty line of GH¢792.05 per adult equivalent per year focuses on what is needed to meet the nutritional needs of household members. An upper poverty line of GH¢1,314 per adult equivalent per year includes both essential food and non-food consumption (GSS, 2018).

The variables that are discussed under household consumption includes the average cash transfer (adult equivalent). A tabular representation of this variable shows an aggregation of household consumption by quintiles, regions, gender, poverty status and residence. This is to help study and compare disparities in consumption between the poor and the non-poor, rural and urban households, different regions, quintile and gender groups.

- Poverty

In understanding the nature of poverty in households, poverty headcount ratio by regions and area of residence are presented in a table. The poverty ratio shows the proportion of households living under the national poverty line. Additionally, the distribution of the poor in rural, urban areas and regions are also presented in tables to understand the proportion of households that are poor in these areas and regions.

### *3.2.2 Data Sources*

Secondary data from the Ghana Living Standards Survey (GLSS) round seven and the World Bank are used in this study. These sources are used because they contain the relevant data in the most credible and accurate form for this study.

### 3.3 Scope of Study

The total population for the research includes all households in Ghana. This data was derived from the GLSS which contains household data on all regions in Ghana. This research seeks to address a question with a national scope. This scope is, therefore, necessary and suitable to capture all data relevant for the study.

### 3.4 Data Analysis

This study employed both descriptive analysis and simulations in analyzing data. Education, poverty, and welfare variables were described. Secondary education share of household expenditure was calculated as the proportion of annual educational spending divided by the total annual household expenditures. Poverty headcount ratio was calculated as the proportion of the population below the poverty line (upper poverty line). The distribution of beneficiaries of the program was calculated as the number of individuals in the group who live in a household where at least one member receives the transfer divided by the total number of direct and indirect beneficiaries. For each household included in the simulation, the per capita average amount received was estimated as the total amount received divided by the size of the household.

Two simulations were performed using sampled household data from GLSS. The following assumptions were made underlying the simulations that were performed:

- All SHS students are within the secondary school going age

- All beneficiary households have children within the secondary school going age enrolled in SHS
- In the first simulation, the free SHS program benefited all households with secondary school going children
- In the second simulation, the free SHS program benefited only rural households with secondary school going children

### 3.5 Limitations of the research

Actual data on the free SHS policy is not readily available for this study. The GLSS household data used in this research does not capture the free SHS policy. The data, however, is useful in predicting the likely impact of the free SHS policy on reducing poverty in Ghana. Two simulations are performed with the GLSS data under certain assumptions to understand their effect on poverty levels. Due to this, the results of this study are predictive.

## CHAPTER FOUR: RESULTS

### 4.1 Introduction

This chapter analyzes and presents the findings obtained from the research through a descriptive analysis of the data. The purpose of this chapter is to investigate the impact of the free SHS policy on poverty in Ghana. Specifically, the research sought to answer the following question; will the free SHS policy reduce poverty in Ghana?

### 4.2 Understanding the trends in secondary enrollment

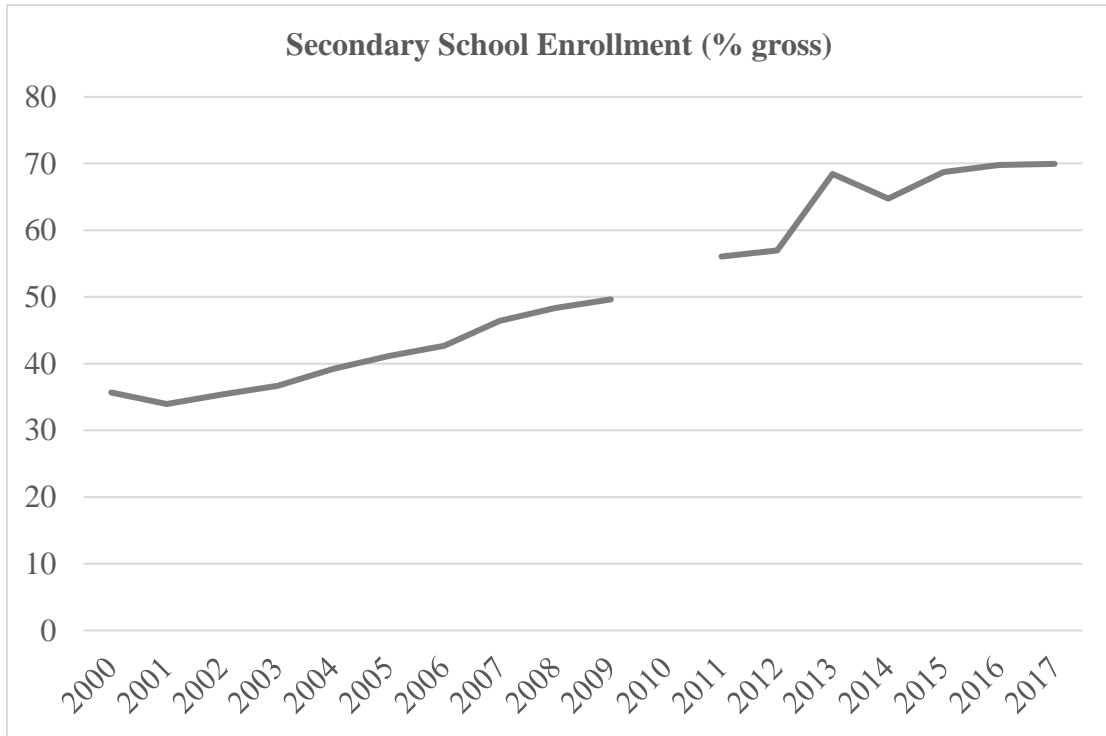
As a preamble to understanding the research question posed in this thesis, the graphs below discuss how gross and net secondary enrollment has evolved between 2000 and 2017. This time frame was used as it captures the period where intervention programs like the Capitation grant and free SHS were implemented. The literature reviewed so far revealed that girls face several problems that act as obstacles preventing them from accessing secondary education. To explore gender bias in secondary school enrollment, the second and third graphs, shown below further shows how gross and net male and female enrollments have evolved over the ten years.

From figure 1 below, secondary school gross enrollment increased consistently between 2000 and 2017. There was a sharp increase in enrollment from 2012 to 2013 after which enrollment rates fell sharply in 2014 and continued to increase at a fairly steady pace. The lowest enrollment rate was 33.95% (in 2001) whereas the highest enrollment rate was 69.95% (in 2017), signaling an increase in secondary enrollment by 36% over the period.

Figure 2 shows an increasing trend in gross secondary enrollment both for males and females. Again, the lowest rates for both genders occurred in 2001. However, the

highest enrollment rate occurred in 2013 for males, but in 2017 for females. An interesting observation is that, even though gross enrollment increased continually for both genders, total enrollment for males increased more than that for females within the ten years. This observation resonates with findings indicating that girls receive less education as many of them get engaged in household activities and marriage and do not have the same opportunities as their male counterparts to enroll in secondary school (Ohba, 2009; Komora, 2014; Yatich & Pere, 2017).

In figure 3, the lowest rates for both males and females were recorded in 2001, whereas the highest rate for males and females were recorded in 2013 and 2017 respectively. Generally, net enrollment for both genders is lower than the gross enrollment because of a likely incidence of under-aged and over-aged students, not captured in the net enrollment. From 2000 to 2015, net enrollment for males was higher than those for females. However, in 2016 and 2017, net enrollment for females was 0.12% and 0.76% higher than those for males respectively. This observation, however, contradicts the findings from studies by Ohba (2009), Komora (2014) and Yatich & Pere (2017).



*Figure 1 Gross Secondary School Enrollment in Ghana (2000-2017)*

*Source: Author's computation based on World Bank data (2000-2017)*

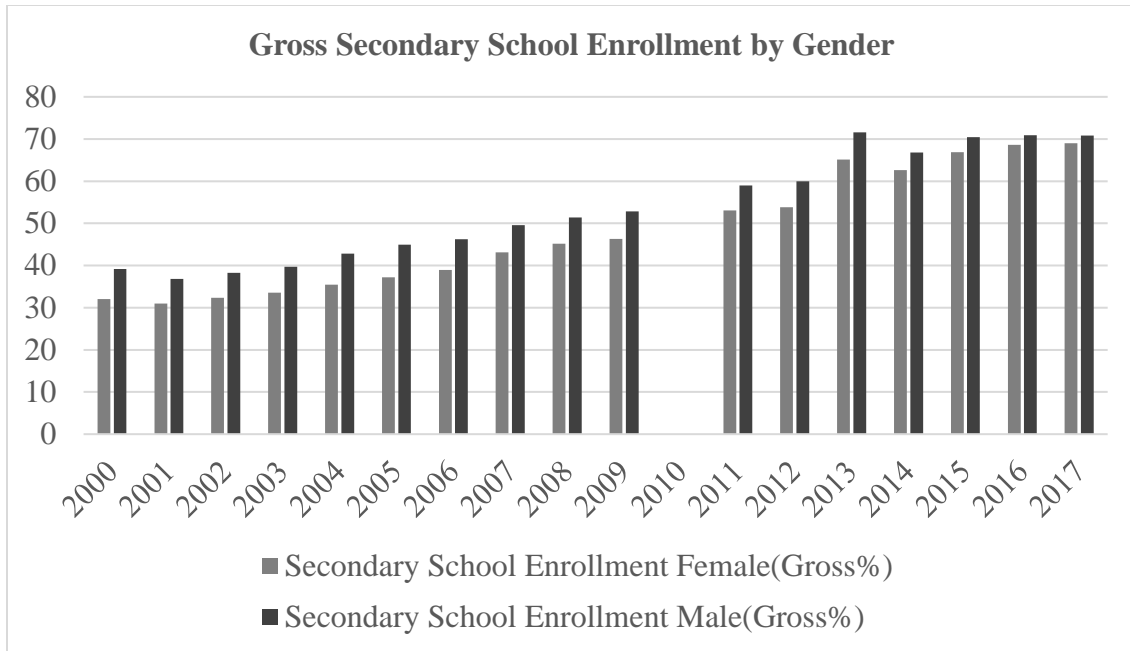


Figure 2 Gross Secondary School Enrollment by Gender (2000-2017)

Source: Author’s computation based on World Bank Data (2000-2017)

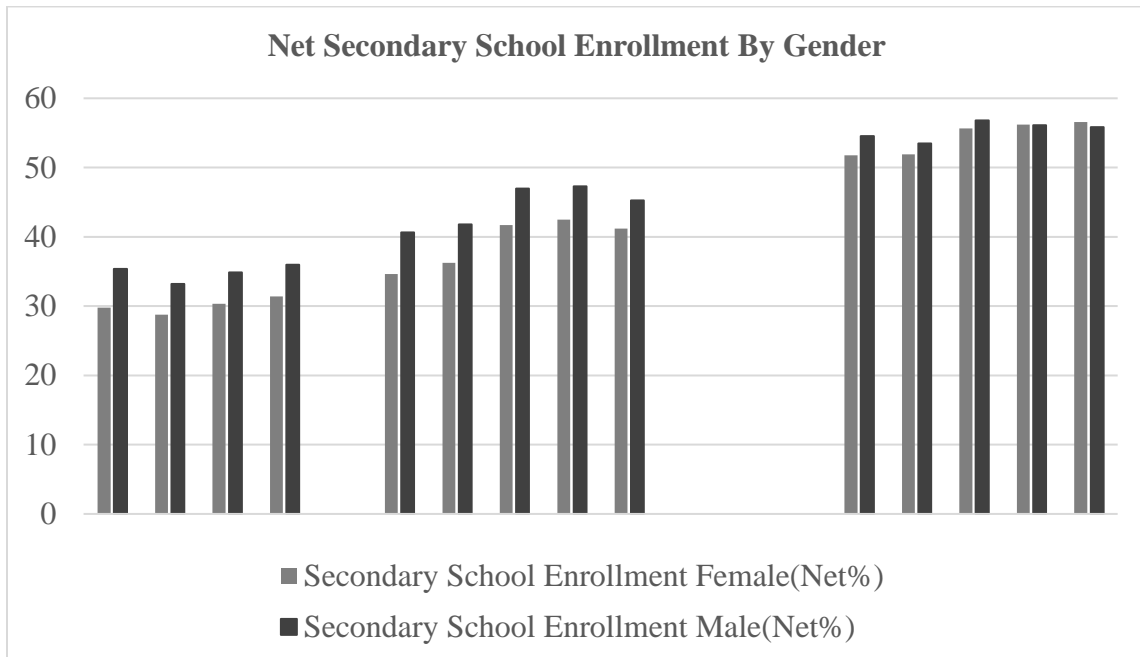


Figure 3 Net Secondary School Enrollment by Gender (2000-2017)

Source: Author’s computation based on World Bank Data (2000-2017)



## 4.3 Discussion of results

Table 1

*Household expenditure on secondary school education*

	Education share of household expenditure (%)	Annual average education spending per child attending	School registration fees	Books and school supplies	Transportation to/from school	Foods, board, and lodging at school	School uniforms	Contribution to the parent-teacher association	Other educational expenditures
<b>Total</b>	10.5	1,764.3	48.6	11.6	6.4	23.0	3.1	2.6	4.6
<b>Gender</b>									
Boys	10.8	1,619.7	48.7	11.5	6.5	23.2	3.0	2.4	4.7
Girls	10.2	1,930.5	48.6	11.6	6.4	22.9	3.2	2.7	4.5
<b>Area of residence</b>									
Urban	9.9	1,988.1	49.3	11.4	7.3	21.9	2.6	2.2	5.2
Rural	11.5	1,422.6	47.6	11.8	5.1	24.8	4.0	3.1	3.6
<b>Residence and gender</b>									
Urban - Boys	10.0	1,798.0	50.5	12.0	7.2	20.2	2.6	2.1	5.4
Urban - Girls	9.8	2,170.0	48.1	10.9	7.4	23.7	2.6	2.4	5.0
Rural - Boys	11.8	1,399.7	46.3	11.0	5.6	27.0	3.6	2.8	3.7
Rural - Girls	11.1	1,457.8	49.7	13.2	4.3	21.2	4.6	3.5	3.5

**Household  
Wealth**

Poorest Quintile	12.1	806.1	53.5	14.7	4.0	16.8	5.7	2.8	2.5
Second Quintile	10.8	1,105.4	51.0	12.0	5.6	21.5	3.6	3.1	3.1
Third Quintile	10.4	1,432.3	48.1	10.5	8.8	23.2	2.1	2.7	4.5
Fourth Quintile	10.0	1,797.9	45.0	11.8	6.5	26.6	2.7	2.7	4.7
Richest Quintile	10.1	3,317.7	48.8	10.3	5.9	23.3	2.9	1.7	7.2

**Household wealth and  
gender**

Poorest Quintile -Boys	12.4	816.9	50.7	15.0	4.0	19.1	5.2	3.2	2.8
Second Quintile- Boys	11.1	1,175.8	52.5	12.1	5.5	21.0	3.3	2.4	3.2
Third Quintile - Boys	10.3	1,436.1	45.5	10.2	10.5	25.0	1.8	2.3	4.7
Fourth Quintile - Boys	11.0	1,895.6	47.6	12.0	4.8	25.0	2.3	2.6	5.5
Richest Quintile- Boys	9.3	2,838.4	48.7	9.2	6.2	23.7	3.9	1.5	6.8
Poorest Quintile - Girls	11.7	789.0	58.4	14.1	4.0	12.8	6.6	2.0	2.0
Second Quintile - Girls	10.4	1,010.7	49.0	12.0	5.8	22.3	4.1	4.0	2.9
Third Quintile – Girls	10.5	1,427.1	52.1	11.1	6.3	20.6	2.5	3.2	4.3
Fourth Quintile – Girls	8.8	1,677.5	41.7	11.6	8.6	28.6	3.1	2.7	3.6
Richest Quintile – Girls	10.6	3,620.2	48.9	10.9	5.6	23.1	2.2	1.9	7.4

**Gender of the household  
head**

Male	9.7	1,672.2	48.5	11.4	6.4	23.5	3.1	2.3	4.7
Female	12.2	1,948.2	48.9	11.9	6.5	22.1	3.2	3.0	4.5
<b>Education of the household head</b>									
No education	10.3	1,149.0	53.5	11.2	5.3	19.6	4.2	3.2	2.9
<b>Region</b>									
Western	11.2	1,648.7	50.4	8.0	6.2	24.2	2.2	4.6	4.3
Central	10.1	1,659.7	51.5	10.6	3.5	23.0	2.4	3.1	5.8
Greater Accra	10.5	3,177.6	46.5	10.4	6.4	26.6	3.2	1.0	5.8
Volta	10.8	1,460.5	44.7	9.5	6.3	23.4	4.1	6.2	5.8
Eastern	10.2	1,429.1	36.2	11.2	6.7	35.5	2.5	2.9	5.0
Ashanti	11.5	1,836.1	51.2	12.7	9.5	19.7	2.0	1.1	3.8
Brong Ahafo	9.6	1,113.8	43.1	17.6	6.6	23.2	1.7	2.5	5.2
Northern	8.1	763.5	69.8	8.5	2.5	9.8	5.5	2.2	1.8
Upper East	11.2	894.8	48.6	14.1	2.9	20.2	6.7	3.9	3.6
Upper West	13.3	963.5	48.1	13.2	7.3	14.7	10.6	5.4	0.8

*Source:* Author's computation based on GLSS data (2016/2017)

Table 1 above shows the distribution of household expenditure on secondary school education, the share of household expenditure on education by gender, residence, region, and quintiles. Spending on secondary education formed 10.5% of total household expenditure in 2017. The average cost per secondary school child was GHS 1,764.3. Spending on school fees (48.6%) formed the highest portion of education whereas spending on PTA dues (2.6%) constituted the least. The high cost of school fees affirms what Hakielimu (2017), Canagarahji & Coulombe (1997) and Lewin (2009) found in their studies regarding secondary school fees being expensive and a significant obstacle that prevents a lot of children especially the poor from accessing education. Out of the indirect educational expenses, expenditure on food and books formed a substantial portion of total spending on education. These indirect expenses according to USAID (2007) could act as barriers to accessing education even if school fees are abolished. Out of the total expenditure on education, spending on males is higher than that of females by 0.6 percentage points. This observation shows that girls may be discriminated against when it comes to enrolling in secondary school. Less female enrollment in a secondary school as compared to males may also be due to factors such as early marriages, helping at home as Komora (2014) and Yatich & Pere, (2017) found in their studies.

The annual average expenditure per child living in a rural area is about GHS 565.5 less than a child living in an urban area. The share of household expenditure on education for girls living in urban areas is substantially lower than for boys in urban areas. Similarly, the percentage of household expenditure on education for girls living in rural areas was lower than for boys living in rural areas. Similar results were revealed in studies by Shabaya & Konadu-Agyemang (2004) who found that girls are generally

disadvantaged compared to boys in terms of educational access, but the probability of attending school is further worsened for those girls living in rural areas.

Table 2

*Sample and population sizes used for simulation*

	Sample size		Population	
	Households	Individuals	Households	Individuals
All observations	14,009	58,844	7,299,925	27,897,740
All households that benefit from the free SHS	562	3,768	275,625	1,714,370
Rural households that benefit from the free SHS	287	2,188	108,051	769,990

*Source:* Author's computation based on GLSS data (2016/2017)

Table 2 shows the total number of household and individual beneficiaries of free SHS. Out of a survey population size of 275625, a sample of 562 households were recipients of the program. At the individual level, 3,768 SHS students were simulated to benefit from the free SHS program. In the second simulation, about 287 rural households and 2,188 SHS students in rural areas also benefited from the program.

Table 3

*Average per capita amount of fees allocated to beneficiary households*

	Quintiles of per capita consumption									
	Total	Lowest	Second	Third	Fourth	Highest				
All households that benefit from the free SHS	43.7	14.1	28.7	41.4	65.7	152.3				
Rural households that benefit from the free SHS	34.9	14.1	30.0	44.1	76.2	211.8				
	Poverty Status		Area of residence							
	Poor <sup>1</sup>	Non-poor	Urban	Rural						
All households that benefit from the free SHS	35.4	164.3	50.9	34.9						
Rural households that benefit from the free SHS	28.8	211.8	n.a.	34.9						
	Region									
	Western	Central	Greater Accra	Volta	Eastern	Ashanti	Bronx Ahaf o	Northern	Upper East	Upper West
Cash transfer (all)	44.5	45.4	55.8	33.5	62.1	45.1	50.0	20.1	33.8	28.2
Cash transfer (rural)	24.9	56.3	123.4	29.2	54.7	30.8	40.9	14.0	32.7	27.1

<sup>1</sup> Information in table 3 and all tables that follow concern households who are beneficiaries of the free SHS

Table 3 above shows the average per capita cash transfer received by beneficiary households of the free SHS program. The table also presents changes in per capita consumption for the different quintiles of beneficiary households. The total average per capita amount received is approximately GHS 60. The average per capita amount of fees provided to all beneficiary households is about GHS 44 whereas fees offered by the government to rural areas amounted to about GHS 35. Across all the beneficiary groups, consumption for the different quintiles increased significantly. The wealthiest quintile received an amount worth about GHS 152 whereas the poorest quintile received about GHS 14 on average. The benefit received by rural households increased reasonably across all quintiles with the highest quintile receiving about GHS 212 whereas the lowest quintile received a significantly lower amount of GHS 14.

Observations from table 3 reveal a huge gap in the amount of free SHS benefit between poor and non-poor households. The non-poor households received about four times what was received by poor households. Similarly, poor rural households received about seven times than what was received by non-poor rural households. With regards to the area of residence, urban households received a higher per capita amount of free SHS benefit than urban households. As rural households received GHS 35 on average, urban households received GHS 51. The disparity in the education subsidy between the poor and the non-poor affirms claims from Gaddah & Munro (2011) and Wachiye (2017) that public subsidies on education accrue disproportionately to wealthier households.

For the beneficiary regions of the free SHS, Eastern region received the highest benefit which amounted to GHS 62 with Northern region receiving the least amounting to GHS 20. However, for the benefit allocated to only rural households, Greater Accra

region received the highest amount of about GHS123, eight times what rural households in the Northern region received on average. Observation from the amount of free SHS funds received in the different regions depict high levels of disparity. The three most deprived regions still received the least proportion of government spending on secondary education with the three least deprived regions; Greater Accra, Ashanti, and Eastern region receiving the highest proportion of government spending on secondary education.



Table 4

*Coverage of the free SHS program*

	Quintiles of per capita consumption					
	Total	Poorest	Second	Third	Fourth	Richest
All households that benefit from the free SHS	6.1	7.8	7.4	8.1	5.0	2.3
Rural households that benefit from the free SHS	2.8	6.1	3.5	2.8	0.9	0.5

	Poverty Status		Area of residence	
	Poor	Non-poor	Urban	Rural
All households that benefit from the free SHS	7.1	2.1	6.7	5.6
Rural households that benefit from the free SHS	3.3	0.5	0.0	5.6

	Region									
	Western	Central	Greater Accra	Volta	Eastern	Ashanti	Brongh Ahafo	Northern	Upper East	Upper West
All households that benefit from the free SHS	6.1	7.2	5.5	6.3	5.5	6.1	5.3	6.9	7.3	7.2
All households	2.6	3.1	0.3	3.7	3.0	2.6	2.2	4.7	4.8	5.7

lds that  
benefit  
from the  
free  
SHS

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*Source:* Author's computation based on GLSS data (2016/2017)

Table 4 depicts the coverage of the free SHS program, that is, the portion of students in each group that benefited from the program. A total proportion of 6.1 of all simulated households benefited from the program. A relatively lower proportion of 2.6 out of the total is rural households who benefited of the program. The table further shows some variations in the proportion of the different quintiles included in the free SHS program. A substantial proportion of the highest quintile was involved in the program compared to those in the lowest quintile.

Similarly, a larger proportion of the poor was included in the program compared to the non-poor. Specifically, the proportion of the poor who were included is about three times the proportion of the non-poor. This observation shows the inclusion of more poor students in free SHS thus, helping to bridge the poverty gap between the poor and the rich in terms of their inclusion. Conversely, a substantial proportion of urban households were included in the program as compared to rural households. This is an indication of a widening gap between rural and urban households in terms of their inclusion in free SHS.

A further observation from the table shows low variations in the proportion of people in each beneficiary region. The highest number of students who were included in the program is situated in the Upper West region whereas the Brong Ahafo region recorded the least beneficiaries of the program. Upper West region was the largest beneficiary of the program with Greater Accra being the smallest beneficiaries of the

transfer. This shows a higher level of inclusion of the most deprived regions in free SHS, thus, bridging the gap between deprived and least deprived regions.

Also, tables 3 and 4 show that even though more poor students were included in the free SHS program than the non-poor, the amount of government funds that went to the poor is comparatively lower than what was received by the non-poor.

Table 5

*Distribution of beneficiaries of the free SHS program*

	Quintiles of per capita consumption					
	Total	Poorest	Second	Third	Fourth	Richest
All households that benefit from the free SHS	100.0	25.5	24.2	26.6	16.2	7.5
Rural households that benefit from the free SHS	100.0	44.4	25.6	20.0	6.7	3.3

	Poverty Status		Area of residence	
	Poor	Non-poor	Urban	Rural
All households that benefit from the free SHS	93.5	6.5	55.1	44.9
Rural households that benefit from the free SHS	96.7	3.3	0.0	100.0

	Region									
	Western	Central	Greater Accra	Volta	Eastern	Ashanti	Bronghma Ahafo	Northern	Upper East	Upper West
All households	10.1	10.1	14.7	8.8	9.5	19.1	8.1	11.3	5.0	3.3

lds that benefit from the free SHS Rural households										
lds that benefit from the free SHS	9.6	9.6	1.8	11.4	11.8	18.1	7.5	17.0	7.3	5.8

*Source:* Author’s computation based on GLSS data (2016/2017)

In table 5 above, the number of poor people who benefited from the free SHS program when the government subsidized education for only rural areas was more than when the government subsidized education for all SHS students. In the first case, the proportion of the most deprived quintile that benefited was 44.4. In the second case, the proportion of the poorest quintile that benefited was 25.5. Conversely, the proportion of the wealthiest quintile benefitting from the free SHS was higher when the program was made available to all beneficiary households, than when it was made to only rural households. This observation suggests that there is a need for more government funds to be targeted at the poor in rural areas. However, this is not to ignore the fact that poor people also reside in urban areas. Similarly, there is a need for government funds to be targeted at the poor living in urban areas as well.

Table 6

*Mean and median adult equivalent consumption expenditure and the Gini Coefficient*

	Mean	Median	Gini Coefficient
Original data			
Urban	5,462.1	4,301.8	36.5

Rural	2,810.4	2,186.7	40.5
Total	4,155.3	3,162.2	41.6
Simulations 1			
Urban	5,478.1	4,319.0	36.4
Rural	2,821.3	2,196.5	40.4
Total	4,168.8	3,179.0	41.5
Simulations 2			
Urban	5,462.1	4,301.8	36.5
Rural	2,821.3	2,196.5	40.4
Total	4,160.7	3,170.5	41.5
Percentage change			
Urban	0.3	0.4	
Rural	0.4	0.4	
Total	0.3	0.5	
Percentage Point Change			
Urban			-0.1
Rural			-0.1
Total			-0.1

*Source:* Author's computation based on GLSS data (2016/2017)

<sup>2</sup>Table 6 shows the adult equivalent consumption of education in rural and urban households before and after two simulations. The first simulation looked at the effect on adult equivalent consumption and inequality in rural and urban households considering that the government subsidized expenditure on education for all households. The second simulation, however, looked at the effect on adult equivalent consumption and inequality in rural and urban households considering that the government subsidized expenditure on education for only rural households. Before the education subsidy, the average

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<sup>2</sup> Percentage point changes shown between Actual and Simulated 1

consumption borne by urban households was GHS 5,462.1 which is about twice higher than the consumption of rural households (GHS 2,810.4).

The wide variation in consumption indicates the level of inequality between urban and rural areas. Another reason for the less consumption of secondary education in rural areas could be associated with distance (Ohba, 2009). According to Ohba (2009), distance influences access to education, in that, when secondary schools are very distant from students especially those in rural areas, they get discouraged from going to school. Urban households recorded a Gini coefficient of 36.5% whereas rural households recorded a coefficient of 40.5%. This shows that there exists a higher level of inequality in rural households than in urban households.

Considering an educational subsidy from the government to all beneficiary households, the average expenditure in urban households increases by GHS 16 whereas the average expenditure in rural areas only increases by about GHS 11. The level of inequality in both urban and rural areas decreased by 0.27% and 0.25% respectively. This shows how the implementation of the free SHS is beneficial as it reduces inequality in both urban and rural areas. However, the subsidy reduces inequality by about 0.02% more in urban areas than in rural areas. In the case of the second simulation, the educational subsidy is allocated to only rural households. Rural households, however, receive the same amount of subsidy (as in simulation one), and thus, their consumption remains unchanged as well as the level of inequality.

Table 7

*Overall poverty in Ghana*

	Poverty Headcount Rate			
	Actual	Simulated 1	Simulated 2	Change
Poverty line				
Urban	7.8	7.6	7.8	-0.2
Rural	39.5	39.2	39.2	-0.3
Total	23.4	23.2	23.3	-0.2

<sup>3</sup>Table 7 shows the proportion of the population whose poverty levels fall below the poverty line. The table shows a higher poverty headcount rate in rural areas than in urban areas. From the results, the simulated effect of the free SHS was a 2.56% and 0.76% decrease in poverty headcount rate for urban and rural households respectively. The difference in poverty rates shows that the free SHS program reduces poverty rates in urban areas more than in rural areas. The total poverty rate also decreased by 0.86% from 23.4% to 23.2%. The implication of this is that more people can now consume secondary school education and the result is lower poverty rates.

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<sup>3</sup> Percentage point changes shown between Actual and Simulated 1

Table 8

*Distribution of poor in urban and rural areas*

	Poverty Headcount Rate				Distribution of the Poor				Distribution of Population			
	Actual	Simulated 1	Simulated 2	Change	Actual	Simulated 1	Simulated 2	Change	Actual	Simulated 1	Simulated 2	Change
Poverty line												
Urban	7.8	7.6	7.8	-0.2	16.8	16.6	16.9	-0.2	50.7	50.7	50.7	0.0
Rural	39.5	39.2	39.2	-0.3	83.2	83.4	83.1	0.2	49.3	49.3	49.3	0.0
Total	23.4	23.2	23.3	-0.2	100.0	100.0	100.0	0.0	100.0	100.0	100.0	0.0

*Source:* Author's computation based on GLSS data (2016/2017)

Table 9

*Headcount ratio by subnational regions*

	Poverty Headcount Rate				Distribution of the Poor				Distribution of Population			
	Actual	Simulated 1	Simulated 2	Change	Actual	Simulated 1	Simulated 2	Change	Actual	Simulated 1	Simulated 2	Change
Poverty line												
Regions												
Western	21.1	21.0	21.0	-0.1	9.1	9.2	9.2	0.1	10.1	10.1	10.1	0.0
Central	13.8	13.4	13.4	-0.4	5.0	4.9	4.9	-0.1	8.6	8.6	8.6	0.0



Greater Accra	2.5	2.4	2.5	-0.1	1.7	1.7	1.7	0.0	16.4	16.4	16.4	0.0
Volta	37.3	37.2	37.2	-0.1	13.6	13.7	13.7	0.1	8.5	8.5	8.5	0.0
Eastern	12.6	12.6	12.6	0.0	5.8	5.8	5.8	0.1	10.7	10.7	10.7	0.0
Ashanti	11.6	11.5	11.5	-0.1	9.5	9.5	9.5	0.0	19.2	19.2	19.2	0.0
Brong Ahafo	26.8	26.1	26.5	-0.7	10.8	10.6	10.7	-0.2	9.4	9.4	9.4	0.0
Northern	61.1	60.3	60.6	-0.8	26.1	26.1	26.1	-0.1	10.0	10.0	10.0	0.0
Upper East	54.8	54.7	54.7	-0.1	9.8	9.9	9.9	0.1	4.2	4.2	4.2	0.0
Upper West	70.9	70.6	70.6	-0.3	8.5	8.5	8.5	0.1	2.8	2.8	2.8	0.0
Total	23.4	23.2	23.3	-0.2	100. 0	100.0	100.0	0.0	100. 0	100.0	100.0	0.0

Source: Author's computation based on GLSS data (2016/2017)

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<sup>4</sup> Percentage point changes shown between Actual and Simulated 1

Results in table 8 show that the proportion of poor people in urban areas decreased by 2.56% after the implementation of the free SHS. Interestingly, however, the proportion of poor people in rural areas decreased by 0.76% after the subsidy. Even though surprising, this may be possible because a larger proportion of 6.7 of urban households received the transfer as compared to 5.6 of rural households.

In table 9, the free SHS program had the greatest impact in Greater Accra region, Central region and Brong Ahafo region as it reduced poverty rates in those regions by 4%, 2.9% and 2.61% respectively. Upper East region saw the least reduction in poverty rate (0.18%) followed by Volta region (0.27%), Upper West region (0.42%), Western region (0.47%), Ashanti region (0.86%) and Northern region (1.31%). Surprisingly, the program did not have any impact on the poverty rate in the Eastern region.

## CHAPTER 5

### 5.1 Introduction

Chapter five is the concluding chapter of the study. It presents a summary of the research problem, the underlying research question, objectives, the methodology and findings from this research. It also provides some recommendations to policymakers and suggests areas for further studies.

### 5.2 Conclusion

The purpose of this study was to ascertain whether free secondary education will reduce poverty in Ghana. Among the key variables discussed in this paper are secondary enrollment rates, expenditure on secondary school education, consumption of secondary education and poverty rates. The study used cross-sectional household data from the GLSS for 2017. A descriptive analysis and simulations were employed to analyze the data. Key findings of the study are summarized as follows:

First, observation from the trend in secondary enrollment showed an increasing rate in secondary enrollment between 2000 and 2017, however, with boys recording higher rates of enrollment than girls. The study also found that total expenditure on secondary school education alone formed 10.5% of total household expenditure. Out of the total spending on education, cost of school fees, food and books formed the highest proportions recording 48.6%, 23%, and 11.6% respectively. PTA contribution, constituting the least component of total education expenditure, recorded 2.6%. This observation implies that, although other indirect costs such as the cost of feeding, books, boarding, transportation, and PTA contribution form a part of total expenditure

on secondary education, school fees remains the most expensive and thus, the major obstacle to accessing education.

Results from the studies showed that expenditure on secondary education for males is 0.6 percentage points greater than that of females. Even though the result shows a disparity between the education expenditure on males and females, the level of inequality is not huge, thus, suggesting a decreasing gap between the gender groups.

With regards to the consumption of secondary education, the average per capita consumption borne by urban households was GHS 5,462.1, about two times higher than the per capita consumption of rural households (GHS 2,810.4). The wide variation in consumption indicates the level of inequality between urban and rural areas. Moreover, there exists a high level of inequality in rural areas than in urban areas. The implementation of the education subsidy increased consumption of education, but more for urban households than rural households. Owing to the subsidy, the level of inequality between urban and rural households decreased by 0.27% and 0.25% respectively suggesting that the implementation of the subsidy is beneficial in reducing inequality.

In terms of coverage, a substantial proportion of the poor and urban households were included in the free SHS program than the non-poor and rural households. However, the study found a huge gap in the amount of benefit between poor and non-poor households, rural and urban households and deprived and non-deprived regions. The non-poor households received about four times the benefit received by poor households. Similarly, poor rural households received about seven times less than the benefit that was received by non-poor rural households.

The three most deprived regions; Upper West, Upper East, and Northern region also received the least proportion of the free SHS funds.

The simulated effect of the free SHS policy was a 2.56% and 0.76% decrease in poverty headcount rate for urban and rural households respectively. The total poverty rate also decreases by 0.86% from 23.4% to 23.2%. The fall in poverty rate is consistent with the expectations that an increase in consumption on secondary education (because of the subsidy) should generally lower poverty.

### 5.3 Recommendations

Even though the implementation of the subsidy decreased overall poverty rate, poverty levels decreased more in urban areas than rural areas. This suggests that issue of targeting the poor in rural remains a problem. When government funds are targeted to only rural households, more poor people and rural residents benefit from the free SHS program than the non-poor and urban residents. However, there still exists a huge disparity as poor households, and rural areas receive the least amount of the government subsidy. Also, the free SHS covered more urban households than rural households. These findings imply that government policies that aim to expand and increase access to secondary education and reduce poverty must strive to identify and target students who are already disadvantaged from accessing secondary education especially those in rural areas. Until the government recognizes those disadvantaged groups to ensure that they receive enough subsidies, access to secondary education by the poor will remain limited even with the free SHS policy.

#### 5.4 Directions for further studies

For further studies, it will be important to investigate ways in which government interventions and policies can be targeted so that the poor and students in deprived regions and rural areas can receive more of government subsidies than the non-poor and the less deprived people. Also, these policies must ensure that more students residing in rural areas are benefitting.

Again, an attempt to reduce poverty and allow more poor students to access secondary school alone is not enough. There is a need for an investigation into policies and strategies that will increase not only the quantity of education but also the quality of education. This is because focusing on demand-side interventions alone to improve access to education may result in educational issues such as congestion in senior high schools and an insufficient number of teachers and teaching materials (Acheampong, 2011, Kayabwe, Nabacwa, Eilor & Mugeni, 2014).

Finally, the simulations that were performed in this research were under the assumption that students within the secondary school going age will take advantage of the free SHS and go to school. However, as studied by researchers like Akyeampong & Rolleston (2009) and USAID (2007), there exist several opportunity costs of attending secondary school. Even with the free SHS, not all students within the secondary school going age may be motivated to go to school. Others may engage in economic activities that can help them earn money. Other households may not see the need for educating their children in senior high school provided they have other pressing needs such as feeding, clothing and paying rent to cater for. Therefore, it would be relevant to study the factors that significantly affect a poor household's decision to send their children to senior high school in the face of government subventions.

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