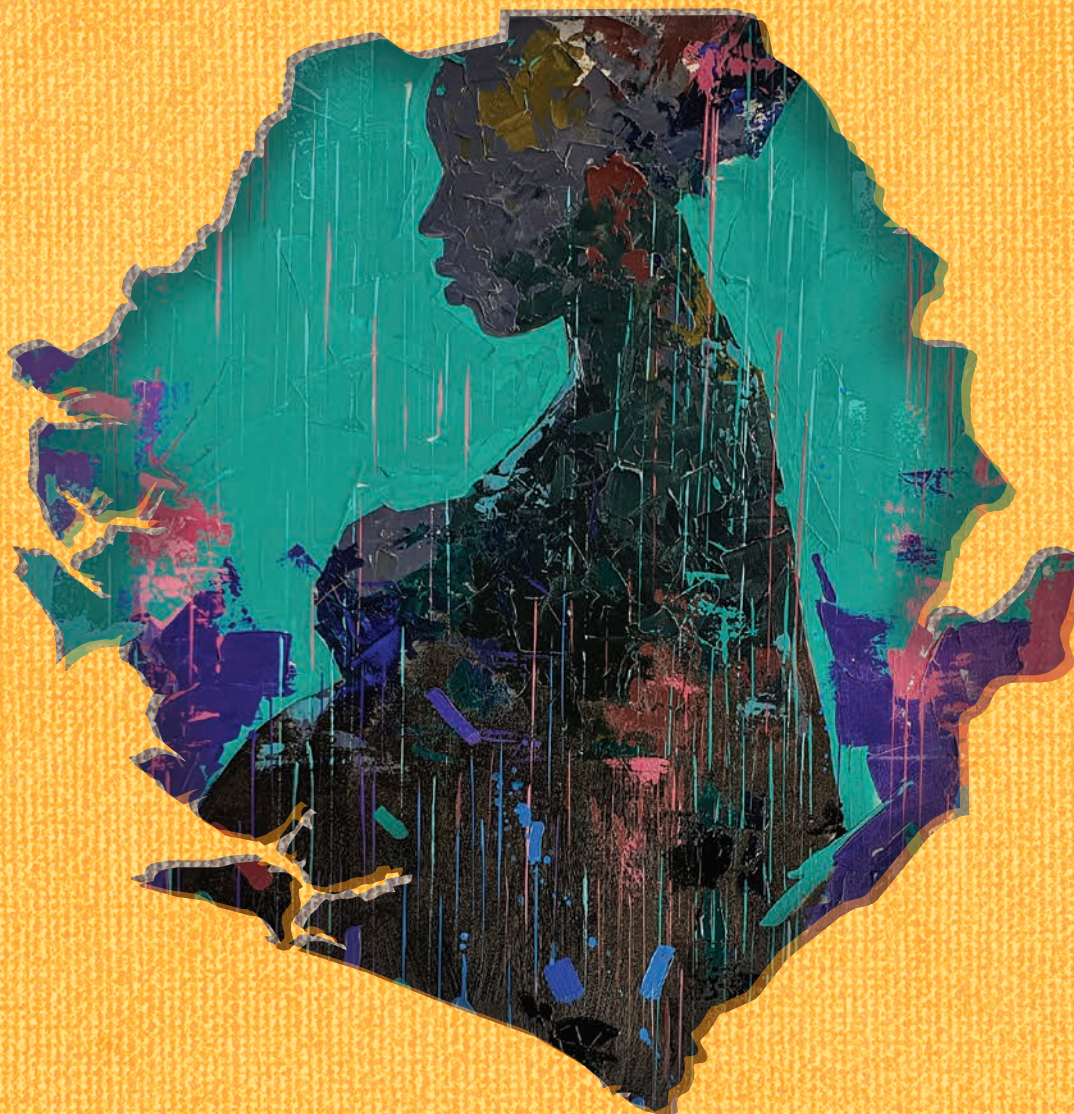




SIERRA LEONE

PUBLIC EXPENDITURE REVIEW 2021

Primary and
Secondary Education



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ABBREVIATIONS

ASC	Annual School Census
BECE	Basic Education Certificate Examination
DDE	District Deputy Director of Education
DEO	District Education Office
ECOWAS	Economic Community of West African States
EU	European Union
EMIS	Education Management Information System
EWI	Education Workforce Initiative
FCDO	Foreign, Commonwealth, and Development Office (of the UK)
FQSE	Free Quality School Education
GoSL	Government of Sierra Leone
GDP	Gross Domestic Product
GER	Gross Enrollment Rate
HCI	Human Capital Index
IFMIS	Integrated Financial Management Information System
IEC	Internal Efficiency Coefficient
JSS	Junior Secondary School
MBSSE	Ministry of Basic and Senior Secondary Education
MDTF	Multi Donor Trust Fund
MEST	Ministry of Education, Science and Technology
MICS	Multiple Indicator Cluster Survey
MLGRD	Ministry of Local Government and Rural Development
MoF	Ministry of Finance
MoHS	Ministry of Health and Sanitation
MTHE	Ministry of Technical and Higher Education
NDP	National Development Plan
NER	Net Enrollment Rate
NLA	National Learning Assessment
NPSE	National Primary School Examination
ODA	Official Donor Assistance
PBF	Performance Based Financing
PER	Public Expenditure Review
PPP	Purchasing Power Parity
PSM	Propensity Score Matching
RoR	Rate of Return

SGLA	Secondary Grades Learning Assessment
SLIHS	Sierra Leone Integrated Household Survey
SLL	Sierra Leonean Leon
SSS	Senior Secondary School
STR	Student Teacher Ratio
TSC	Teaching Service Commission
TVET	Technical, Vocational Education and Training
UNICEF	United Nations Children's Fund
WAEC	West African Examination Council
WASSCE	West African Secondary School Certificate Examination

EXECUTIVE SUMMARY

Introduction

The overall objective of the Public Expenditure Review (PER) for primary and secondary education is to assess the quality and efficiency of public spending on education in order to recommend measures to help heighten the quality and efficiency of public spending in primary and secondary education.

Country and Educational Context

Sierra Leone has been suffering from serious fiscal conditions and challenges. The Coronavirus disease 2019 (COVID-19) pandemic worsened Sierra Leone's macro-fiscal conditions; the fiscal deficit and public debt increased sharply. Due to the pandemic, public debt increased by 7.3 percentage points compared to the pre-pandemic debt forecast, spiking to 76.6 percent of gross domestic product (GDP) in 2020.

Education Sector in Sierra Leone

The Government of Sierra Leone (GoSL) has made its further commitment to strengthening the education sector through the launch of its flagship Free Quality School Education (FQSE) Program in 2018. To deliver promised access and learning improvements through the FQSE Program, the education sector needs to drive substantive efficiency gains and resource mobilization to maintain fiscal sustainability.

The education system consists of five levels: pre-primary, primary, junior secondary, senior secondary, and tertiary education. The Ministry of Basic and Senior Secondary Education (MBSSE) is responsible for primary schools, junior secondary schools (JSS), and senior secondary schools (SSS), and the Ministry of Technical and Higher Education (MTHE) is responsible for tertiary and technical/vocational education. The Teaching Service Commission (TSC) is a semi-autonomous body under the MBSSE, responsible for teacher management and enhancing the quality of teachers and learning. Policy decisions have decentralized some functions of basic education service delivery over recent years, and these functions are the responsibilities of the Local Councils.

There were 11,168 basic and senior secondary education schools in Sierra Leone in 2019. Of these, pre-primary schools accounted for 15.7 percent, primary schools for 64.1 percent, JSSs for 14.6 percent, and SSSs for 5.6 percent. The majority of schools delivering primary and secondary education lie outside government ownership. Only 18 percent and 10 percent of schools are owned/run by the Government at the primary and secondary levels respectively. The GoSL has a school approval process in place that can qualify non-government (community/mission) schools for government financial assistance. This shows the Government's strong commitment to strengthening education service delivery. In 2019, three-quarters of schools had been approved. Government approval implies the payment of subsidies, textbooks, teacher salaries, and examination fees. However, in practice, the approval process does not necessarily guarantee immediate support, as the GoSL faces operational and fiscal limitations.

Education Sector Performance

The country has made substantial progress in increasing access to education. Despite gains in enrollment, the Sierra Leone education system faces a set of major challenges. They include the following:

- (a) **Low and inequitable access.** There is still significant variation in students' access to education by gender, socioeconomic status, and location. School retention rates among poor and rural children, and adolescent girls are low. Key factors generating the inequity include: (i) cost burden especially for poor families (e.g., uniform etc.); (ii) distance to schools and safety issues; (iii) lack of basic facilities for teaching and learning; (iv) school-related gender-based violence (GBV); and (v) teenage pregnancy.
- (b) **Poor learning outcomes.** Sierra Leone suffers from severe learning poverty. Children lack basic foundational literacy and numeracy skills. There are serious disparities in learning outcomes by gender, economic group, and location. The key challenges that result in poor learning outcomes include insufficient and poor-quality teachers, weak teacher management that contributes to teacher absentee-

ism, less time spent on teaching, and a shortage of teaching and learning materials.

- (c) **Weak sector management and governance.** Key challenges related to sector management and governance include: (i) a weak policy and regulatory environment; (ii) inadequate quality assurance systems across sub-sectors; and (iii) an education management information system (EMIS) which is fragmented and under-used.

Education Expenditure Analysis

Government Education Spending. By 2019, the share of total government expenditure toward education had reached 16.9 percent. Although this shows the GoSL's strong commitment to investing in education, government education spending in 2019 represented only 2.5 percent of GDP, which is lower than that for other similar countries in the region. The budget on primary and secondary education was on average under-executed at 83 percent. The highest share of education expenditures goes towards pre-primary and primary education; however, the priority is shifting to secondary education. Almost all of the public expenditure in the sector goes towards covering recurrent costs. Under-investment in the capital budget has negative consequences for the performance of the education system.

Decentralized Financing. The devolution of functions pertaining to managing and providing basic education to Local Councils is partially implemented. On average, below 10 percent of education funds are spent at a Local Council level. There is extremely low capital education spending at the local level, raising concerns about the potential risks for effective long-term investment on schools. There is no clear written policy document, guidelines or mechanism that clarifies roles and responsibilities at the local level among the District Education Office (DEO), FQSE office, regional TSC office, and Local Council. This leads to confusion and duplication of work among these agencies.

Government Spending for Teachers. Teacher salaries have increased. Teachers in Sierra Leone are relatively well paid compared to other more developed countries, with

salaries corresponding to approximately 3.3 times the per capita GDP.

Government Spending for Students. Aggregate school fee subsidies have increased significantly mainly due to an increased number of students, and government and government-assisted schools that receive financial assistance from the government but are owned by non-government organizations. Schools utilize funds primarily for paying salaries and improving the quality of school infrastructure. Schools do not invest enough funds in activities which directly support students' learning (e.g., reading books).

Government Spending for the Supply of Schooling. The establishment of schools has not prioritized disadvantaged districts. At the primary level, education coverage is the most extensive. However, the supply of schooling at other levels of education is more limited. While about half of public schools are operating over capacity, certain schools are operating under-capacity. There is a need to re-allocate teachers from surplus schools to deficit schools.

Education System Technical Efficiency. There is a relatively high level of system inefficiency. About half of resources are wasted due to dropouts and repetition at the primary level. There is less wastage of public resources at the secondary education level. There is a weak link between school level expenditures and enrollment outcomes. However, performance-based financing (PBF) supported under the closed World Bank-assisted Project has had a positive impact on student attendance across all grades.

Private Spending on Education. Households also contribute to education, and the wealthiest households spend 4 to 8 times more on education than the poorest households in Sierra Leone. Household education spending primarily goes towards fees and tuition and learning materials for children.

Adequacy of Financing. While the Government's budget allocation to the education sector has increased, the financing gap has increased over time. The total budget deficit is very large (around US\$2.8 billion) to implement the Government flagship FQSE Program fully in the next four years, mainly

due to a sizable infrastructure gap and salaries for additional teachers that will be hired.

Policy Recommendations

(1) Prioritize Education Spending to Improve the Efficiency and Quality of Education

Spend more for non-salary inputs that are critical for improving teaching and learning (e.g., school inputs and favorable learning environment). The GoSL should use school catchment data to identify unserved and underserved areas for equitable provision of education services.

Invest more in programs targeting disadvantaged groups and students who lag behind in learning. There are supply and demand side barriers preventing children from participating and remaining in school. The key is to provide additional support to students who lag behind in learning.

Link school subsidies with school performance outcomes and/or school-based planning through PBF. School subsidies should be linked with school performance outcomes (e.g., student attendance, teacher attendance, etc.) and/or school-based planning (e.g., school improvement annual plan). The key is to expand PBF that had a positive impact on student attendance and strengthened school-based planning by empowering school management committees.

Improve efficiency in teacher recruitment, deployment, and development of teachers. The quality of teachers is critical to the performance of schools. The GoSL should reduce the number of unqualified teachers in the education system, ensure more equitable distribution of teachers, and introduce a teacher incentive scheme to promote teacher mobilization and retention in disadvantaged areas.

(2) Improve Institutional Effectiveness

Strengthen the school quality assurance system to monitor the quality of teaching not only in government schools, but also non-government schools. It is vital for the GoSL to

build a strong supervision mechanism at the local level and provide necessary support to schools.

Strengthen the capacity of local agencies at the district level with a clear division of labor. The effectiveness of education service delivery at the local level is being undermined by unclear roles and responsibilities among local agencies engaged in education.

(3) Increase Overall Education Financing

Gradually increase overall education financing. In the medium- and long-term, the GoSL should increase education spending by both increasing the overall education envelope and improving the rate of budget execution. In addition, it needs to utilize existing resources more efficiently.

Overview of Key Recommendations

Strategic Area	Policy Options	Time Frame	Responsibility
Prioritize education spending to improve the efficiency and quality of education	Spend more for non-salary inputs that are critical for improving teaching and learning (e.g., school inputs, favorable learning environments)	Short to medium term	MBSSE and TSC
	Invest more in programs targeting disadvantaged groups and students who lag behind in learning	Short to medium term	MBSSE and TSC
	Link up school subsidies with school performance outcomes or school-based planning	Medium term	MoF and MBSSE
	Improve efficiency in teacher recruitment, deployment, and development of teachers	Short to medium term	TSC
Improve institutional effectiveness	Strengthen school quality assurance system to monitor quality of teaching not only in government schools, but also non-government schools	Short to medium term	MBSSE
	Strengthen capacity of local agencies at the district level with a clear division of labor	Short to medium term	MBSSE, TSC, and Local Councils
Increasing overall education financing	Gradually increase overall education financing by increasing overall education envelope and improving the rate of budget execution.	Medium term	MoF and MBSSE

INTRODUCTION

1

1.1. Country Context for Educational Development

Sierra Leone is a small low-income country on the west coast of Africa with a population of approximately 7.8 million people. The population is young—with around 45.8 percent below the age of 15 and 74.8 percent below the age of 25. Human development outcomes are very low; Sierra Leone ranks 151st out of 157 countries on the Human Capital Index (HCI)¹ with an HCI value lower than the region's average. This index, as a composite measure of human capital, confirms that only around two-thirds (61 percent) of today's 15-year-olds can be expected to survive to the age of 60 and about one-quarter of the country's children are stunted, a condition resulting from chronic malnutrition. Moreover, the HCI measure predicts that a child born today in Sierra Leone can be expected to be only 36 percent as productive when he or she grows up as the child could have been if he or she had enjoyed complete education and full health.

The country has made socio-economic progress, particularly in reducing poverty since the end of the civil war in 2002, however, the pace of poverty reduction has slowed in recent years. The poverty rate fell by 1.5 percentage points annually between 2003 and 2011 and by 0.8 percentage points annually between 2012 and 2018 to reach 56.8 percent in 2018. Inequality, as measured by the Gini coefficient, increased from 0.33 in 2011 to 0.37 in 2018. Poverty remains disproportionately concentrated in rural areas (78.5 percent), and the largest poverty reduction occurred in urban areas outside of Freetown (by 0.9 percentage points annually over 2012–2018). The major determinants of poverty are: large household size, low level of education of the household head, employment in agriculture, and non-wage employment. Extreme poverty in rural areas increased by 4.3 percentage points between 2012 and 2018. While the percentage of the population that is food-insecure decreased from 49.8 percent to 43.7 percent between 2012 and 2018, 3.2 million people remained food insecure.

Despite tough economic challenges battered by successive epidemic, economic, and climatic shocks,² the Government of Sierra Leone (GoSL) is committed to improving the

¹ The HCI is made up of five indicators: the probability of survival to age 5, a child's expected years of schooling, harmonized test scores as a measure of the quality of learning, adult survival rate (fraction of 15-year-olds who will survive to age 60), and the proportion of children who are not stunted.

² Ebola epidemic (2014–2016), iron ore mining collapse (2015–2016), Freetown landslide (2017), COVID-19 pandemic (2020–ongoing).

quality of and access to education. In Sierra Leone, education is regarded as a fundamental principle of State policy recognized by the 1991 Constitution. As such, education is at the heart of the Government's Medium-term National Development Plan (NDP) 2019–2023. The GoSL is guided by five core principles: disciplined leadership, national integration, efficiency, professionalism, and delivery of the NDP. The NDP outlines eight strategic priorities: (a) education for development, (b) health, (c) water, (d) macroeconomic management, (e) energy, (f) agriculture, (g) tackling corruption, and (h) security. Specifically, the NDP highlights the importance of education in enhancing human capital development and facilitating the transformation of the country. Many measures are being developed and currently under way to address each of these priority areas.

In 2018, the government launched a national flagship program—Free Quality School Education (FQSE) Program—with an aim of ensuring free quality education to all school-age children from pre-primary to secondary school. While this provides universal access to primary and secondary education for children, financing such an ambitious program adds additional financial stress to the government's education budget. Over the years, Sierra Leone has made various attempts to increase the accessibility of education for its children, but budget constraint has always been an issue. The Education Act 2004 recognizes the right to Free Compulsory Basic Education in government and government-assisted schools. A failed attempt of free primary education was rolled out in 2010. That program failed due to inadequate financing. At that time, to make up for the revenue loss in school fees, the per pupil subsidy was set too low which could not adequately cover school operating costs and schools' differing needs were also not considered. Fees were hastily brought back. Thus, this time, to support the FQSE, the GoSL increased the portion of the national budget allocated to education to 21 percent in 2020 and reaffirmed its commitment to increase the budgetary allocation on education annually until at least 2023.

Sierra Leone has made substantial progress in increasing access to education at all levels, but challenges remain, including: (a) low and inequitable access to education; (b) poor learning outcomes and skills acquisition; and (c) weak sector management and governance. A PER of primary and

secondary education is considered an important step to identify gaps in terms of efficiency, equity, and effectiveness of public expenditures in primary and secondary education. To deliver the promised access and learning improvements, the education sector needs to drive substantive efficiency gains to ease reliance on resource mobilization and maintain fiscal sustainability.

1.2. Objective of the Education PER

This PER is part of the Sierra Leone Programmatic PER.

The overall objective of the PER in primary and secondary education is to assess the quality of public spending on education in order to recommend measures to help heighten the quality and efficiency of public spending in primary and secondary education. Due to funding and time limitations, this PER focuses on primary and secondary education (both junior secondary school [JSS] and senior secondary school [SSS]) only and not the whole education sector. Specifically, this Education PER assesses: (i) the adequacy and sustainability of public spending in the education sector; (ii) the efficiency and effectiveness in the use of these resources; (iii) the equity of education expenditure in terms of the distribution of expenditures, complementary inputs, and outcomes; (iv) the key management and governance issues facing the education sector; and (v) provides policy recommendations. By analyzing the constraints in primary and secondary education, this PER not only clarifies and highlights the critical existing challenges in primary and secondary education in Sierra Leone, but also encourages serious discussions on the issues among a broad set of stakeholders in the sector. This PER has been undertaken at a time when the GoSL embarked on its ambitious, yet necessary education program but suffers from funding gaps and, at the same time, underspending. Thus, the PER findings will not only provide guidance on efficiency gains but also will be instrumental in the GoSL's decision-making and its medium-term reform priorities in the education sector.

The PER has benefitted from various data sources, data sets, surveys, and a census. The main data sources for the analysis include: (i) Sierra Leone Integrated Household Survey (SLIHS) Series; (ii) Annual School Census (ASC)

Series; (iii) Boost³ database from Ministry of Finance (MoF); (iv) budget and other financial and sectoral data and reports from the MoF and Ministry of Basic and Senior Secondary Education (MBSSE); (v) data made available by development partners; (vi) data on student learning assessments; and (vii) other data and reports collected from meetings with various officials.

These datasets allowed a comprehensive analysis using both quantitative techniques and qualitative assessment methods. The PER mainly focuses on the years 2017, 2018, and 2019. The Boost data does not cover the COVID-19 period and, as such, will not be useful for assessing the impact of COVID-19 on public expenditures on education. Given this limitation, the PER only briefly discusses the impact of COVID-19 on education financing; however, the PER does include analysis of the estimated impact of school closures due to COVID-19 on lifetime earnings of the present student cohort.

Data limitations impacted the ability to conduct more in-depth analysis. One of the major limitations was the

lack of reliable, longitudinal learning assessment data. This data would have allowed for more in-depth analysis linking education sector outcomes and spending over the three-year period of the PER. Similarly, the lack of expenditure data at the district level and below prevented more granular analyses. With support from partners, the Ministry of Finance conducted a Public Expenditure Track Survey (PETS) for health, agriculture, and education sectors in 2017/18, but the report has not been disclosed, which would have provided greater insight into public financing issues for particular reforms.

The remainder of this report is structured as follows: Chapter 2 presents a macro-fiscal overview extracted mainly from the Macro-Fiscal PER (World Bank, forthcoming). Chapter 3 provides an overview of the education sector context and structure. Chapter 4 reviews how the main outcomes of the sector have evolved recently. Chapter 5 reviews the trends in public spending in the education sector. Chapter 6 analyses the efficiency and equity of education spending. The analysis is followed by Chapter 7, a summary of the main findings and policy recommendations.

³ This database provides desegregated public spending data rigorously collected, cleaned, and verified through the BOOST methodology. By requesting raw data at the most disaggregated level available, the resulting BOOST database takes advantage of the full breadth and depth of the country's budget classification system. The data on expenditures, organized using all of the country's budget classification codes, is then compiled in one database that covers all sectors, all spending units, and all types of expenditures recorded in the treasury system.

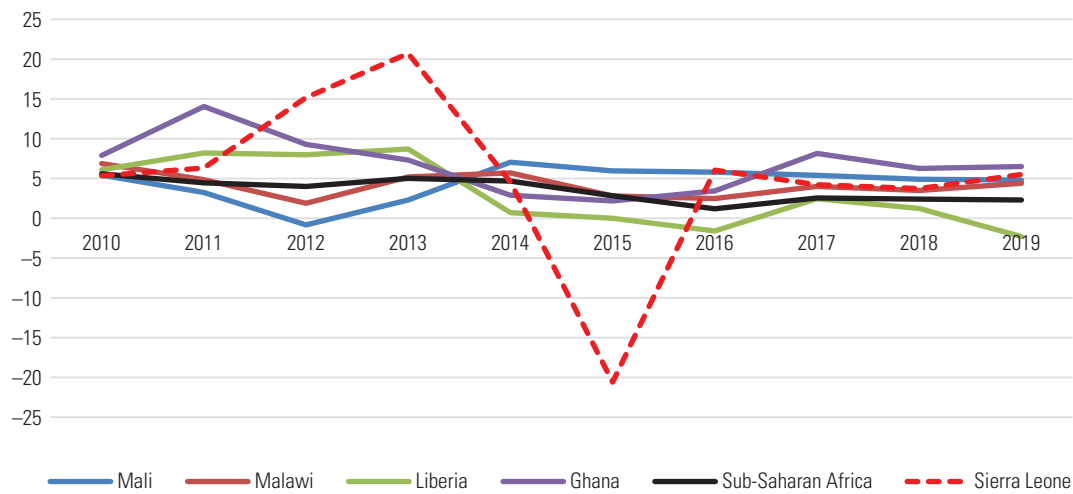
MACRO-FISCAL DEVELOPMENTS AND ECONOMIC CONTEXT IN SIERRA LEONE

This chapter briefly provides an overall picture of key macro-fiscal scenarios that are relevant for Sierra Leone's education system. The discussion focuses on economic growth, the macro-fiscal context, and the impact of the COVID-19 pandemic on the economy. This chapter also gives a short overview of the demography of the country, its population, as well as the labor market and economy.

2.1. Macro-fiscal Context

Sierra Leone's economic growth rebounded after the Ebola epidemic, but macro-economic conditions remained challenging (Figure 1). Sierra Leone experienced a gradual recovery in economic growth until it faced the Ebola crisis in 2014. The Ebola crisis was followed by iron ore shocks and the growth rate plummeted from 20.7 percent in 2013 to -20.6 percent in 2015. These shocks left a scar on the country's economy and recovery has been tenuous. After that crisis, the economy expanded by an average of 4.7 percent per annum during 2016–2019. The mining sector played a major role in the recovery of growth with decent contributions from the agriculture and services sectors. However, the poor business environment and the high cost of energy and credit kept manufacturing growth at a minimum. Sierra Leone's economy lacks diversification and relies mainly on subsistence agriculture with a moderate service sector and a low industry share driven by volatile mining. The economy has yet to witness a structural transformation since independence. The economy suffers from low commodity prices, high domestic prices for energy, and lower investment in the last several years. Agriculture sector growth shows signs of resilience but remains below potential (World Bank 2021). Challenging macroeconomic conditions have constrained poverty reduction, with 56.8 percent of Sierra Leone's population still living below the poverty line.

Sierra Leone has been suffering from serious fiscal challenges. High inflation and fiscal deficits have persisted for the last five years. This long-term fiscal deficit has been a result of low mobilization of domestic revenue with relatively low tax collection compared to peer African countries. Weak and limited local capacity to mobilize domestic revenue and manage cash flows over the business cycle, and the current structure of expenditure, are major contributors of limited fiscal space. This limited fiscal space negatively affects investment and spending on key social sectors including education. Major public financial management issues include: budget reliability and predictability; fiscal transparency;

FIGURE 1 GDP Growth (Annual %), Sierra Leone and Regional Peers, 2010–2019

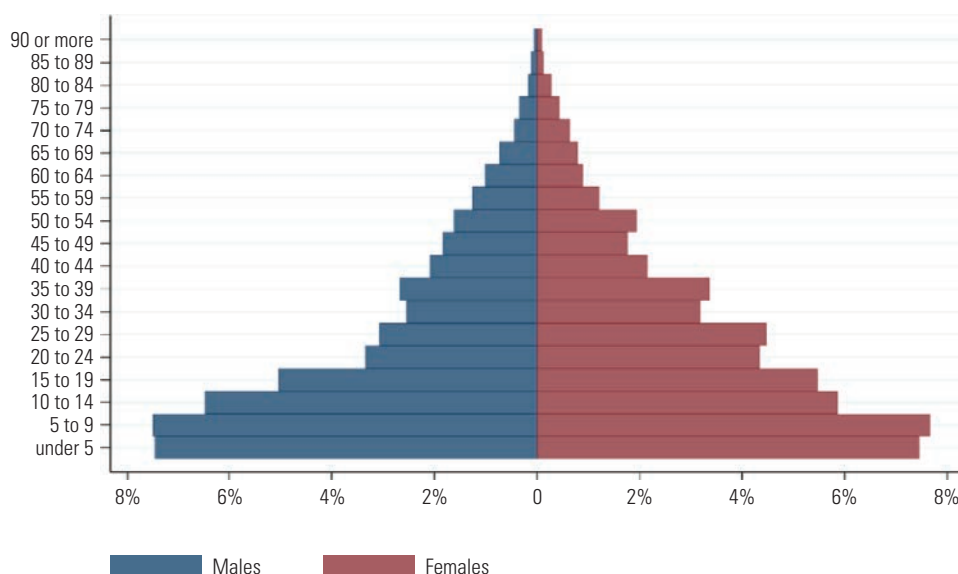
Source: World Development Indicators.

reporting, accounting, and asset management. In addition, the country also suffers from a weak public investment management system. Exogenous challenges include acute terms of trade shocks with declining export prices (e.g., cocoa and iron ore) and increasing import prices (e.g. rice and infrastructure equipment). With limited access to international financial markets and the increasing cost of non-concessional debt, Sierra Leone faces external financial pressure and is considered to be at “high risk” of debt distress for both external and overall public debt. Frequent natural disasters (e.g., the 2017 floods and mudslide) and health crises (the 2014–2016 Ebola epidemic and current COVID-19 pandemic) are the other exogenous shocks that have been adding additional pressure to the country’s economy. In this context, Sierra Leone has made strong efforts to improve its fiscal condition by reducing both internal and external imbalances. A comprehensive policy package was developed and began implementation in 2018, covering measures for both domestic revenue mobilization and creating fiscal space. As a result, the fiscal deficit declined from 5.7 percent of GDP in 2018 to 3.2 percent in 2019.

The COVID-19 pandemic worsened macro-fiscal conditions; the fiscal deficit and public debt increased sharply. On the supply side, the services sector shrank by 11 percent due to the combined adverse effect of international and domestic restrictions on trade, travel, and tourism. The fall

in gross fixed investment and net exports due to the disruption of global trade explained the contraction of growth on the demand side. Inflation stayed in double digits even though nonfood prices declined due to lower demand, as food inflation increased sharply reflecting the prolonged impact of COVID-19 on domestic food supply. The fiscal deficit almost doubled to 6.4 percent of GDP driven mainly by revenue shortfalls due to the slump in economic activities and health-related spending pressures to respond to the pandemic. Public debt increased sharply, largely reflecting the increase in fiscal deficits financed by additional domestic loans.

The COVID-19 pandemic poses the risk of gain reversal with the stalling of reform momentum. Many of the fiscal reforms have been put on hold since the onset of the pandemic. The pandemic-induced increased spending, particularly on health, and the substantial decline of tax collection have generated new fiscal pressure. The GoSL took prompt action to support the COVID-19 response by submitting a supplementary budget to Parliament in July 2020 with the theme “*Saving Lives and Livelihood*.” The budget supported the Quick Action Economic Recovery Programme (US\$135 million) and the comprehensive COVID-19 Health Sector Response Plan (US\$34 million). In the supplementary budget, total expenditure increased by 2.8 percent of GDP, while domestic revenue fell by 2.4 percent of GDP due to decline in tax income. Due to the pandemic, public debt

FIGURE 2 Population by Age Group and Sex, 2018

Source: SLIHS Report 2018.

increased by 7.3 percentage points compared to pre-pandemic debt forecast, spiking to 76.6 percent of GDP in 2020.

Economic growth is expected to bounce back over the medium-term rising to 4.5 percent by 2023. Mining and agriculture are expected to support this growth assuming that iron ore production will resume and, as COVID-19 recedes, agriculture will flourish, with large scale investment following Government's policy to promote public-private partnership. The fiscal deficit is expected to decline, eventually reaching 2.3 percent of GDP in 2023 as the pandemic-related spending subsidies and the economic recovery gains momentum.

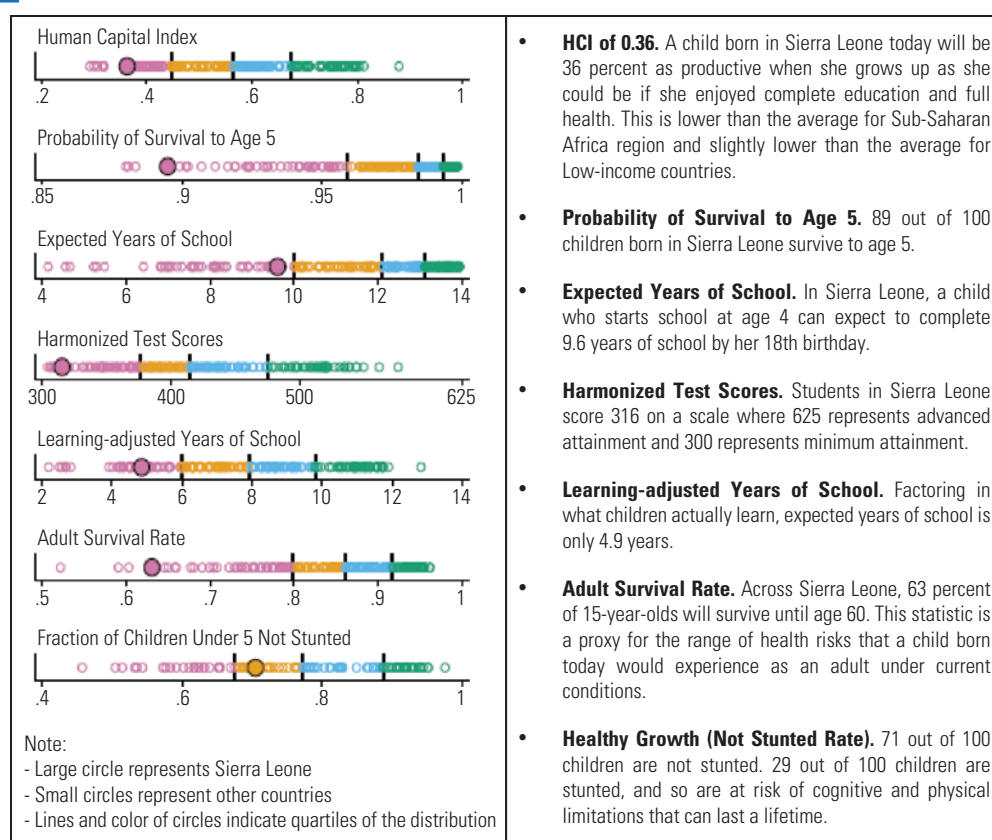
2.2. Demography, the Labor Market, and the Economy

The population of Sierra Leone is disproportionately young with a median age of 19.4 years and a life expectancy of 55.9 years. With a youth dependency ratio⁴ of 71.1, indicating

71 young people for each 100 working-age adults in the population, the country has a youth bulge with a relatively large school-age cohort which has potentially far-reaching implications for its economy and education sector. The population pyramid in Figure 2 shows that the primary and secondary education age cohort, ages 6 to 18, represents the largest subgroup. Total fertility rate in Sierra Leone is 4.2; this means, on average, a Sierra Leonean woman gives birth to over 4 children. This high birthrate has resulted into substantial population growth in the country. The population is growing at a rate above 2 percent annually since the turn of the century. Thus, the pre-primary, primary and secondary education age cohort will remain the largest subgroup in the near future. Population projections, however, shows that by 2030, the proportion of population less than 15 years will be slightly smaller, under 40 percent.

Currently, youth suffer from learning poverty. If empowered with appropriate skills and education, the youth bulge provides a "window of opportunity" for Sierra Leone. A younger workforce can be more productive and consequently contribute more to society. Currently, the Human Capital Index (HCI) score of Sierra Leone is one of the lowest among all countries. As an indicator of productivity, the HCI of 0.36 shows that Sierra Leone is performing at 64 percent

⁴ Youth dependency ratio is a measure of the age structure that relates the number of young people who are likely to be economically dependent as a percentage of the adult working age population; Youth Dependency Ratio = ([Population ages 0–15] / [Population ages 16–64]) × 100.

FIGURE 3 The Main Components of the HCI for Sierra Leone

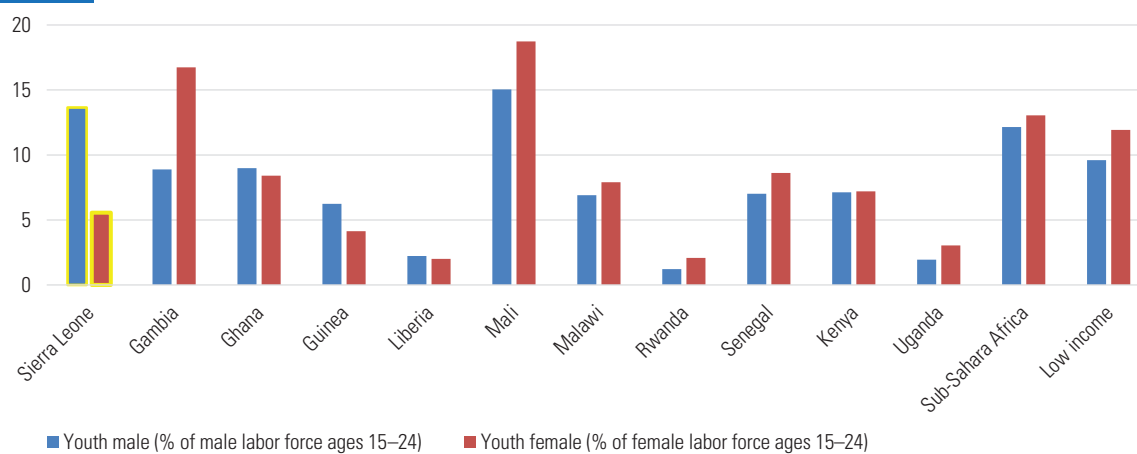
Source: Human Capital Index Workshop Brief, 2020.

lower than it could if the country did not suffer from a human capital deficit. Figure 3 shows the HCI for Sierra Leone and its education and health components compared to other countries. Low survival rate and low learning outcomes are the major contributors to the low HCI score.

Youth unemployment in Sierra Leone has been recognized as a potential trigger for social instability, the prolonged state of underdevelopment, and economic stagnation. The unemployment rates⁵ among economically active men and women aged between 15 and 64 are 5.1 percent and 3.6 per-

cent, respectively. Rural unemployment rates are higher than urban areas. In Sierra Leone, over one-third of the population lives in cities. The unemployment rate is higher among young (age 15 to 24) males, 13.6 percent, while for young females it is 5.6 percent. The youth unemployment level in Sierra Leone is higher than the level in other countries in the region (Figure 4), contributing to social instability and economic stagnation. Key factors driving this high youth unemployment include a mismatch between skills offered by the education system and skills needed in the labor market, political instability, and the challenging economic environment.

⁵ Based on International Labor Organization (ILO) definition. Persons in unemployment are defined as all those of working age who were not in employment, carried out activities to seek employment during a specified recent period and were currently available to take up employment given a job opportunity.

FIGURE 4 Youth Unemployment Rate, Sierra Leone and Regional Peers, 2019

Source: World Development Indicators, 2019.

EDUCATION SECTOR IN SIERRA LEONE

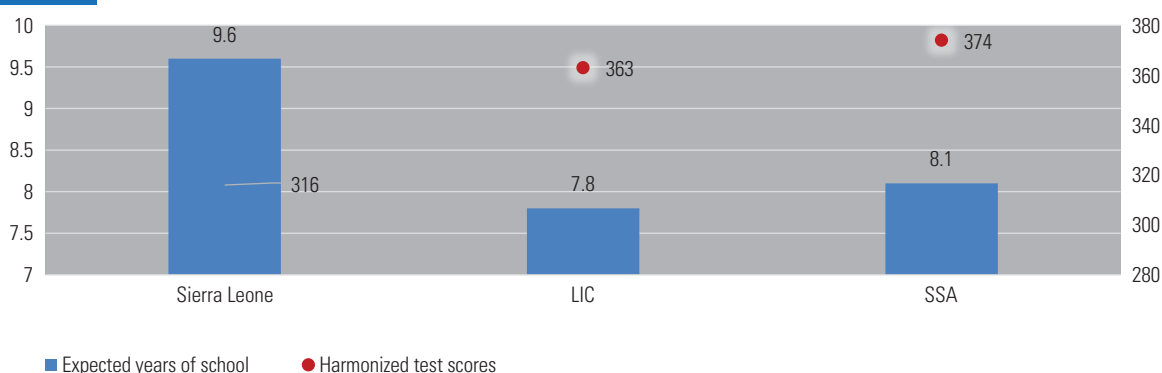
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This chapter provides an overview of the education sector context and structure in Sierra Leone. After expanding on the substantial improvements in enrollment rates, as well as the challenges faced by the sector, the strategies and priorities utilized to address these challenges are outlined. A detailed description of the structure of the education system, and its administration systems, is also provided. The chapter concludes by providing an overview of school ownership.

3.1. Education Sector Context

Substantial improvements have been observed in enrollment rates at all levels of education in Sierra Leone. The primary enrollment rates are close to 100 percent. The primary school completion rate in 2004, post-civil war, was 55 percent. This increased above the regional average of 69 percent to 75.4 percent in 2016. With an increase in the primary completion rate, extraordinary achievements have been made in secondary school enrollment as Sierra Leone saw a 50 percent and 100 percent increase in secondary school enrollment rates for male and female students, respectively, from 2010 to 2016. Secondary enrollment rates were close to 43 percent in 2017. The sharp increase in female enrollment has resulted in closing the gender gap in primary enrollment and reducing it substantially at the JSS level. However, SSS and tertiary levels still await to see considerable reduction in gender gap. Along with enrollment, completion rates for JSS and SSS also increased from 26 percent to 64.5 percent and 11 percent to 27.6 percent, respectively, between 2004 and 2016.

Sierra Leone suffers from severe learning poverty due to lack of quality in education. Children lack basic foundational literacy and numeracy skills. For example, 17 percent of children ages 7 to 14 possess foundational reading skills, while only 12 percent demonstrate foundational numeracy skills. With a HCI 2020 of 0.36, a child born in Sierra Leone today can be expected to be only 36 percent as productive when she grows up as she could be if she enjoyed complete education and full health. Given this condition, a child who starts school at age 4 can expect to complete 9.6 years of schooling by her 18th birthday (Figure 5). However, given the low quality of education, in those 9.6 years the child would gain only 4.9 years equivalent of learning. Sierra Leonean students score 316 (Figure 5) on a scale where 625 represents advanced attainment and 300 represents minimum attainment. These figures for Sierra Leone are worse than those for low-income countries and

FIGURE 5 Expected Years of Schooling and Learning Outcomes, HCI 2020

Source: The Human Capital Index: Country Briefs and data.

Note: LIC = Low-income countries and SSA = Sub-Saharan Africa. Expected Years of School is calculated as the sum of age-specific enrollment rates between ages 4 and 17.

Sub-Saharan African countries (Figure 5). Poor learning outcomes and limited skills acquisition in primary and secondary education impact higher education and technical, vocational education and training (TVET) as well contributing to a youth population lacking job relevant skills.

The key challenges that result in poor learning outcomes include insufficient and poor-quality teachers. Particularly, there is a shortage of qualified and specialized subject teachers. Further, teacher management is weak—contributing to teacher absenteeism, less time spent in teaching, and a shortage of teaching and learning materials at the school level (World Bank, forthcoming). Since the inception of FQSE that covers pre-primary, primary, JSS, and SSS, the GoSL has begun to implement measures to increase access to and quality of education. The Teaching Service Commission (TSC), with the support of development partners, is developing innovative initiatives to enhance teacher deployment, training, and technology-based monitoring to tackle the challenges related to deployment, subject teacher matching based on need, and training. In addition to poor quality of education, the education sector suffers from challenges related to low and inequitable access, weak sector governance, and ineffective management.

Ensuring education access for poor children and children with disabilities is critical. Despite gains in enrollment, a large number of primary-age children, mostly from poor economic backgrounds and/or with disabilities, are out of school. School retention rates among poor and adolescent

girls are exceptionally low. Inequities in access is particularly a problem at the pre-primary and SSS levels. Inequitable access—based on gender, location and poverty—is also experienced at the levels of TVET and higher education. A number of factors contribute to these inequities—the long distance to schools associated with travel costs and safety issues; cost burden (e.g. uniform etc.) for poor families; school related GBV; and high rate of teenage pregnancy (until 2020, visibly pregnant girls were not allowed to stay in schools). The GoSL is updating school catchment area mapping to increase school accessibility and equity which will reduce distance to school and associated cost and risks. The Government recently reversed a ban on pregnant girls attending school. Through the FQSE Program, the Government has also taken initiatives to address and reduce GBV, increasing access of adolescent girls and marginalized children including children with disabilities.

Sector management and governance need to be improved.

Key challenges include: (i) a weak policy and regulatory environment; (ii) inadequate quality assurance systems across sub-sectors; (iii) an education management information system (EMIS) that is fragmented and under-used; and (iv) weak aid management—characterized by aid fragmentation, with various development partners operating in parallel implementation arrangements (many of which bypass country systems). Weak country systems and fiduciary risks contribute to this issue.

The education sector and the already low human capital accumulation were strongly affected by the COVID-19

pandemic which not only complicated the already existing challenges but created new ones. The GoSL was prompt in responding to mitigate the potential adverse impacts of the pandemic on education by establishing an Education Emergency Taskforce (EET) and developing a COVID-19 Response Plan. Schools were closed for three months for national exam takers and six months for others. Schools reopened after extensive consultations with stakeholders and risk mitigation measures were adopted and implemented including COVID-19 protocols and restrictions, including social distancing and use of masks. To minimize learning loss during the school closure, the MBSSE and TSC launched the Radio Teaching Program (RTP) which continues to be broadcast even after schools have reopened to complement teaching at school. The medium and long-term impact of the COVID-19 pandemic on the education sector is yet to be seen.

3.2. Sectoral Strategies and Priorities

The Government's response to education sector challenges has been guided by the medium-term NDP 2019–2023 and National Education Sector Plans (ESPs). The NDP lays out the GoSL's overall vision for the development of Sierra Leone and covers all main sectors, grouped under eight policy clusters. As discussed earlier, education is one of the national priorities articulated in the NDP. It highlights the importance of education in enhancing human capital development and facilitating the transformation of the country. The most recent ESP 2018–2020 was prepared as a transitional document, in order to indicate the broad priorities to be pursued by the government and development partners following the Ebola epidemic. It presents the GoSL's strategy to achieve its overall goals of improving: (a) education service delivery; (b) integrity in education; and (c) learning in formal and non-formal settings/education institutions. The plan focuses on several key areas including: (a) access, equity, and completion; (b) quality and relevance; (c) system strengthening; and (d) emergency preparedness and response. The ESP has been extended for one year until 2021 and the MBSSE and Ministry of Technical and Higher Education (MTHE) are currently developing the new ESP.

The GoSL has made its further commitment to strengthening the education sector through the launch of its flagship FQSE Program in 2018. The key elements of the program include: (a) reducing barriers to accessing education (government payment for public examination fees and per pupil subsidies in government and government-assisted schools); and (b) providing essential elements for quality education provision (policies to motivate teachers, provision of textbooks in core subjects and teaching-learning materials). To make education more inclusive, the GoSL has developed and introduced the Radical Inclusion Policy which was approved by the Cabinet in March 2021. The policy seeks to ensure that schools throughout the country are accessible to and inclusive of all children—especially those that are typically marginalized or excluded—children with disabilities, children from low-income families, children in rural and underserved areas, and girls, especially pregnant and parent girls. While this provides universal access to primary and secondary education for children, financing an ambitious FQSE program adds additional financial stress to the government education budget. To support its program, the GoSL has increased the budget allocation on education annually over the years. Despite increases in budget allocation, FQSE still suffers from a budget deficit to meet the requirements planned under the program.

3.3. Structure of the Education System

The education system of Sierra Leone consists of five levels: pre-primary, primary, junior secondary, senior secondary, and tertiary education (Table 1). Basic education is comprised of primary and JSS. Primary education consists of six years from first to sixth grade targeting children aged six to eleven years old and junior secondary spans three years from seventh to ninth grade targeting children aged twelve to fourteen. SSS includes grades ten to twelve; it also includes TVET. Tertiary education covers colleges, universities, polytechnics and teacher training colleges.

Non-formal and adult education are offered to older children, youth, and adults who are not able to join or retain formal education and cover programs contributing to adult and youth literacy and education for out-of-school children,

TABLE 1 Structure of Formal Education System in Sierra Leone

Ministry		Education Level	Grade/Standard	Years	Age	Number of Students
MBSSE		Pre-primary		3	3 to 5	127,168
	Basic Education	Primary	1 to 6	6	6 to 11	1,770,368
		JSS	7 to 9	3	12 to 14	451,685
		SSS	10 to 12	3	15 to 17	305,085
MTHE		TVET	Vocational			
		Tertiary	Tertiary	4 to 5	18 to 22+	

as well as programs on life skills, vocational skills, and social development. Community Learning Centers provide basic numeracy and literacy skills that allow children to (re-)enter formal education if they choose, or to continue on the non-formal path to acquire further skills training, or to enter the labor market.

There are three nationwide examinations for primary and secondary students. All students in the final grade of primary school sit for the National Primary School Examination (NPSE) designed by the West African Examination Council (WAEC). Exams in five subjects are given which include Quantitative Analysis, Verbal Aptitude, Mathematics, English Language, and General Science. Passing of NPSE makes students eligible to progress to JSS. Students take the Basic Education Certificate Examination (BECE) to complete JSS and the West African Secondary School Certificate Exam (WASSCE) to complete secondary education. Both exams are coordinated and implemented by the WAEC.

According to the 2019 ASC, there were 11,168 basic and senior secondary education schools in Sierra Leone. Of these, pre-primary schools accounted for 15.7 percent, primary schools for 64.1 percent (7,154 schools), JSSs for 14.6 percent (1,633), and SSSs for 5.6 percent (623). There are five universities in the country (bachelor-master-doctorate system)—three public: University of Sierra Leone, Njala University, and Ernest Bai Koroma University of Science and Technology; and two private: University of Makeni and Limkokwing University. There are also Teacher Training Colleges offering a Teachers Certificate (TC) for pre-primary and primary levels and a Higher Teachers Certificate (HTC) for JSS. University of Sierra Leone is the first university of West Africa established in 1927.

Pre-primary, primary, JSS, and SSS in all Government and Government-assisted schools and government vocational institutions below WASSCE level have been free for all students since 2018 with the inception of FQSE. In addition to no school fees, FQSE covers—(i) free admission, and (ii) payment of public examination fees for NPSE, BECE, WASSCE, and the National Vocational Qualification (NQV). The program also aims to (iii) improve the conditions of non-formal learning centers, (iv) provide mathematics, English, science and social science/civic education for primary schools and JSS and English textbooks for SSS, and (v) provide teaching and learning materials—pens, pencils, exercise books—for primary schools. The concept and limited implementation of free education for children was conceived earlier through the Education Act 2004. The Act abolished school fees for basic education for all girls living in northern and eastern areas to increase girls' school enrolment and reduce gender gap in education. The exam fees for NPSE were also abolished through the Education Act 2004.

3.4. Overview of Education Administration

The GoSL has recently made several changes in the institutional framework that governs the education system. The former Ministry of Education, Science and Technology (MEST), which was a Ministerial department of the GoSL responsible for planning, overseeing, and implementing the educational policies, was split into two ministries in 2018; the MBSSE and the MTHE, with the MBSSE being responsible for pre-primary, primary school, JSS, and SSS, and the MTHE responsible for tertiary and technical/vocational education. The TSC is a semi-autonomous body under the MBSSE, responsible for

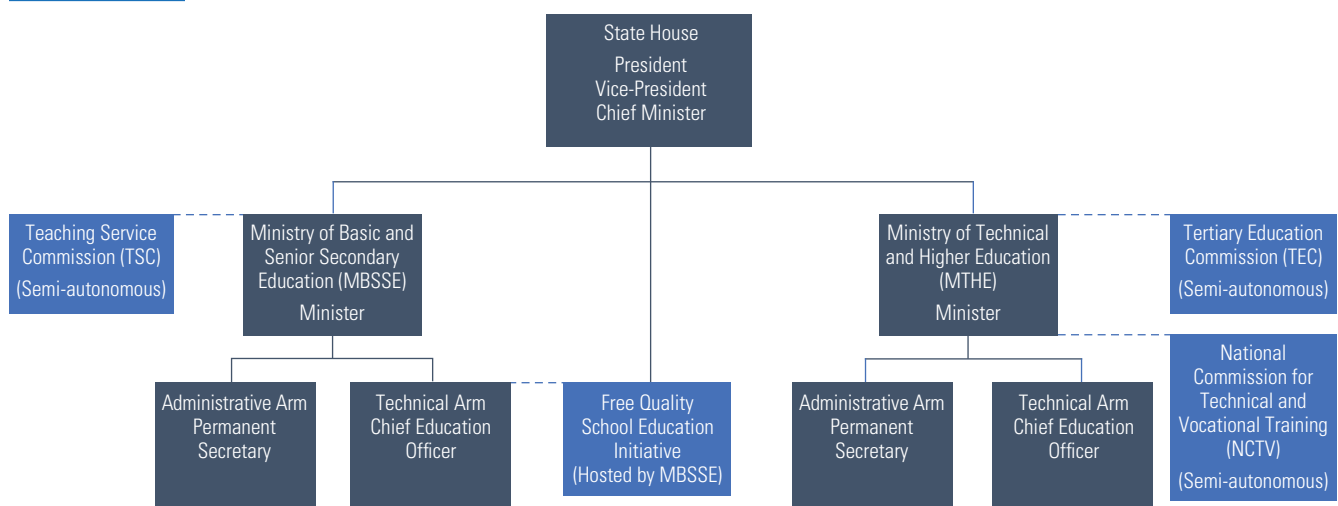
teacher management and enhancing the quality of teachers and education. Although the Teaching Service Commission Act was adopted in 2011, the body has been functioning since 2017. The FQSE is the government's flagship program, launched by the President, to promote access to quality basic and senior secondary education for all. Since early 2019, the FQSE secretariat is hosted by the MBSSE (Figure 6).

The administrative system is a multiple-tiered one. The top tier is the headquarters which is responsible for policy making and overall strategic coordination of the education sector. The next tier is the divisions that implement policies, coordinate and deliver local level education services. They include provinces, districts and chiefdoms. Sierra Leone has five provinces: Eastern; North Western; Northern; Southern; and Western Area, and 16 districts. A province and district are headed by a Provincial Secretary and a District Officer respectively and they both form principal representation of the central government in their respective divisions with the key functions of disseminating government policies and facilitating their implementation within their jurisdictions (MBSSE 2020). The District Deputy Director of Education (DDE) at the District Education Office (DEO), who reports to the Directorate of the Inspectorate within the MBSSE, is responsible for disseminating education policies and over-

seeing their implementation in collaboration with other district departments as well as the education establishments in the district. Below the districts are Chiefdoms, headed by Paramount Chiefs who are elected from the lineage of ruling houses in respective chiefdoms.

Policy decisions in recent years have decentralized some functions of basic education service delivery, and these functions are the responsibilities of the Local Councils, who report to the Ministry of Local Government and Rural Development (MLGRD). There are 21 Local Councils and Local Councils prepare and implement development plans including basic education, mobilize resources for development, develop and maintain basic infrastructure, and facilitate coordination among various actors at the local level. The DDE is part of Local Development Committees and involved in the development of plans and oversight of education service delivery at the Local Council level. There are TSC District Offices and the FQSE Secretariat that also have staff at the district level, who monitor teacher-related activities and the FQSE activities respectively. There is unclear and significant overlap in roles and responsibilities at the district level between the DEO, FQSE, TSC, and Local Council, leading to confusion and an inefficient use of limited resources (EPG 2020).

FIGURE 6 Overview of the National Educational Administration



Source: MBSSE (2020).

The bottom tier is the schools and institutions that deliver teaching and learning services. Schools are also responsible for maintenance of school buildings and coordinating with students and parents. Each school (government and government-assisted schools) is expected to establish a School Management Committee (SMC) at primary education level and a Board of Governors at secondary education level, which mobilizes resources for development of the school, monitors the functioning of the school, and encourages community participation in schooling.

School Ownership and Approval Status

Education services are provided by a mix of government and nongovernment providers with a majority from non-government providers. There are four main categories of school owners: government; mission; community; and private. The majority of schools delivering primary and secondary education lie outside government ownership. At the primary level, only 18 percent are owned/run by the Government, while the majority (58 percent) are owned/run by missions, 14 percent by the community, and 9 percent by private entities. At the JSS level, only 10 percent are government schools and 90 percent of schools are owned/run by non-

government providers (44 percent by missions, 24 percent by the community, and 21 percent by a private entity).

The Government supports non-government community and mission schools through funding of teacher salaries, teaching and learning materials, and examination fees.

With this distinction, there are three categories of schools: (a) government schools that are funded and managed by the government; (b) government-assisted schools that receive financial assistance from the government but are owned by non-government organizations such as missions or a community, and (c) private schools that are privately owned, funded and managed without financial assistance from the GoSL. The GoSL has in place a school approval process that can qualify non-government (community/mission) schools for government financial assistance. This shows the Government's strong commitment to strengthening education service delivery. As of 2019, three-quarters of schools have been approved for government assistance (53 percent in pre-primary, 79 percent in primary, 77 percent in JSS, and 80 percent in SSS). Government approval implies the payment of subsidies, textbooks, teacher salaries, and examination fees; the increase in government-approved schools adds substantial fiscal outlay to the GoSL. However, in practice the approval process does not necessarily guarantee immediate support, as the GoSL faces operational and fiscal limitations.

EDUCATION SECTOR PERFORMANCE

4

This chapter presents an overview of key education sector indicators and trends for Sierra Leone's school education. The discussion focuses on historical educational attainment, school participation, equity in access to education, the learning outcomes of students, and the quality of school environment.

4.1. Educational Attainment

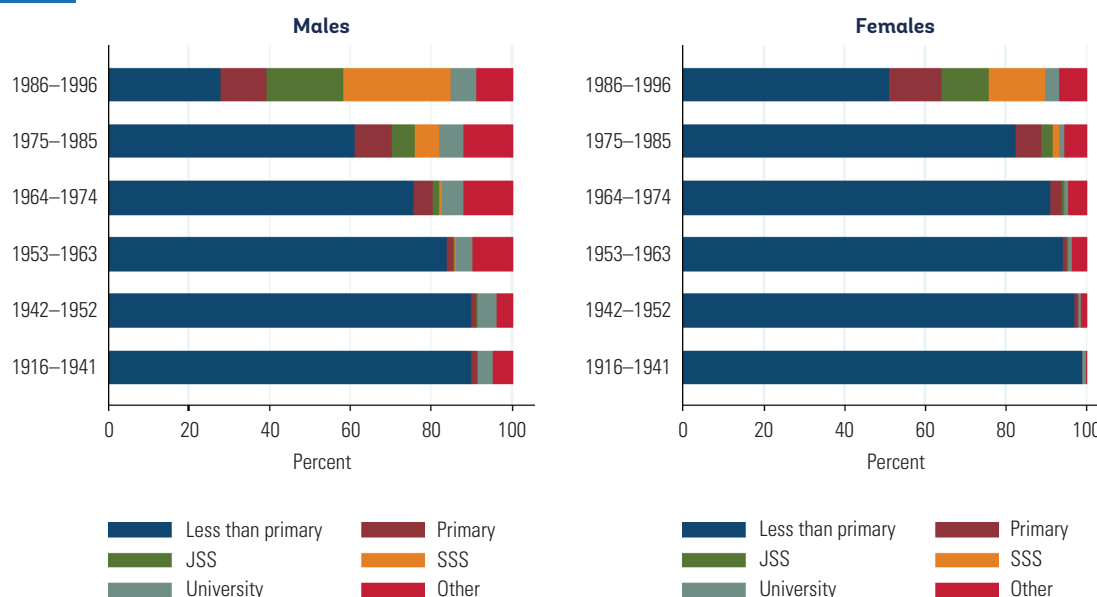
Overall, younger age cohorts of the Sierra Leonean population are more educated.

The proportion of the population completing higher grades has been increasing over time, however, educational attainment gains have been higher for males than females. As reflected in Figure 7 below, more than 90 percent of males and females born between 1916 and 1941 have completed less than some primary education, while for the latest cohort in the analysis (born between 1986 and 1996) 27 percent of males and 52 percent of females have completed less than some primary education. The largest gains in educational attainment for Sierra Leone are observed in the latest cohort born between 1986 and 1996. Though the gender gap has been declining, it is still there. Educational attainment for males born between 1986 and 1996 has significantly exceeded that of females—approximately 40 percent of males have completed SSS or obtained a higher qualification as compared to only 23 percent of females.

4.2. Enrollment Outcomes

The education system has expanded extremely quickly. Despite internal conflict, economic crisis and Ebola, the number of students in the system has almost doubled in the past 15 years (Table 2). In particular, the number of learners of pre-primary and SSS has more than quadrupled, and in JSS more than doubled. This has been accompanied by increments in the number of teachers. This enrollment trend can be expected to continue—and likely intensify—under the FQSE program. The FQSE program will also increase the number of government-approved schools, which adds additional financial stress to the government education budget.

Gross enrollment rates (GERs) reflect mixed trends between 2003 and 2017 with a declining gender-gap in enrollment since 2003. Although aggregate enrollment numbers

FIGURE 7 Highest Education Level Completed by Birth Cohort

Source: Statistics derived from SLIHS 2018.

TABLE 2 Historic Evolution of Enrollment, 2013–2019

	Pre-Primary	Primary	JSS	SSS	Total
2003/2004	19,068	1,134,815	133,401	38,324	1,325,608
2004/2005	20,632	1,280,853	155,052	44,924	1,501,461
2010/2011	37,351	1,194,503	244,289	108,243	1,584,386
2011/2012	49,006	1,252,354	275,915	124,885	1,702,160
2012/2013	54,040	1,298,908	276,593	139,647	1,769,188
2015	60,065	1,338,210	286,457	156,520	1,841,252
2016	80,923	1,412,524	316,402	171,424	1,981,273
2017	80,119	1,486,939	312,919	179,221	2,059,198
2018	90,701	1,369,738	315,500	206,536	1,982,475
2019	127,168	1,770,368	451,685	305,085	2,654,306

Source: National Development Plan, 2019; and ASC various years.

have increased during this period, enrollment rates (which take into account the share of the school age population that is enrolled at various levels) reflect mixed trends. At the primary level GERs⁶ decreased between 2003 and 2011 and

increased in 2017 (Figure 8). Net enrollment rates (NERs)⁷ followed a similar trend (Figure 9). However, it is important to interpret the 2003 figures with caution since this was in the immediate post-conflict period and children were entering and re-entering the education system after prolonged absence (World Bank, 2013). Similarly, 2017 experienced a pickup in school enrolment after the country recovered from Ebola crisis (2014–2016) and schools reopened after a prolonged 9-month-long closure. At the primary level, the GER exceeded 100 suggesting that there were many over-age children enrolled in primary grades which could be attributed to late entrants into the school system and/or increased grade repetition. For JSS students, GERs have dropped since 2011 as the cohort who enrolled in primary education in 2011 and graduated to JSS afterwards was smaller and this decrease is more pronounced for males than females. While NERs at the JSS level also slightly declined during this period, the decline was not as significant as the decline in GERs suggesting a reduction in over-age enrollment in JSS during this period. At the senior secondary level, GERs and NERs both

⁶ GERs are calculated as the “number of students enrolled in a given level of education, regardless of age, expressed as a percentage of the official school-age population corresponding to the same level of education” (source: UIS).

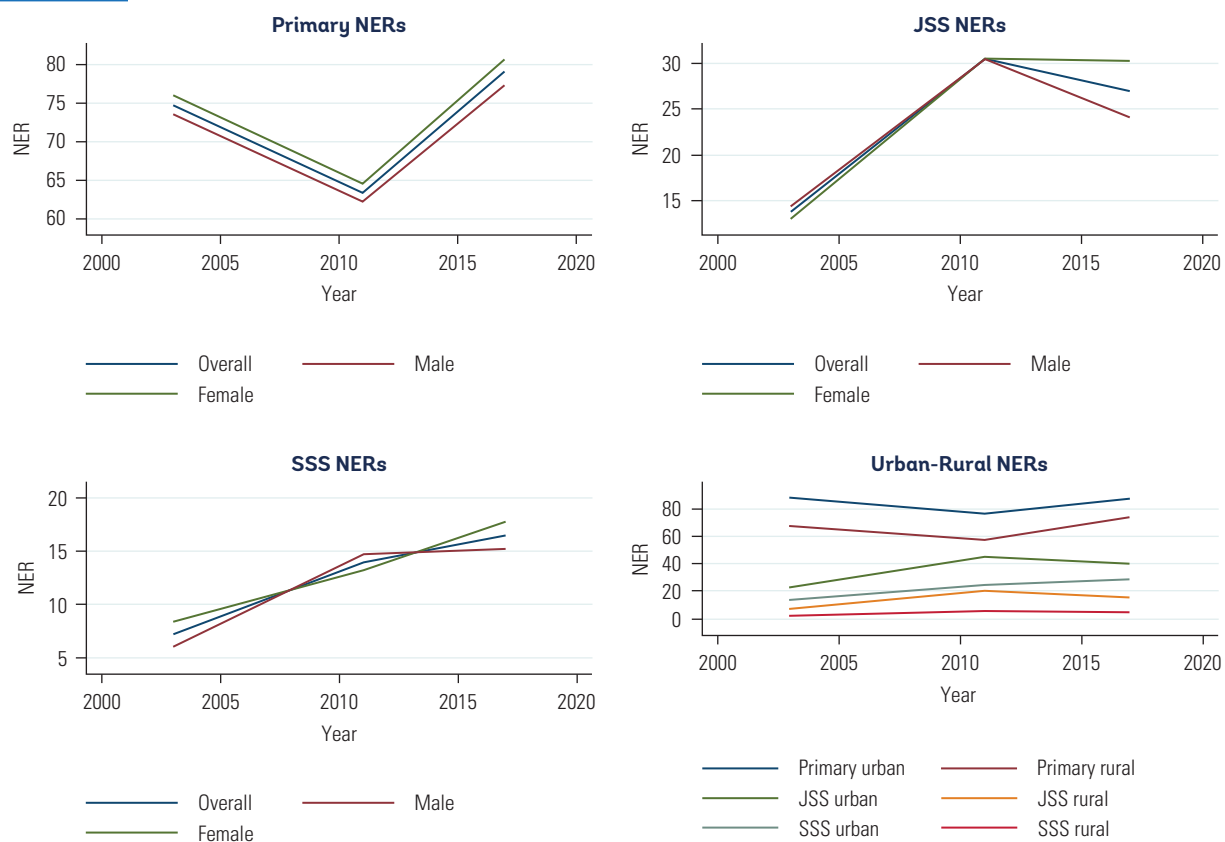
⁷ NERs are calculated as the “Total number of students of the official age group for a given level of education who are enrolled in any level of education, expressed as a percentage of the corresponding population.” (Source: UIS).

FIGURE 8 Gross Enrollment Rates by Gender and Location, 2003–2018



Source: Statistics derived from SLIHS 2003, 2011 and 2018 and have been adjusted for sample weights.

FIGURE 9 Net Enrollment Rates by Gender and Location, 2003–2018



Source: Statistics derived from SLIHS 2003, 2011, and 2018 and have been adjusted for sample weights.

reflect a significant increase between 2003 and 2017: the SSS level GER has almost doubled while NERs have more than doubled since 2003. However, NERs remain low at the SSS level (17 percent).

Across all levels, female NERs exceed male NERs. While the primary level GER is slightly higher for males than females, primary NERs are higher for females than males, suggesting that age appropriate enrollment is more of a challenge for males than females. The gap in NERs is most prevalent at JSS level where there is a 6-percentage point difference in NERs between females and males. At SSS level, the NER for females is 18 percent while for males it is 15 percent.

The share of children in school has increased since 2011 and the gains have been largest for children between the ages of 6 and 11. School participation rates represent the share of children in a given age cohort enrolled in school

(regardless of grade level). This statistic gives a sense of the extent to which children are attending school within a given age group. Figure 10 presents a graphic representation of school participation rate trends between 2003 and 2018. Based on the latest available data, 84 percent of children ages 6 to 11 are enrolled in school in 2018, and 88 and 81 percent of children in the 12 to 14 and 15 to 17 age groups respectively are enrolled in school in 2018. Since 2011, the share of children between the ages of 6 and 11 that are enrolled in school has increased by approximately 8 percentage points. It is also apparent that across all age groups, the gap between males and females has closed since 2003.

The majority of children enrolled in school are attending government schools even though only 18 percent of primary and 10 of percent of JSS are government owned. The share of children enrolled in mission schools has declined drastically since 2003. Based on the latest SLIHS data, across all age cohorts, government schools account for the largest

FIGURE 10 School Participation Rates by Gender, 2003–2018



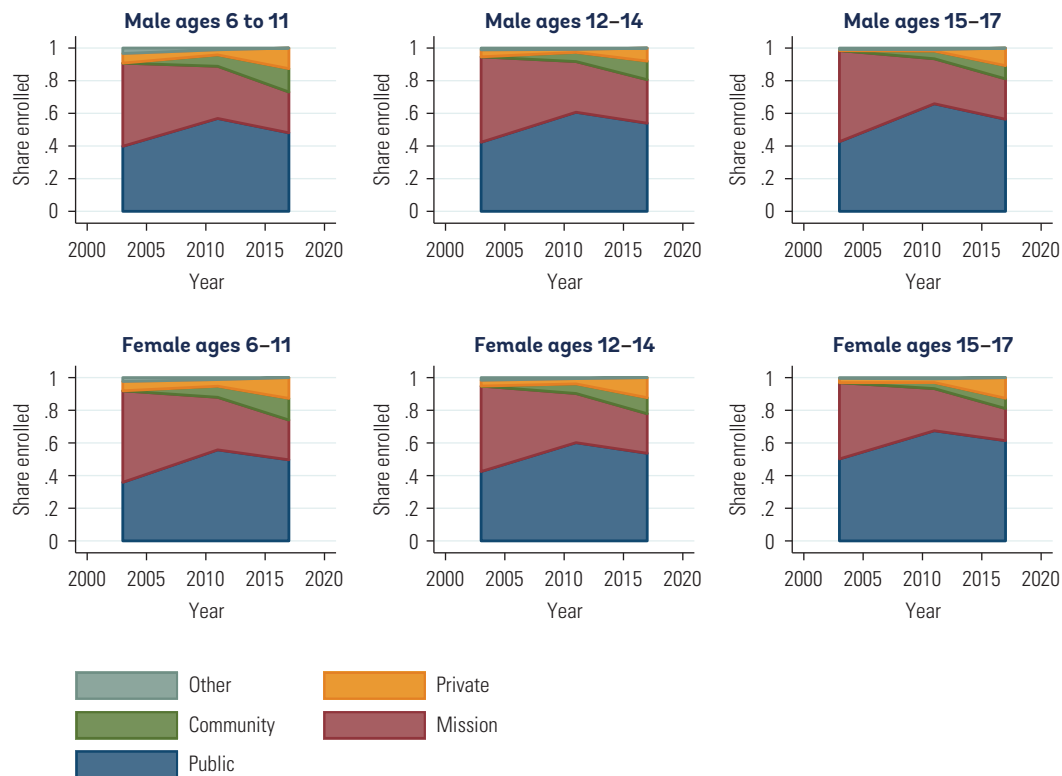
Source: Statistics derived from SLIHS 2003, 2011, and 2018.

share of enrollments—approximately half of all enrolled children are attending government schools in the 6 to 11 and 12 to 14 age group (Figure 11). In the 15 to 17 age group the share of enrolled children attending government schools is even higher with 59 percent of students attending government schools. This is despite the fact that the majority of schools in the country are non-government schools, reflecting that the average enrollment in a typical government school is very high compared to non-government schools. However, back in 2003, mission schools were more popular than government schools with more than half of enrolled children across all age groups being enrolled in mission schools. Another notable development since 2003 is the relative growth in the share of students attending community schools and private schools. As of 2018, 13 percent of enrolled students ages 6 to 11 attend community schools and the same proportion attend private schools. The corresponding numbers for students ages 12 to 14 for community and private school enrollment are 11 and

10 percent respectively, while 7 percent of enrolled students attend community schools and 12 percent attend private schools in the 15 to 17 age group.

The number of schools and enrollment has increased drastically between 2017 and 2019. During this period, the number of government schools has increased by approximately 18 percent (Table 3). However, it should be noted that 2017 was a difficult year after the Ebola epidemic when the economy was hit hard, and the education sector suffered. The largest percentage gains have been in the number of private schools which experienced a 42 percent increase and mission schools with a 25 percent increase. Since 2017, overall enrollment (from pre-primary up until senior secondary school) has increased by 29 percent. As of 2019, it is evident that enrollment in pre-primary remains relatively low (Figure 12): only 131,000 students are enrolled in pre-primary compared to approximately 1,770,000 students enrolled

FIGURE 11 Type of School Attending, 2003–2018



Source: Statistics derived from SLIHS 2018.

Note: Graphs depict the distribution of enrolled children by the type of school they attend.

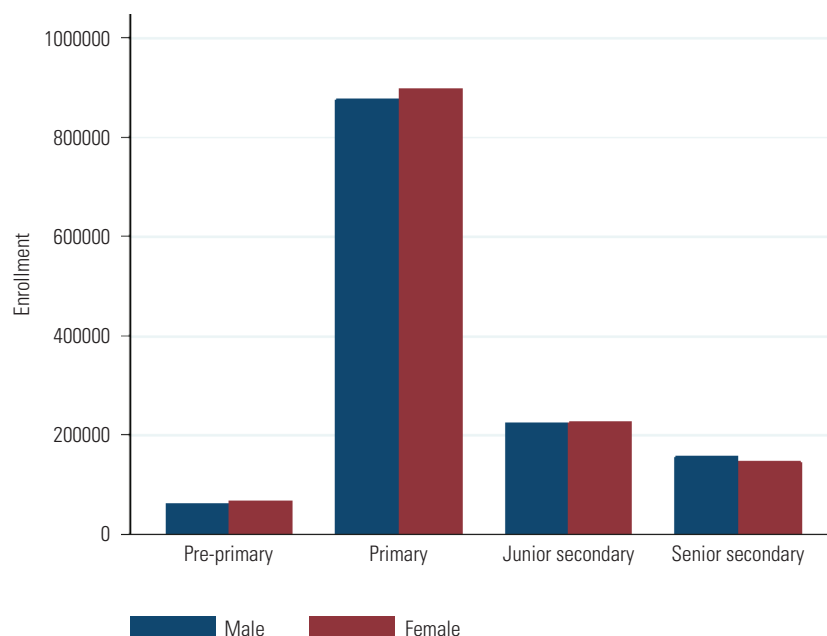
TABLE 3 Schools and Enrollment, 2017–2019

	School Type	2017	2018	2019	Change Since 2017
Schools	Community	1,648	1,748	1,581	↓
	Government	1,312	1,645	1,542	↑
	Mission	4,973	5,617	6,228	↑
	Private	1,280	1,737	1,813	↑
	Other	45		16	↓
	Grand Total	9,258	10,747	11,180	↑
Enrollment	Male	1,025,780	983,751	1,320,510	↑
	Female	1,035,191	998,724	1,340,118	↑
	Total	2,060,971	1,982,475	2,660,628	↑
	Student to school ratio	223	184	238	↑

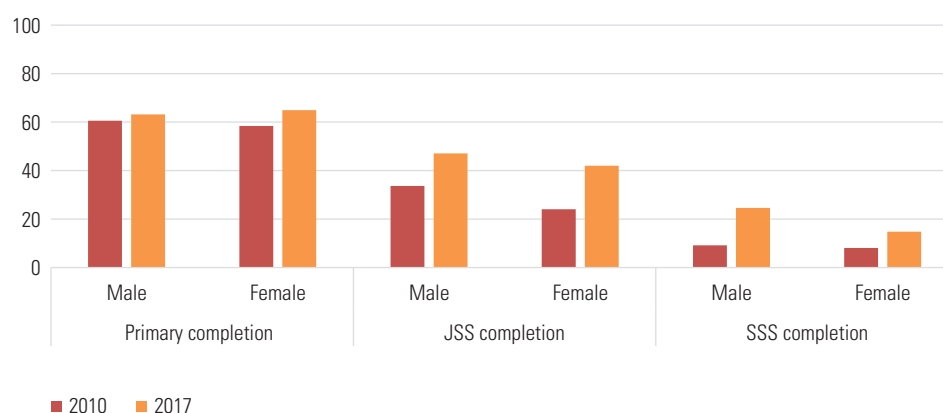
Source: ASC 2017, 2018, and 2019.

at the primary level. Between 2017 and 2019 the average number of students per school has also increased from 223 to 238 students per school.

The progression through the school system in Sierra Leone is inefficient. Completion rates are usually used as a proxy to measure internal efficiency. While completion rates have improved over time, still many students drop out in the middle of the education year and, therefore, do not complete the full education cycle (Figure 13). Key factors driving this issue include: (i) cost burden especially for poor families (e.g., uniform etc.); (ii) distance to schools and safety issues; (iii) school-related GBV; and (iv) teenage pregnancy. More than 3 of every 10 students entering primary school are not likely to make it to the end of primary school, for those entering JSS the corresponding rate is 5 out of 10, and for SSS, 7 out of 10. It is worth noting that the high-stakes examinations administered by the WAEC between levels of education (except from pre-primary school to primary) act as a filter between levels. The biggest challenge for the sector is, therefore, to ensure that learners who access grade 1 can stay in school up to at least the end of basic education, and to address inequalities entailed, due to the limited access to higher levels of education.

FIGURE 12 Enrollment by School Level, 2019

Source: ASC 2019.

FIGURE 13 Completion Rates by Gender, 2010 and 2017

Source: EdStats.

4.3. Equity in Access to Education

Overall, NERs have increased for all provinces across all levels except for the West province⁸ which historically has a high educational participation rate (Table 4). NERs in the South lag behind other regions. NERs are highest for the West province across all levels of schooling. At the JSS level, NERs are lowest for the Northwest province, while at the SSS level they are lowest for the South province. Enrollment disparity is more apparent at higher levels of schooling—for example, at the JSS level NERs in the Western region are twice that of the Southern region of Sierra Leone. The Southern region has made the least amount of progress in improving NERs particularly at the JSS and SSS levels.

At the district level, Falaba and Bonthe Districts have the lowest share of children attending school, while Western Area (Freetown) has the highest school participation rates. Overall, only 64 percent and 72 percent of children between the ages of 6 and 17 in Falaba and Bonthe, respectively, are enrolled in school. Across most districts, girls are more likely to be enrolled in schools compared to boys, and the gap is largest in districts Moyamba and Pujehun where the share of girls in school is 12 percentage points higher than boys (Figure 14).

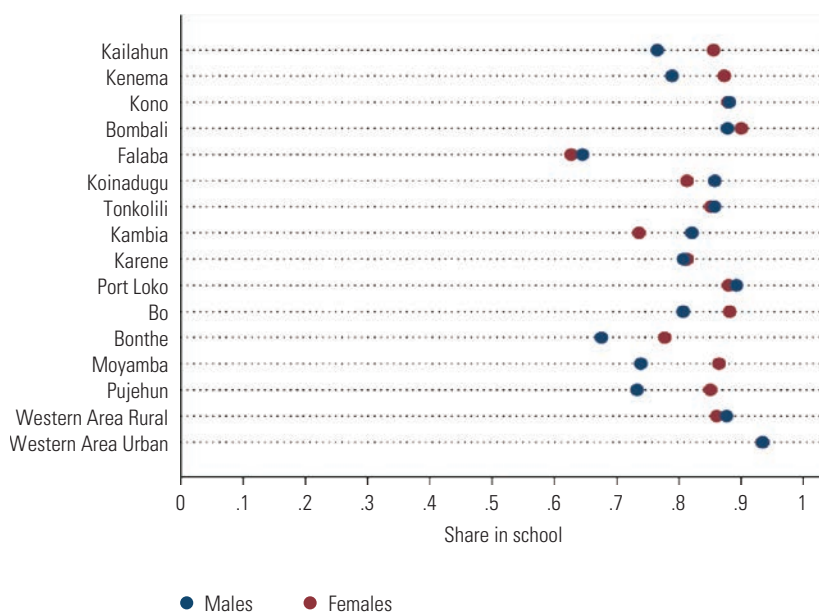
⁸ However, a new province was created out of the north and west provinces.

There is disparity in enrollments between urban and rural areas in Sierra Leone, although the situation is improving in rural areas. At the primary level, the urban NER is 87 percent compared to 74 percent in rural areas, while the gap is even more pronounced at the JSS and SSS levels (Figure 9). The urban NER at the JSS level is 40 percent com-

TABLE 4 Net Enrollment Rates by Province (%)

	2003	2011	2017	Change Since 2003
Primary NER				
East	76	59	77	1
North	69	59	78	10
Northwest			77	
South	75	69	76	1
West	90	73	87	-4
JSS NER				
East	7	33	24	18
North	7	22	23	16
Northwest			21	
South	16	25	20	5
West	31	49	41	10
SSS NER				
East	1	13	16	15
North	1	8	11	9
Northwest			11	
South	6	12	9	2
West	22	26	31	9

Source: Statistics derived from SLIHS 2003, 2011, and 2018.

FIGURE 14 District Share in School Ages 6–17

Source: Statistics derived from SLIHS 2018.

pared to 16 percent in rural areas, while at the SSS level, the urban NER is 29 percent compared to only five percent in rural areas. However, since 2003 the primary NER in rural areas has increased by approximately six percentage points while the urban NER remains at the 2003 level. Similarly, at both the JSS and SSS levels NERs have doubled since 2003 in rural areas.

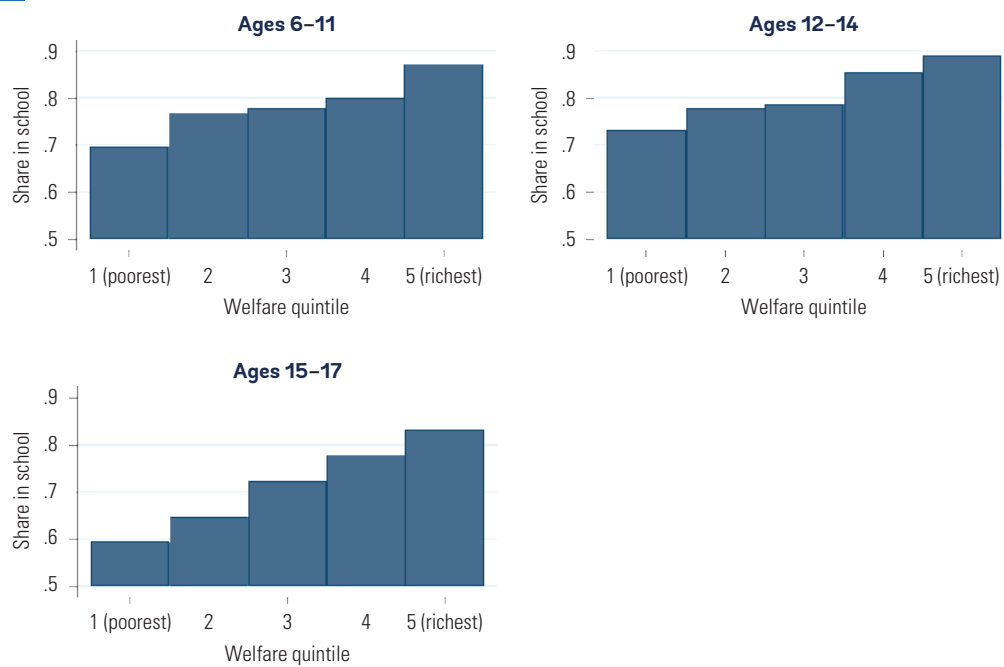
Across all groups, children in the lowest welfare quintiles are less likely to be enrolled in a school. Across all welfare quintiles, school participation is highest in the 12 to 14 age group and lowest in the 15 to 17 age group. For children ages 6 to 11 years old, there is an approximately 15 percentage point difference in the share of children enrolled in school between the richest and poorest welfare quintiles (Figure 15). This gap is even more pronounced in the older age groups where the difference in school participation between the richest and poorest quintiles is more than 20 percent. Comparing the situation with 2003, by and large the enrollment gap between the poorest and richest quintiles has remained. However, for the 15 to 17 age group the enrollment ratio has decreased by 16 percent indicating that the education gap between the poorest and richest is shrinking (Figure 16).

4.4. Learning Outcomes

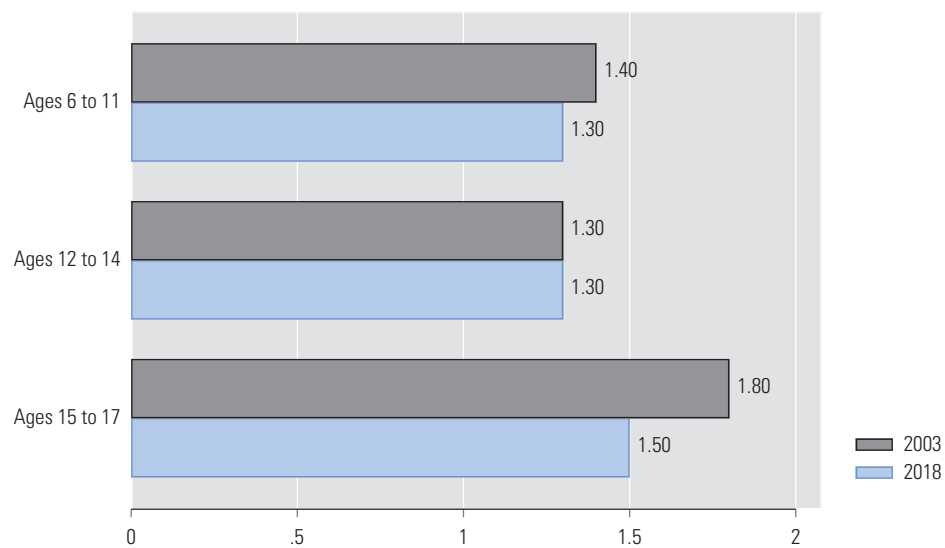
Children lack basic foundational literacy and numeracy skills and this problem is more acute in rural areas.

According to Multiple Indicator Cluster Survey (MICS) 2017, 17 percent of children ages 7 to 14 possess foundational reading skills while only 12 percent demonstrate foundational numeracy skills. The urban-rural gap in literacy and numeracy skills is quite pronounced: in urban areas, 30 percent of children possess foundational reading skills and 22 percent of children possess numeracy skills as compared to only five percent of children demonstrating literacy and numeracy skills in rural areas. In terms of geography, the share of children possessing foundational reading skills is less than 10 percent in districts Pujehun, Kailahun, Moyamba, Tonkolili, Bonthe, Koinadugu, and Port Loko.

Children from poor households are less likely to demonstrate foundational literacy and numeracy skills (Figure 17). Thirty-nine percent of children ages 7 to 14 in the richest wealth quintile demonstrate foundational literacy skills as compared to only three percent of children in the poorest wealth quintile. Similarly, one-quarter of children

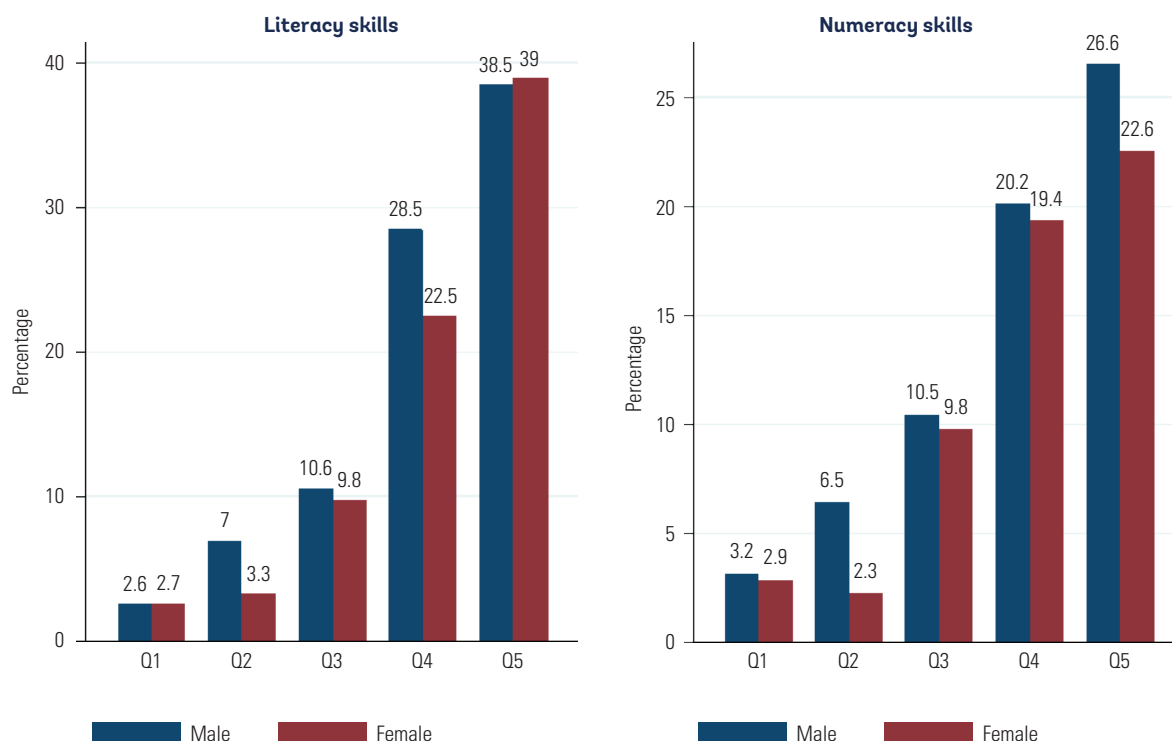
FIGURE 15 School Participation by Welfare Quintile

Source: Statistics derived from SLIHS 2018.

FIGURE 16 Enrollment Ratio of Richest to Poorest Quintile, 2003–2018

Source: Statistics derived from SLIHS 2018.

FIGURE 17 Percentage of Children Ages 7–14 Demonstrating Basic Literacy and Numeracy Skills by Wealth Quintile



Source: MICS 2017.

Notes: "Q" denotes quintile with Q1 as the poorest wealth quintile and Q5 as the richest quintile.

in the richest quintile possess basic numeracy skills while only three percent of children in the poorest wealth quintile possess basic numeracy skills. There are also differences by sex—in quintiles two, three and four boys are more likely than girls to possess basic literacy and numeracy skills. While there is parity in literacy between boys and girls for the richest wealth quintile, the gap remains in numeracy with the share of boys demonstrating basic numeracy skills being four percentage points higher than the proportion of girls.

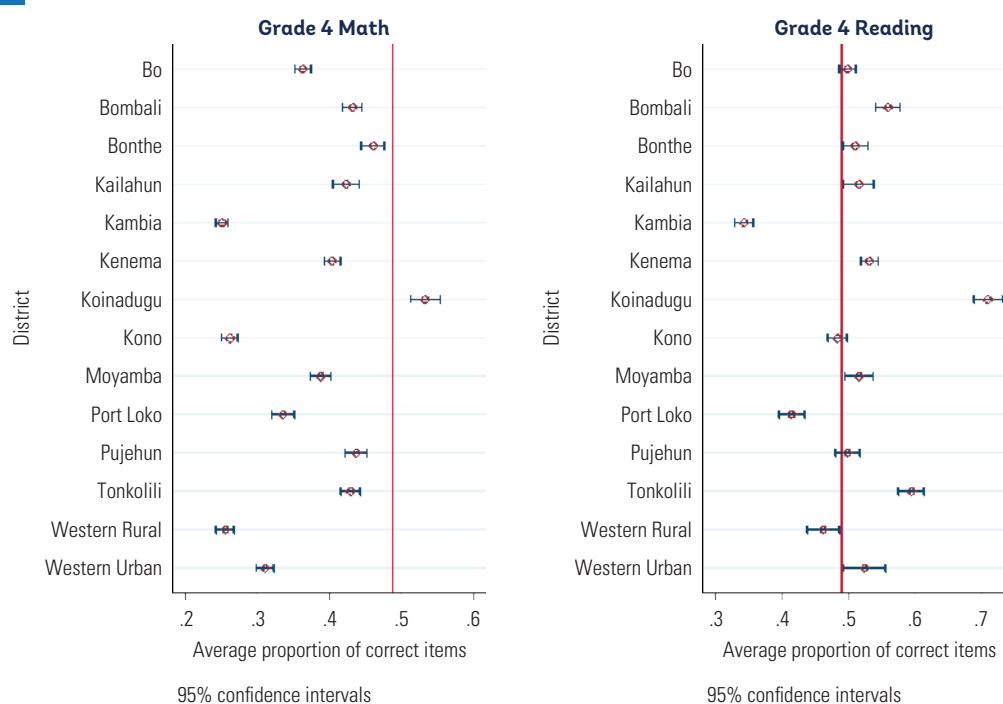
Student performance on grade four achievement tests reflects low levels of learning in math and reading.

On average, grade four students only answered 37 percent of math and 51 percent of reading test items correctly. Average math and reading achievement for grade four students vary by district (Figure 18). District Koinadugu is a clear outlier, with students correctly answering (on average) 53 percent of test items in math and 71 percent of test items in reading. On the other end of the spectrum, students in districts Kambia, Kono

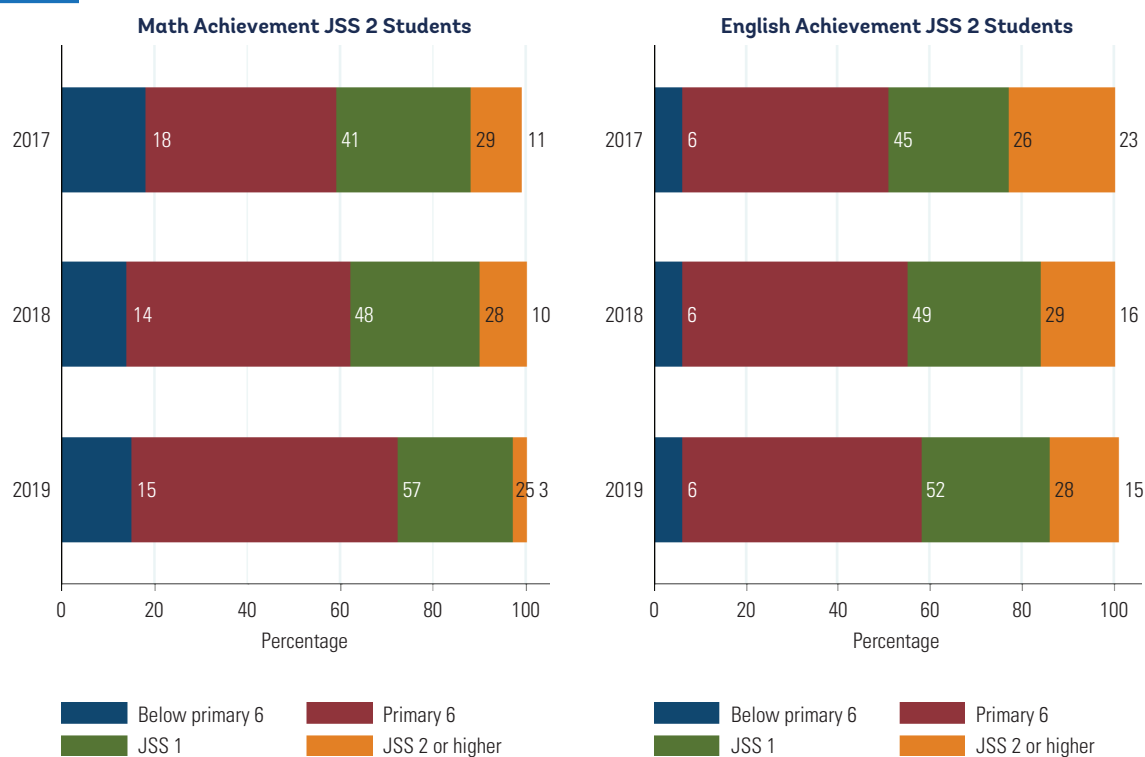
and Western Rural perform the worst in math only answering correctly 25 to 26 percent of test items (on average). For reading, the districts where scores are the lowest are Kambia, Port Loko and Western Rural. Overall, while there are no statistically significant differences in the share of test items that were answered correctly for boys and girls, there are slight gaps in achievement at the district level. For example, in both math and reading the average share of correct responses is between 2 to 3 percentage points higher for boys than girls in Kailahun, Bonthe, Koinadugu, Kono, and Moyamba districts. In Bombali and Port Loko districts, the average share of correct responses is 2 percentage points higher for girls than boys in both math and reading tests.

Secondary students are behind in grade levels in terms of their learning.

In 2017, only 11 percent of JSS2 students were rated as learning at grade level or higher in the math assessment and by 2019 this number was only 3 percent (Figure 19). Similarly, in English 23 percent of JSS2 students

FIGURE 18 National Learning Assessments Math and Reading Achievement

Source: Statistics derived from National Learning Assessments.

FIGURE 19 JSS 2 Student Achievement

Source: SGLA 2017–2019.

were performing at grade level in 2017 as compared to only 15 percent of students in 2019. In fact, the majority of JSS2 students are at the primary grade six level of competency in both math and English. For SSS2 students, only 5 and 1 percent of students are performing at the JSS 3 level or higher in English and math, respectively. Forty-six and 60 percent of SSS2 students are achieving at the primary level or below in English and math, respectively.

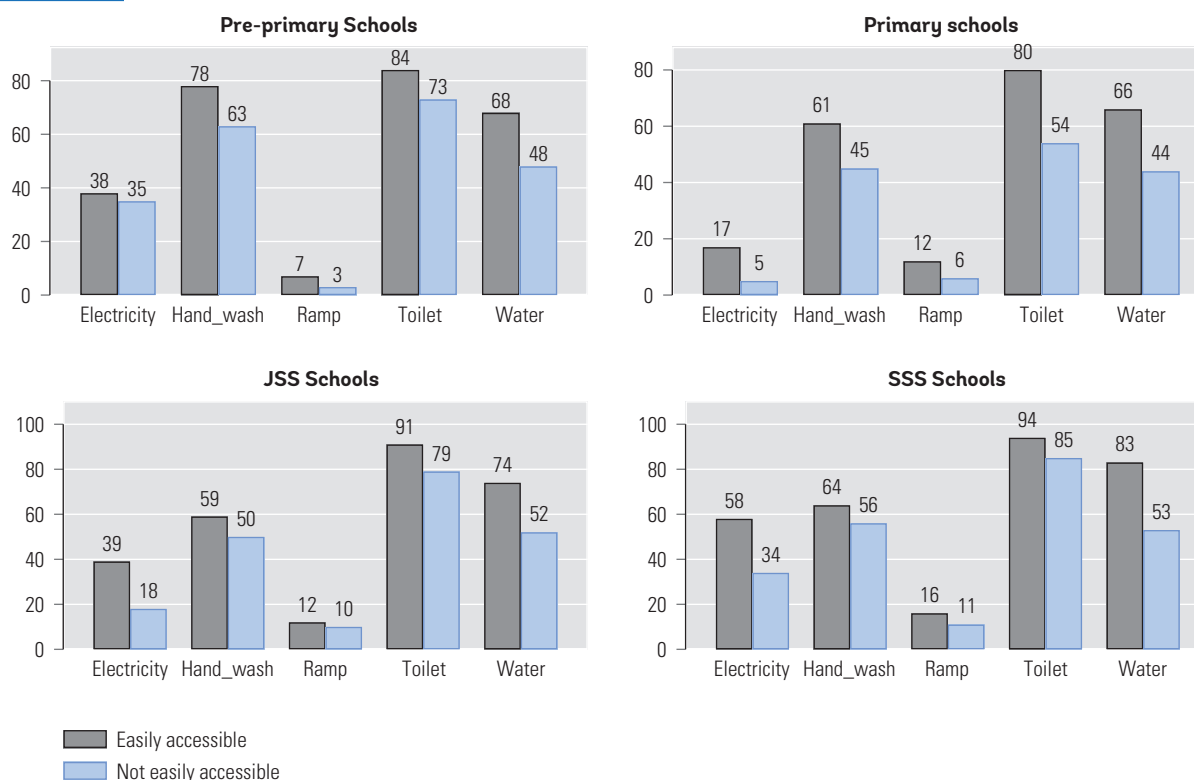
4.5. School Inputs and Teacher Quality

This sub-section presents information on school inputs including school facilities, infrastructure, the provision of textbooks, teacher qualifications and their understanding of learning objectives.

Many schools still lack basic facilities. Figure 20 below presents information on school facilities by school level and

by accessibility. The facilities presented below include having at least one toilet facility, hand wash facility, electricity, and ramps for physically disabled students. School with those facilities are assessed to be of good quality in terms of physical amenities. The outermost border of the pentagon represents a situation where all schools have basic water, toilet, hand wash, electricity and ramps for physically disabled students. While the majority of schools do have access to some water source, this varies by school level. Of all SSSs and JSSs, 80 percent and 70 percent have access to water, while for pre-primary and primary schools the corresponding numbers are 65 and 58 percent, respectively. Among all pre-primary schools and JSSs, 70 and 63 percent of toilets in pre-primary and JSS respectively were deemed to be of “good quality” while the share of SSS toilets of good quality was only 31 percent. Access to electricity is also limited across all school levels. Relatively speaking, SSSs are more likely to have electricity than other levels of education, while primary schools are the least likely to have electricity with only 13 percent of schools having electricity. Pre-primary and SSSs are more likely to have hand

FIGURE 20 Availability of Basic Facilities by School Level and Ease of Accessibility



Source: ASC 2019.

washing facilities. Lastly, across all school levels ramps for physically disabled students are limited: only 10 percent of primary schools, 12 percent of JSS, and 15 percent of SSS have ramps. It is worth noting that the availability of facilities also varies by the remoteness of schools. For example, 66 percent of primary schools that are classified as ‘easily accessible’ by road have access to a water source as compared to only 44 percent of schools classified as not easily accessible by road. Schools in remote areas of the country are more disadvantaged when it comes to possessing basic facilities.

Classrooms constructed from solid materials are limited in supply particularly at the primary level. Fifty-two percent of pre-primary classrooms and 40 percent of primary classrooms are made out of solid materials. For JSS and SSS the corresponding numbers are 53 and 65 percent, respectively. There has been a reduction in the number of temporary/makeshift classrooms across all levels: at present 10 percent of pre-primary, 9 percent of primary classrooms, 5 percent of JSS, and 4 percent of SSS classrooms are makeshift (ASC, 2019).

Textbooks to pupil ratios vary by grade and utilization of textbooks is low. In government assisted primary schools, on average 8 pupils in grade 1 share a textbook; this number drops to 4 by grade six (ASC, 2019). However, availability of textbooks in a school does not necessarily mean that they are accessible to students in that school. A randomized control trial of textbook provision to primary schools found that student level access to textbooks in Sierra Leone did not actually increase as a result of the free textbook program because textbooks were stored by schools rather than distributed to students (Sabarwal, Evans and Marshak, 2014).

The majority of teachers in Sierra Leone are male and many teachers are unqualified. Overall, there are approximately

TABLE 5 Qualified Teachers by School Level

	Pre-Primary	Primary	JSS	SSS	Overall
Qualified Teachers	2,874	30,384	11,533	3,970	48,761
Total Teachers	5,566	47,738	19,888	9,841	83,033
Percent Qualified	52%	64%	58%	40%	59%

Source: ASC 2019.

83,000 teachers of which 72 percent are males and 28 percent are female (ASC, 2019). More than 57 percent of teachers work in primary schools, followed by 24 percent of teachers working in JSS, 12 percent in SSS and 7 percent of teachers in pre-primary schools. In the past, school administrators have accepted unqualified individuals as teachers to meet the growing demands of the education system. Across all levels, 29,872 teachers were paid by the government in 2019. Only 59 percent of teachers possess basic teaching qualifications to teach at their particular level of schooling (Table 5). The percentage of teachers with basic qualifications is highest for primary schools (64 percent) and lowest for SSSs (40 percent). This is not surprising given that required qualifications at the senior secondary level are much higher than the requirements at the primary level.

While JSS and SSS teachers report utilizing lesson plans prepared by the MBSSE, many teachers were not able to correctly identify learning objectives for particular grades. In 2017, the ministry distributed 40,000 lesson plans in language, arts, and math to teachers across the country. Seventy-three percent of JSS and SSS teachers surveyed reported using lesson plans to prepare their own lessons. However, only 45 percent of teachers could match learning objectives to the corresponding JSS grades and only 52 percent of teachers could correctly identify the five standard parts of a lesson plan.⁹

⁹ These parts are opening, introduction to new material, guided practice, independent practice, and closing.

EDUCATION SECTOR EXPENDITURE ANALYSIS

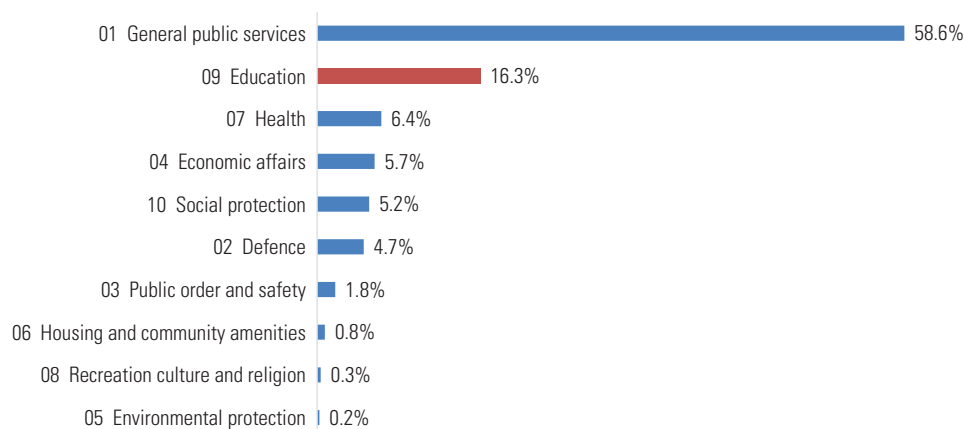
This chapter presents the financial landscape of the education sector in Sierra Leone. The GoSL is committed to improving equitable access to quality education services. While a minimum level of resources is necessary to ensure that students have access to a reasonable standard of resources and materials, how resources are spent on education is more important than how much is spent.

5.1. Education Financing and Fund Flow

Sierra Leone's budget shows strong commitment to education with expenditure on the sector being the largest of any single sector (Figure 21). Government's expenditure categories were mapped with the ten Classification of Functions of Government (COFOG) to identify the largest spending functions. The top six spending government functions are: general public services, education, health, economic affairs (including agriculture and fisheries, mining, trade and commerce, energy, and so on), social protection, and defense. General public service includes spending for executive and legislative services, public debt transactions and financial management services, external affairs, foreign economic aid and other services. Education is the single largest spending sector over the five-year period (2015–19), accounting for on average 16 percent of total executed expenditures, reflecting Government's human capital development priorities.

The GoSL executes its education spending at the central government and the local government level through Local Councils (MBSSE, 2020). At the central level, the GoSL does this through the MBSSE, MTHE, and TSC. Other ministries like Ministry of Health and Sanitation (MoHS) also support education sector (e.g., school health). In addition to the centralized spending, the Government supports decentralization through transfers to Local Councils. On average between 2015 and 2018, 93.9 percent of education sector spending (SLL 688 billion) was carried out by MEST, which covered all education sub-sectors. However, MEST's share of total education spending fell after splitting the MEST into two ministries. In 2019, the MBSSE spent SLL 668 billion (70.3 percent of total education expenditures) and the MTHE spent SLL 260 billion (26.7 percent of total education expenditures) respectively. The TSC spent SLL 13.8 billion (Table 6).

Funds from the MoF move through three layers in the education sector. In the first layer, the MBSSE receives funds primarily for administrative and operational costs. Contracts for the supply of education materials are awarded by the Ministry, but payments are made

FIGURE 21 Government Priority Sector by Expenditure, 5-years Average, Share (%)

Source: BOOST data.

TABLE 6 Expenditures by the Central Level, SLL Billion

	2014	2015	2016	2017	2018	2019
MBSSE	568.8	597.3	691.9	673.0	789.9	668.1
MTHE						260.0
TSC	—	—	—	1.5	4.5	13.8
Total	568.8	597.3	691.9	674.5	794.5	941.9

Source: BOOST data.

Note: The MEST was split into two ministries in 2018.

directly by the Accountant General's office to the suppliers. The MBSSE, however, prepares the necessary payment paperwork that is lodged in the Integrated Financial Management Information System (IFMIS) platform (EU, 2019). The second layer includes schools that receive direct payments from the MoF, through the Local Government Finance Department as school-fee subsidies for primary and JSS. The MBSSE also makes payment directly to schools as subsidies for SSS. Subsidies are paid directly into school bank accounts.

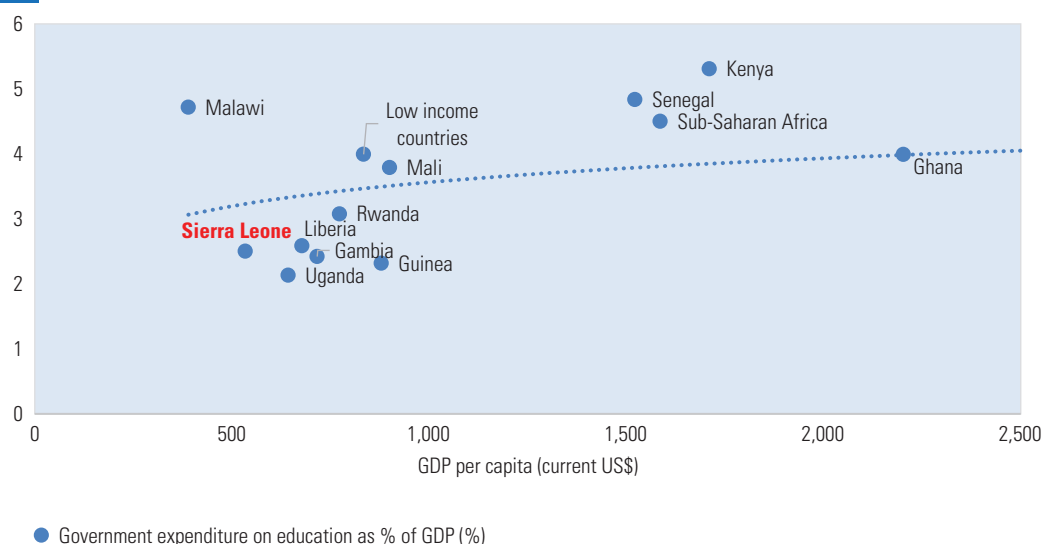
5.2. Government Education Funding

Although the government education expenditure has increased, it still does not meet international standards. In 2017, overall 13.5 percent of total government expenditures

went towards the education sector.¹⁰ By 2019, the share of total government expenditures towards education increased to 16.9 percent. Although this shows the GoSL's strong commitment to investing in education, the government education spending in 2019 represented only 2.5 percent of GDP, and a significant portion of the education budget remained unspent. Compared to other low-income countries where average government spending on education in 2018–19 was 4.0 percent of GDP, the GoSL's spending on education still fell below international standards (Figure 22). The Education 2030 Framework for Action suggests that countries allocate 4.0 to 6.0 percent of their GDP, ensuring countries are to achieve the Sustainable Development Goal (SDG) 4 on education.

In 2019, across all education levels more than SLL 1 trillion (US\$97.9 million) was spent on education representing a 46 percent increase in government spending on education since 2017. Government education spending per child has also increased in recent years. It rose from PPP\$99 in 2013–14 to PPP\$207 in 2017–18. Government expenditure per student in primary education was 236.4 in PPP\$. The average government spending in low-income and high-income countries in 2018–19 were approximately US\$48 and US\$8,501 per school-aged child.

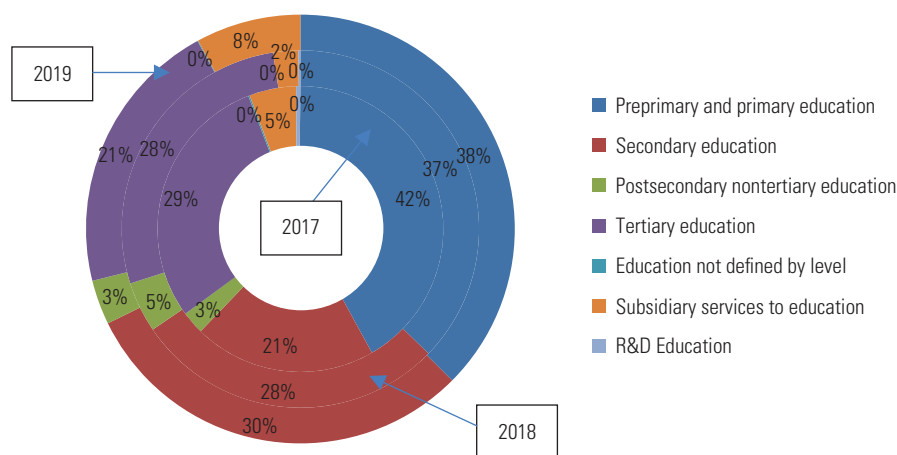
¹⁰ This includes all levels schooling.

FIGURE 22 Public Spending on Education as Percentage of GDP, an International Perspective, 2018–19

Source: BOOST data for Sierra Leone. World Bank Education Statistics Data for other countries.
 Note: Data for 2018 or nearest year available.

The highest share of education expenditures goes towards pre-primary and primary education (38 percent); however, the priority is shifting to secondary education. Figure 23 presents a graphic depiction of expenditures by functional classification. The innermost ring represents the corresponding statistic for 2017, the middle ring corresponds to 2018 while the outermost ring reflects the figures for 2019. With

the inception of FQSE program, GoSL has shifted its focus and budget towards primary and secondary education. In 2019, 38 percent of total education expenditures were classified as expenditures on pre-primary and primary education. At the secondary level, expenditures have more than doubled between 2017 and 2019. In 2017, secondary education only accounted for 21 percent of total education expenditures,

FIGURE 23 Education Expenditure by Functional Classification, 2017–2019

Source: BOOST data.
 Note: Innermost ring corresponds to 2017; middle ring corresponds to 2018; and outermost ring corresponds to 2019.

by 2019, 30 percent of education expenditures were on secondary education. Spending at the tertiary level has declined from 29 percent to 21 percent between 2017 and 2019.

Under-investment in the capital education budget has negative consequences for the performance of the education system. The MBSSE spent 98.5 percent of total primary and secondary education expenditures on recurrent expenses in 2019 (Table 7). The recurrent education budget includes personnel emoluments, goods and services, and current transfers (grants and subsidies). The capital education budget includes expenditure for construction, renovation and major repairs of buildings, and the purchase of heavy equipment or vehicles. Capital expenditures remain extremely low, accounting for only 1.5 percent of total primary and secondary education expenditures. In fact, between 2011 and 2018 there was no public capital spending in primary and secondary education. This is a contributing factor to the poor quality of school facilities and infrastructure (MBSSE, 2020). Overall, the ability of the education system to deliver a high quality education experience for students is constrained by the relatively low level of public investment in education.

Between 2017 and 2019, the government expenditure on primary and secondary education was on average under-

TABLE 7 Total Expenditure and Allocation in Primary and Secondary Education, 2017–2019, SLL Billion

	2017	2018	2019
Expenditure (SLL)	476.62	564.52	778.78
Recurrent (share %)	469.17 (98.4%)	558.17 (99.4%)	767.09 (98.5%)
Capital (share %)	7.46 (1.6%)	3.35 (0.6%)	11.69 (1.5%)
Allocation (SLL)	525.71	689.4	1,002.11
Execution rate	91%	81%	78%
Recurrent budget execution rate (%)	91%	82%	81%
Capital budget execution rate (%)	86%	65%	21%
Expenditures as a share of total government spending (%)	9%	11%	13%

Source: BOOST data.

Note: These figures represent government allocation and expenditure on primary and secondary education. This includes education expenditures not defined by level and subsidiary services to education but excludes tertiary and other post-secondary education expenditures and allocations.

executed at 83 percent. Since 2017, while expenditures on primary and secondary education have increased by 61 percent, budget execution rates have decreased suggesting limited absorptive capacity of the government (Table 7). In 2017, 91 percent of the allocated budget was utilized, compared to 81 and 78 percent in 2018 and 2019 respectively. Low levels of budget utilization are particularly apparent with respect to the capital budget with only one-fifth of the capital budget being utilized in 2019.¹¹

5.3. Decentralized Financing

The GoSL supports decentralization through transfers to Local Councils. School fee subsidies, examination fees, delivery of textbook and teaching and learning materials, education development, and government libraries are supported through transfers to Local Councils. Spending at Local Councils varies from year to year (Table 8). For instance, in 2015, Local Councils spent SLL 71.9 billion (US\$7.0 million) on education. Textbooks and teaching and learning materials are not procured every year. This education spending decreased between 2016–2018 with an annual average spending of SLL 32.9 billion (US\$3.2 million). In 2019 it increased to SLL 93.5 billion (US\$9.2 million). This is largely due to an increased student enrollment under the FQSE program, which requires increased spending on fee subsidies to schools. It is worth mentioning that in 2018 and 2019, nothing was spent on education development, textbooks, and teaching and learning materials, or government libraries, raising concerns about the potential risks for effective long-term investment on schools.

According to the 2004 Local Government Act, the delivery of basic education (primary and junior secondary education) is a devolved function. However, in practice, the devolution of functions to Local Councils is partially implemented. As shown in Figure 24, on average more than 90 percent of education funds are spent at the central level while education

¹¹ For example, 2019 data shows no expenditure against activities such as rehabilitation of boarding schools, office buildings, secondary education improvement project etc.

TABLE 8 Expenditure on Education at Local Councils, SLL Million

	2015	2016	2017	2018	2019
School Fee Subsidies	29,999.53	11,920.42	12,199.74	21,524.03	78,295.32
Examination Fees (NPSE)	6,633.16	7,788.95	3,069.28	4,438.76	8,156.04
Examination Fees (BECE)	6,328	7,117	7,932	7,591	7,000
Textbooks (mid-Secondary Schools)	7,368	—	—	—	—
Education Development	4,315	474	3,350	—	—
Government Libraries	1,320	1,070	1,037	—	—
Teaching & Learning Materials	15,264	9,316	—	—	—
Textbooks (primary schools)	714	—	—	—	—
Total	71,942	37,686	27,587	33,554	93,451

Source: BOOST Data.

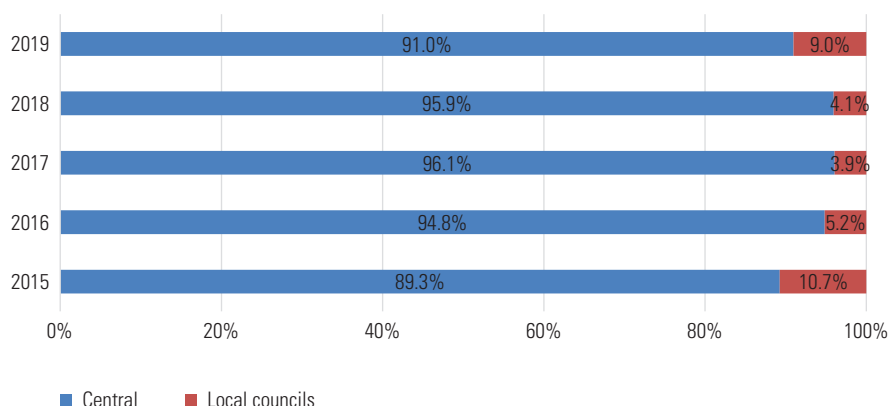
spending at Local Councils accounts for below 10 percent. The MBSSE at the central level retains control over majority of education spending. As discussed earlier there are various agencies existing at the local level, including the DEO, TSC District Office, FQSE units, and Local Councils. There is no clear written policy document, guidelines or mechanism

that clarifies roles and responsibilities at the local level among the DEO, FQSE, TSC, and Local Council, creating confusion and duplication of work among these agencies (EPG 2020; MBSSE 2020).

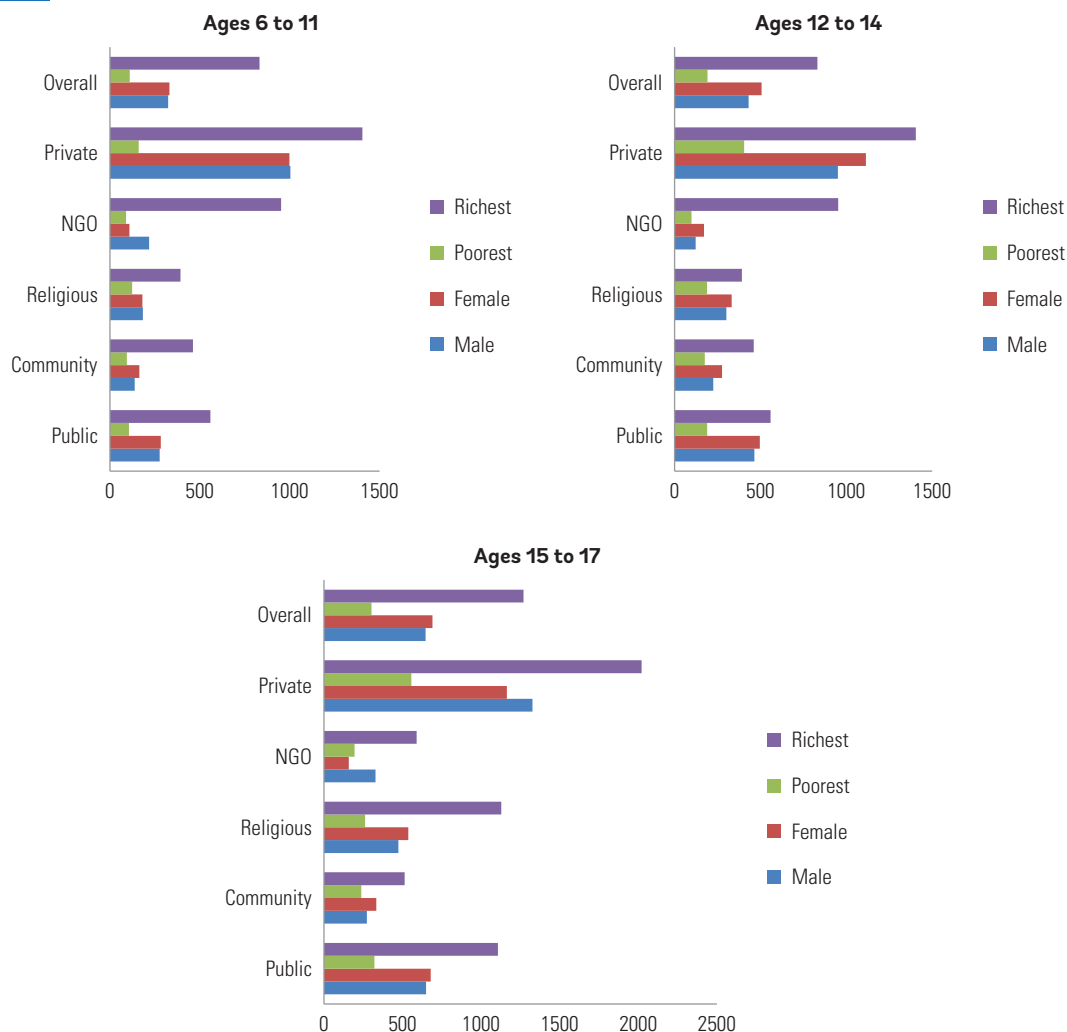
5.4. Private Education Spending

While the level of the public expenditure in education provides a measure of the government's commitment to education, households also contribute to education. Educational expenditures are highest for children attending private schools, and on average, households spend more on educating girls than boys. Using household survey data from the SLIHS 2018, private expenditures on education are calculated by age group, sex, and school type (Figure 25). It is important to note that SLIHS 2018 was carried out in 2018 before the introduction of the FQSE Program. On average, households spend approximately SLL 328,000 (US\$32.1) per year on 6 to 11-year-olds enrolled in school. For this age group, across different school types, the mean expenditure on schooling is approximately the same for boys and girls; however, for older children it is evident that households spend more (on average) on girls' education than that of boys. For example, for 12 to 14-year-olds, households spend 17 percent more on girls than boys. For the 15-to-17-year age group, while households spend more on girls education than boys overall, in private and NGO schools average expenditure on education is higher for boys than girls. It is worth noting that

FIGURE 24 Education Spending, Central and Local Levels



Source: BOOST Data.

FIGURE 25 Average Household Education Expenditure per Child in Thousands of SLLs

Source: Statistics derived from SLIHS 2018.
Note: Figures are in SLL 1000s.

of all school types, the gap in education expenditures between boys and girls is lowest for children attending government schools. Across all age groups, households spend the least on children attending community and mission schools. Average expenditure for children attending private schools is two to three times more than for children attending government schools.

For children attending government schools, (on average) households spend more per capita than public schools at the primary and JSS level, but not at the SSS level. Comparing average household expenditures on education

with per capita spending by the state reveals that of the total spending at the primary and JSS levels, household contributions are the largest (54 and 55 percent, respectively). However, at the SSS level public expenditure per pupil is greater than private expenditure per pupil—56 percent of total per student spending is by the state, while 44 percent is at the household level.

The richest households spend 4–8 times more on education than the poorest households in Sierra Leone. The average education expenditure for a child between the ages of 6 and 11 amounts to approximately 1 percent of total annual

TABLE 9 Average Expenditures on Education by Poorest and Richest Welfare Quintiles

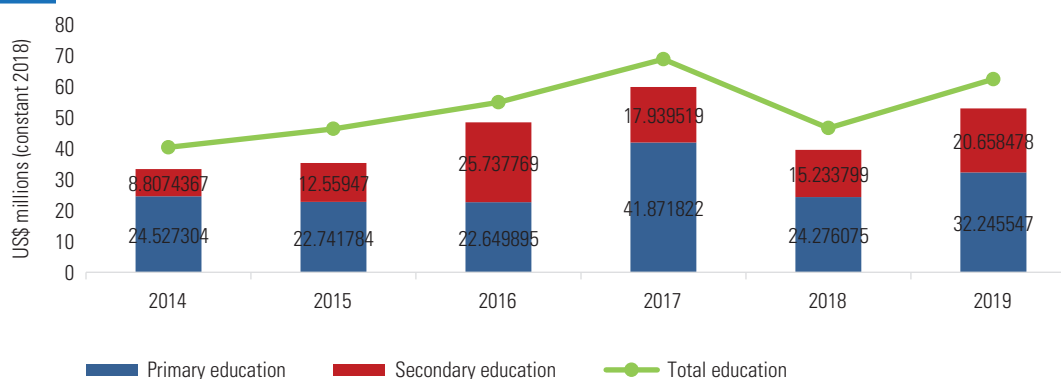
	Age 6 to 11		Ages 12 to 14		Ages 15 to 17	
	Poorest	Richest	Poorest	Richest	Poorest	Richest
Public	105,539	558,845	189,967	872,207	320,674	1,106,458
Community	94,243	461,320	175,646	742,453	237,509	513,485
Religious/mission	123,668	391,937	188,427	584,680	261,583	1,128,003
NGO	89,519	952,593	98,647	335,403	194,513	590,000
Private	160,123	1,404,851	404,591	1,477,081	556,194	2,021,016
Overall	110,103	831,901	191,279	989,440	302,937	1,269,237

Source: Statistics derived from SLIHS 2018.

expenditures for the poorest households in the country (Table 9). The same is true for children ages 12 to 14; however, household education expenditure for children ages 15 to 17 belonging to the poorest welfare quintiles constitutes approximately 2 percent of overall household expenditure. For the richest welfare quintile, households spend between 2 and 3 percent of their total annual expenditure on education for one school-age child. Though the expenditure difference in percentage terms is minimal, the disparity in household education expenditures in absolute terms between the richest and poorest households is stark. For 6 to 11-year-olds and 12 to 14-year-olds, the richest households spend approximately 8 and 5 times more on education than poor households. Across all age groups, the largest difference in education expenditures between rich and poor households is for students attending private schools.

5.5. Donor Funding

The education sector also relies heavily on donor contributions, with 45 percent of the education spending for primary and secondary education coming from development partners in 2021. Multiple donors are engaged in the education sector and contributing to the improvement of education service delivery and outcomes in Sierra Leone. Official donor assistance (ODA) for primary and secondary education and overall education in general have increased gradually since 2014 until 2017, from US\$33.34 million to US\$59.8 million (constant 2018) for primary and secondary education (Figure 26), while share of all global aid going to education declined, falling from 11 to 8 percent between 2007 and 2016. The increase of ODA in Sierra Leone was mainly in response to the Ebola crisis that the country

FIGURE 26 ODA for Primary and Secondary Education Received, US\$ Millions

Source: Statistics derived from Education Finance Watch 2021 database.

experienced at that time. Once the Ebola epidemic subsided, donor funding for both primary and secondary education declined in 2018. However, it increased again in 2019 reaching US\$32.25 million and US\$20.66 million (constant 2018) for primary and secondary education, respectively.

5.6. Impact of the COVID-19 Pandemic on Education Financing and Earnings

The pandemic created significant fiscal challenges in the already limited fiscal space of the country which is likely to have negative impacts on education financing. The uncertainty about the overall economic impact of the pandemic is considerable. It is difficult to estimate/predict the overall effect of COVID-19 on education funding. However, without any doubt, it can be said that it will not be easy for the government to maintain or expand the education financing. Two-thirds of low and lower-middle-income countries have cut their education budgets since the onset of COVID-19 pandemic in early 2020.

In Sub-Saharan Africa, between 2019 and 2020, government revenue as a share of GDP was expected to fall from 17.2 to 16.4 percent (World Bank 2020C). In Sierra Leone, estimated annual real GDP growth has declined by 2.3 percent in 2020 and it is forecasted to increase only by 0.1 percent in 2021. Even if the GoSL maintains the share of overall budget allocated to education at its pre-pandemic level (e.g. 16 percent), the actual size of the education budget may decline due to the decline in government revenue and national GDP. The expected impact of COVID-19 might have similarities with the past Ebola experience. During the Ebola epidemic, government education expenditure experienced a sharp decline both in real terms and as a share of the education budget. Between 2014 and 2017, government spending on education fell from 15 to 12 percent of total public spending.

Along with the government, the ability of the households to spend on education has also been affected negatively as many households are experiencing health and income

shocks. Because of the global nature of the pandemic, households that heavily rely on remittances are likely to suffer as well. Decline in income and the need to spend more on health would make it difficult for families to maintain education spending.

It is estimated that the economic cost of school closures (in the form of lifetime earning losses) for the current school and university going population is USD 2 billion dollars—approximately 48 percent of 2019 GDP. Following the approach used by Psacharopoulos et al. (2021) the lifetime earnings loss due to school closures are estimated for Sierra Leone. This method calculates earning loss by using information on mean annual earnings, the duration of school closures, the rate of return on an additional year of schooling, the total number of students (across all levels) and an adjustment factor which allows for some distance learning during school closures. The intuition behind this modelling approach is that school closures have reduced the quantity of schooling compared to what students would have received in the absence of COVID-19. In the case of Sierra Leone, schools were closed for 14 weeks and this reduction in the amount of schooling has impacts on future earnings. Using the formula below, the total loss in lifetime earnings for the entire student cohort in Sierra Leone is calculated.

$$L = PV(Y \times \alpha \times r) \times (S \times P \times \beta)$$

L is total earning loss, PV denotes the present value of lost earnings, Y is mean annual earnings, α is an adjustment factor capturing the share of the school year for which schools were closed, and r is the rate of return on one year of schooling. S represents the total school population in primary, secondary and tertiary, P represents the labor force participation rate, and β represents an adjustment factor for distance learning during school closures. The results of this exercise are presented in Table 10 below. The estimated present value of lifetime earnings loss for a student in Sierra Leone is US\$1,523. While this number may seem low, when aggregating learning loss across all students in Sierra Leone, the present value of lifetime learning loss is USD 2 billion which is approximately 48 per cent of GDP.

TABLE 10 Economic Costs of School Closure in Sierra Leone

Lost Wage Estimates	
Annual per student loss (USD)	US\$33.85
Lifetime per student loss (PV USD)	US\$1,523
Total loss (PV USD)	US\$1,995,231,805
Total losses over cohort's lifetime as % of current year GDP	48%
Annualized losses as % of GDP	1.08%

Notes: (a) Mean annual earnings are in USD derived from SLIHS 2018. (b) Data on duration of school closures in Sierra Leone is from UNESCO. (c) Rate of return for one additional year of schooling is estimated through Mincerian regressions using SLIHS 2018 data. (d) Adjustment factor for distance learning is assumed to be 0.64 (this is based on SLIHS (2018) data which reports the share of students engaging in learning activities during school closures). (e) discount rate of 3 percent is assumed. (f) labor force participation rate of 73 percent is assumed which is based on SLIHS 2018. (g) it is assumed that lifetime earnings span 45 years.

Donor funding on education is likely to decline due to COVID-19 as donor countries are likely to shift their funds away from aid to domestic priorities related to the pandemic that they are suffering from as well. Priorities of funding might also shift away from education to immediate health-related responses. The major cost of the COVID-19 response to the education sector in Sierra Leone was funded by Global Partnership for Education (GPE) through a USD 6.85 million grant. The COVID-19 pandemic has put additional pressure on the financing landscape and the already tight education financing. This further highlights the importance of efficient, effective, and equitable use of public resources.

EFFICIENCY AND EQUITY OF EDUCATION SPENDING

6

This chapter presents an overview on the composition of education expenditure and analysis on the allocative, technical, and external efficiency in the education sector with a particular focus on pre-primary, primary, and secondary education. The chapter concludes with a discussion on overall sector effectiveness and equity of education expenditures and a discussion on the adequacy of education financing.

6.1. Expenditure Composition

Wages and salaries continue to dominate education expenditures although non-salary recurrent expenditures have drastically increased between 2017 and 2019. In 2019, SLL 478 billion went towards wages and salaries (Table 11). This translates into 61 percent of total primary and secondary education expenditures going towards wages and salaries, while 37 percent of expenditures go towards recurrent non-salary expenditures. Since 2017, while expenditures on wages and salaries have increased by 21 percent, recurrent non-salary expenditures have increased by 288 percent.

School fee subsidies have increased more than five-fold since 2017, but spending priorities vary year-to-year. In 2017, SLL 12 billion (US\$1.2 million) was paid as school fee subsidies to approved schools and in 2019 more than SLL 78 billion (US\$7.6 million) was spent on this program. At the primary level, approximately SLL 600 million (US\$ 58.7 million) was spent on examinations in 2017 and this increased to more than SLL 8 billion (US\$782.9 million) in 2019. This reflects that a growing number of schools (government schools and government-assisted schools) have received school fee subsidies from the GoSL. What is worth noting is that there are many items which appear in the budget for only one year, and do not reappear in subsequent years. This is possibly a reflection of shifting priorities between 2017 and 2019. An example of one such activity is an Early Childhood Care Development scheme which appeared in the budget only in 2018 and not in 2019. At the secondary level examples of one-off budget schemes include tuition and scholarship programs for girls under which more than SLL 82 billion (US\$8.0 million) was spent in 2018.

The main source of funds received by schools is government, particularly at higher levels of schooling. Overall, schools received SLL 182 million (US\$17.8 million) from different sources in 2019 (ASC, 2019). In Sierra Leone, 63 percent of funds received by schools are from the government, but this varies by level of schooling (Figure 27). At the pre-primary

TABLE 11 Expenditure by Object Classification (SLL Billions)

Object Classification	2017	2018	2019	Change Since 2017
Wages and Salaries	394.64	411.60	478.21	21%
Non-salary, Non-interest recurrent expenditures	74.52	146.27	288.88	288%
Domestic Capital Transfers	7.46	3.35	11.69	57%
Interest Payment	0.0027	0.294	0.0062	126%
Total Expenditures	476.62	561.52	778.78	

Source: BOOST Data.

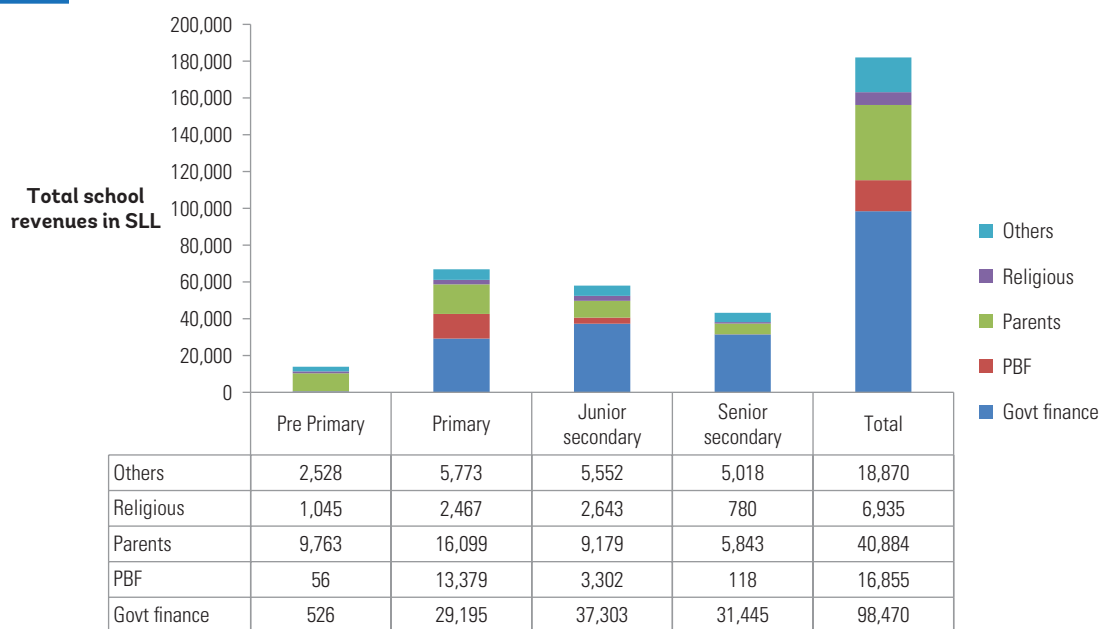
Notes: These figures represent government allocation and expenditure on primary and secondary education. This includes education expenditures not defined by level and subsidiary services to education but excludes tertiary and other post-secondary education expenditures and allocations.

level, parents are the main source of funding accounting for 70 percent of total school revenues while at the primary level approximately 64 percent of funds to schools are from government sources. At the primary level, one-fifth of all funds allocated to schools are allocated based on performance under the performance-based financing (PBF) implemented by the World Bank-financed Education Project. At the JSS

and SSS level, government financing accounts for 71 and 73 percent of total school funding respectively, while parent financing accounts for only 16 and 14 percent of total school funding respectively.

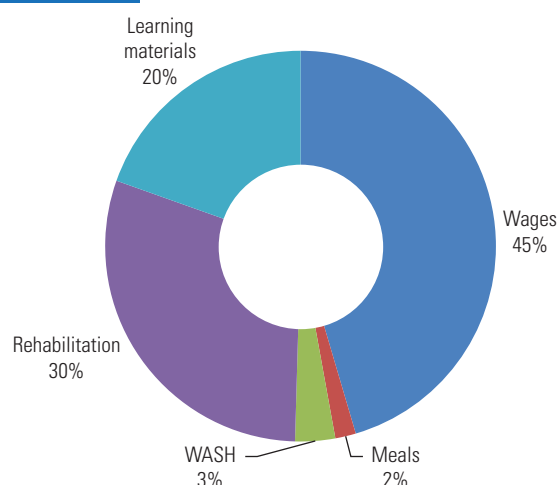
Schools utilize funds primarily for paying salaries and improving the quality of school infrastructure. Figure 28 below presents the breakdown of the utilization of funds as reported by schools. Overall, 45 percent of funds received by schools was utilized for wages, 30 percent was utilized for rehabilitation, and 20 percent was utilized for learning materials. Only 3 and 2 percent were utilized on water and sanitation programs and meals, respectively. This suggests that very little public school expenditures go towards activities which directly support students' learning.

Household expenditures on education primarily go towards fees and tuition and learning materials for children. Figure 29 below presents the breakdown of private expenditures on education with the innermost ring representing the distribution of expenditures for children ages 6 to 11, the middle ring representing the distribution for children ages

FIGURE 27 School Revenue Sources in 1000s of SLL


Source: ASC 2019.

Note: PBF = Performance-based financing that were provided to schools under the World Bank-financed project.

FIGURE 28 Breakdown of School Expenditures

Source: ASC 2019.

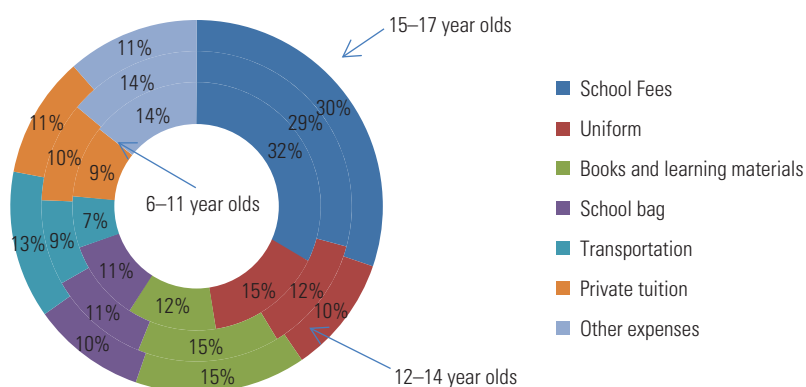
12 to 14, and the outermost ring representing the breakdown for 15 to 17-year-olds. Between 29 and 32 percent of private education expenditures go towards school fees, while 10 to 15 percent of expenditures go towards uniforms. It is worth highlighting that the share of household education expenditures attributed to transportation is higher for older age groups: for example, transportation costs account for 13 percent of total education expenditures for students between the ages of 15 and 17, as compared to only 7 percent for children ages 6 to 11. Lastly, between nine and 11 percent of education expenditures go towards private tuition.

6.2. Allocative Efficiency

In this section, we explore the efficiency in the allocation of resources in Sierra Leone's education sector. This includes examining in detail per pupil spending, the teacher wage bill, the allocation of teachers to schools, and teacher absenteeism.

Public per pupil expenditures on education have increased across all levels since 2010, with the largest increase at the senior secondary level. Per pupil expenditures by schooling level are obtained from Sierra Leone's Education Sector Analysis (MBSSE, 2020) (Table 12). It is evident that per pupil expenditure has increased across all levels since 2010; however, the extent of the increase varies by school level. Pre-primary experienced the smallest increase in per pupil expenditure (66 percent in nominal terms) while at the senior secondary per pupil expenditures increased by 171 percent in nominal terms. After taking inflation during this period into account, in real terms the increases in per pupil expenditures are much smaller. At the pre-primary and primary level, real per pupil expenditures increased by 8 and 42 percent respectively, while at the junior and senior secondary levels real per pupil expenditures increased by 34 and 77 percent respectively.

Primary and secondary expenditures on education as a percentage of GDP per capita are lower in Sierra Leone than most other countries in the region. Figure 30 presents cross country comparisons of average spending on primary

FIGURE 29 Breakdown of Private Expenditures on Education by Age Group

Source: Statistics derived from SLIHS 2018.

TABLE 12 Per Pupil Spending in Education by Sector (SLL)

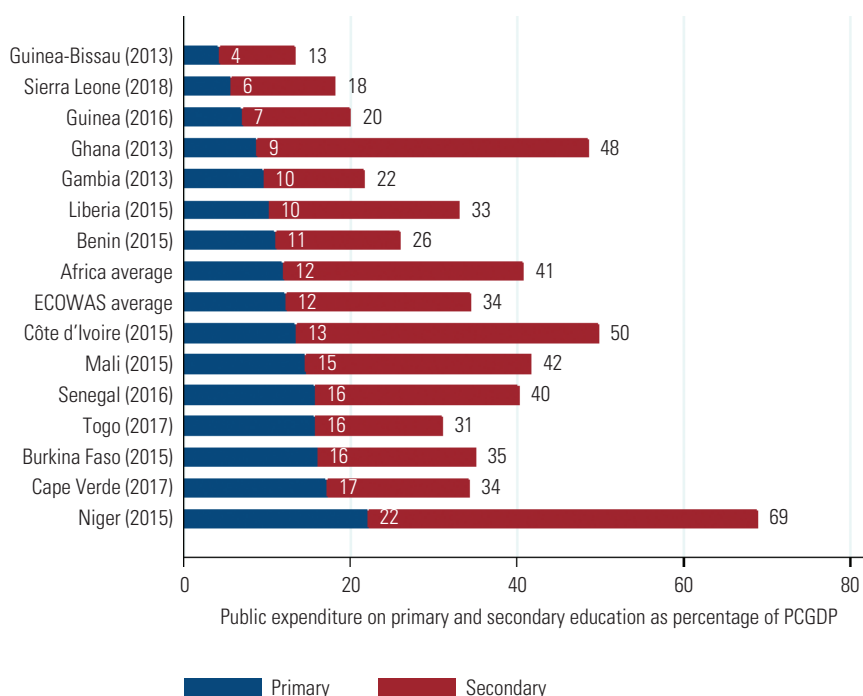
	Average Spending per Student			Average Spending as % of per Capita GDP	
	2010 (1)	2019 (2)	2019 (in 2010 prices) (3)	2010 (4)	2019 (5)
Pre-Primary	179,655	298,046	194,612	10.20%	6.90%
Primary	111,530	241,979	158,003	6.40%	5.60%
Junior Secondary	186,849	382,278	249,612	10.60%	8.90%
Senior Secondary	316,061	857,008	559,592	18.00%	19.90%
Technical & Vocational	—	1,032,770	674,357	—	23.90%
Tertiary Education	2,118,011	4,435,387	2,896,130	120.70%	102.80%

Source: MBSSE (2020).

Note: Column 3 represents average spending per student in 2019 in terms of 2010 prices using the GDP deflator method.

and secondary education as a percentage of GDP per capita. In terms of public spending at the primary level, Sierra Leone is second from the bottom with per pupil spending at only six percent of GDP per capita. At the secondary level, Sierra Leone fares the same—ahead only of Guinea-Bissau. Compared to the average spending of the Economic Community of West African States (ECOWAS) Sierra Leone fares quite poorly—the ECOWAS average primary spending as a percentage of per capita GDP is more than double that of Sierra Leone.

Primary school teachers account for the largest share of teacher salaries, and teachers are relatively well paid compared to other more developed countries. Table 13 presents an overview of the teacher wage bill along with average teacher salaries by pay grade. Overall, primary school teachers account for 62 percent of overall teacher wages while secondary school teachers and pre-primary school teachers account for 34 percent and four percent, respectively. Across all pay grades and levels of schooling teachers are paid on average, SLL 14.3 million (US\$1,400) per year.

FIGURE 30 Public Expenditure on Primary and Secondary Education as a Percentage of GDP per Capita

Source: MBSSE, 2020.

TABLE 13 Teacher Wage Bill

Grade	Number of Teachers on Payroll				Wage Bill (SLL Million)				Average Salary (SLL Million)	Average Salary Relative to PCGDP
	Pre-Primary	Primary	Secondary	Total	Pre-Primary	Primary	Secondary	Total		
1	8	150	50	207	82	1,548	516	2,146	10.37	2.4
2	124	4,502	381	5,007	1,363	49,464	4,217	55,044	10.99	2.6
3	25	886	291	1,202	309	10,629	3,471	14,409	11.99	2.8
4	6	149	90	246	88	1,909	1,154	3,150	12.80	3.0
5	157	3,083	884	4,123	2,070	41,065	11,730	54,865	13.31	3.1
6	465	6,124	914	7,503	6,706	89,579	12,950	109,235	14.56	3.4
7	244	2,753	4,085	7,081	3,603	41,257	61,474	106,334	15.02	3.5
8	70	1,053	1,509	2,632	1,140	17,305	25,322	43,768	16.63	3.9
9	51	781	1,025	1,857	1,019	15,764	20,706	37,488	20.19	4.7
10		7	45	52		168	1,101	1,269	24.40	5.7
11		1	62	64		46	2,178	2,225	34.77	8.1
12			1	1			42	42	42.00	9.8
Total	1,150	19,488	9,337	29,975	16,380	268,733	144,861	429,974	14.34	3.3

Source: MBSSE (2020).

This corresponds to approximately 3.3 times the per capita GDP. Primary school teachers who graduated from a teacher training college (grade 5) are paid on average SLL 13.3 million (US\$1,300) per year and earn 3.1 times the average per capita GDP. Secondary school teachers who obtained a degree with education and higher teacher's certificate (grade 9) are paid SLL 20.2 million (US\$1,976) per year and earn 4.7 times the per capita GDP. Compared to regional peers, Sierra Leone ranks in the middle: with relatively lower teacher salaries than countries such as Cote d'Ivoire, Senegal, Gambia, and Madagascar, but relatively higher salaries than Ghana, Rwanda, Eritrea, and Tanzania (Sandefur, 2018). This is significantly higher than what teachers earn in OECD countries (1.07 times the per capita GDP) (Beteille and Evans, 2019).

Since 2010, teacher salaries have increased across the board, with the largest increase for primary school teachers. In nominal terms, teacher salaries have more than tripled for pre-primary and primary school teachers since 2010, while secondary school teacher salaries have more than doubled during this period (Table 14). In real terms, pre-primary and primary school teacher salaries doubled since 2010, while secondary school teacher salaries have only increased by 66 percent. The gap in average pay between pre-primary and primary school teachers has remained relatively consistent

between 2010 and 2019; however, the gap in pay between primary school teachers and secondary school teachers has narrowed during this same period.

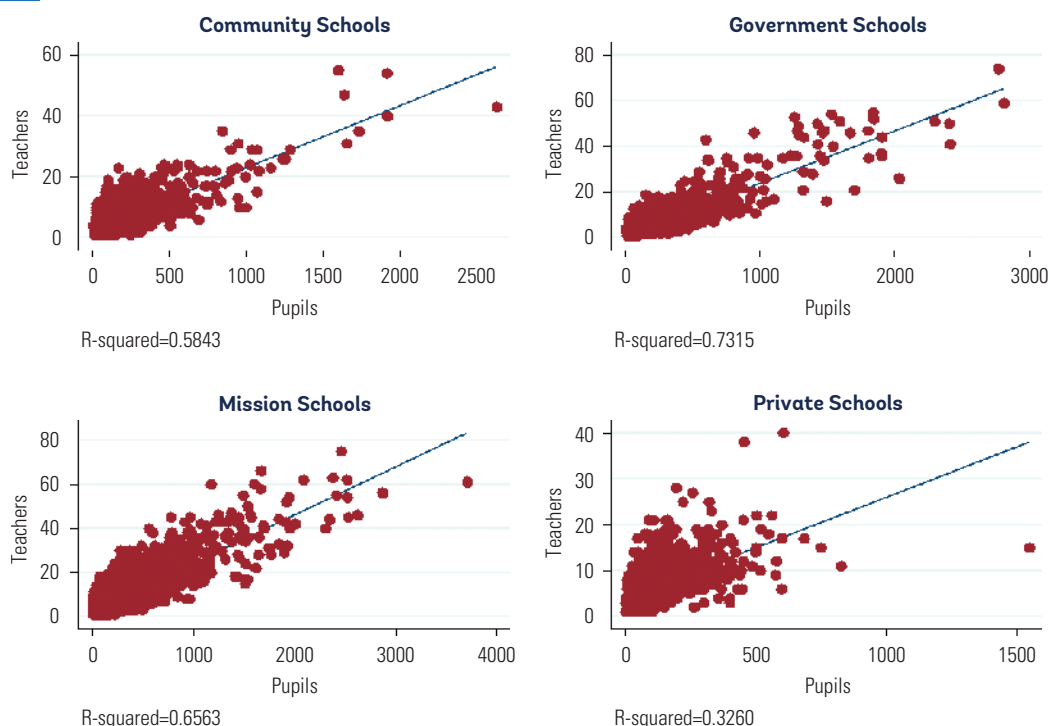
The allocation of teachers to government schools appears to be relatively efficient. With teacher salaries constituting a large part of public expenditures on education, it is worthwhile investigating whether there is efficiency in the allocation of teachers to schools. At a very basic level, we would expect that schools with higher enrollment would be allocated more teachers. This relationship is tested graphically in Figure 31 below with teachers and enrollments for each

TABLE 14 Average Teacher Salaries 2010 versus 2019

	2010	2019	2019 in 2010 Prices	Change in Real Salaries	Pay Relative to Primary 2010	Pay Relative to Primary 2019
Pre-primary	4,441	14,249	9,304	1.095	1.04	1.03
Primary	4,274	13,789	9,003	1.107	1	1
Secondary	6,089	15,514	10,130	0.664	1.42	1.13

Source: MBSSE, 2020.

Note: 2010 prices calculated using GDP deflator method.

FIGURE 31 Teachers and Enrollment

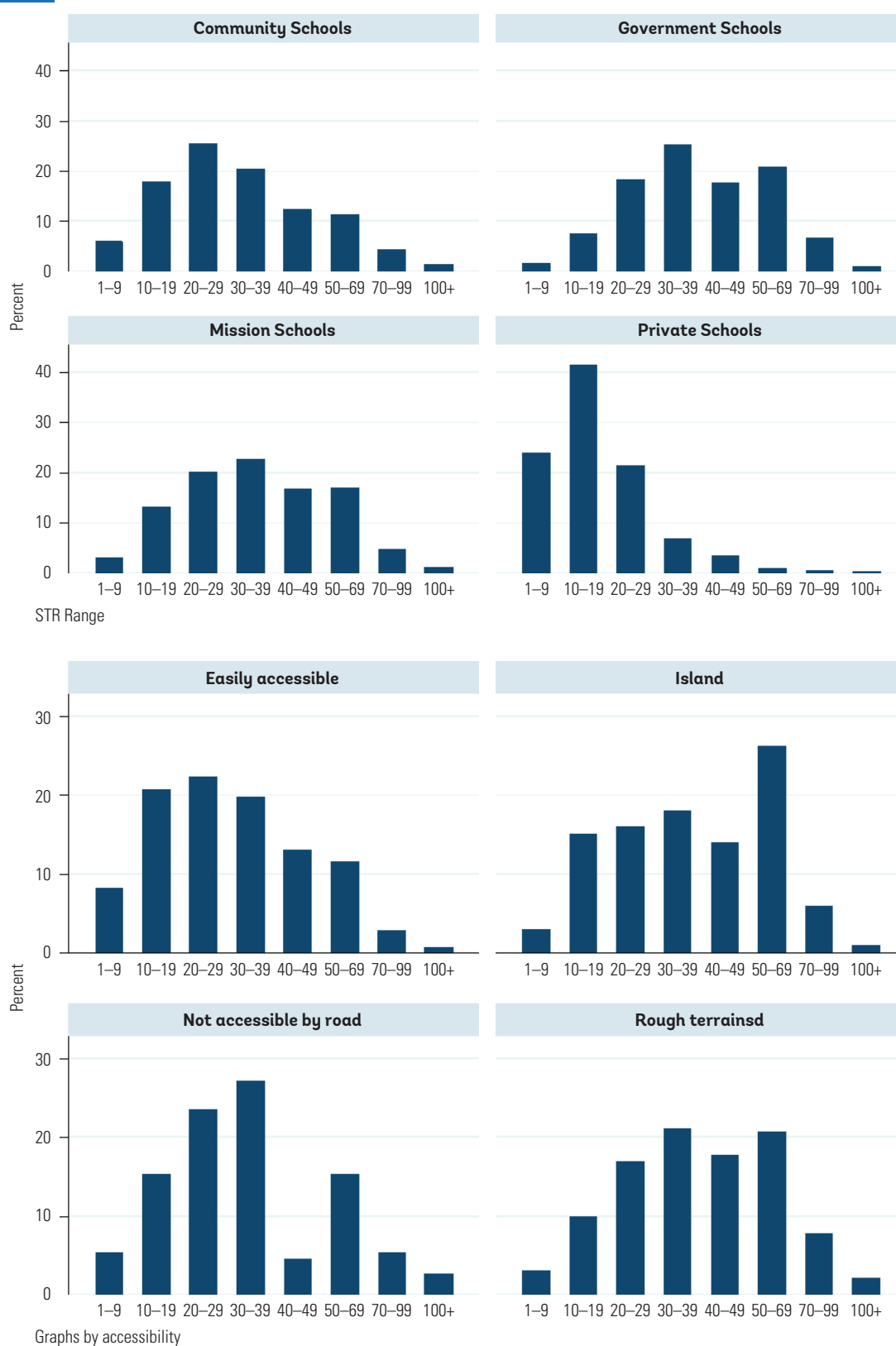
Source: Statistics derived from ASC 2019.

school plotted by school type. The r-squared values signify the strength of the relationship: a higher r squared reflects a strong relationship between teachers and the number of pupils in a school suggesting greater efficiency in the allocation of teachers. Of the various school types, it seems that the allocation of teachers in government schools is most efficient (with an r-squared value of 0.73) followed by mission schools (with an r-squared value of 0.66). Surprisingly, private schools appear to be the least efficient in their allocation of teachers with an r-squared value of only 0.33, suggesting that there may be factors other than school level enrollment that determine the number of teachers in a school.

Access to primary schooling is widespread, however over one million children do not have access to an age-appropriate school in Sierra Leone. Another important dimension of efficiency in the education sector is determining whether schools are catering to the needs of the population. The key question in this regard is: are schools accessible to the population of Sierra Leone? The results discussed here are from a report authored by GRID3 (2020), in which a school

mapping exercise was conducted using school location information and population figures. The analysis reveals that at the primary level, education coverage is the most extensive with 99 percent of children ages 6 to 11 having access to a primary school within a three mile radius. However, the supply of schooling at other levels of education is more limited: only 56 percent of children ages 3 to 5 live within three miles of a pre-primary school, 71 percent of children ages 12 to 14 live within three miles of a JSS, and 49 percent of children ages 15 to 17 live within three miles of an SSS. Overall, an estimated 1,067,000 children do not have access to an age-appropriate school within a three mile radius.

Many government schools are operating over capacity, but there is some scope for re-allocating teachers from surplus schools to deficit schools. To learn more about the efficiency in the allocation of teachers, the distribution of student-teacher-ratios (STR) by school type and accessibility is presented in Figure 32. In government and mission schools, it is evident that there is a large proportion of schools where the STR exceeds 40:1—47 percent of public schools and

FIGURE 32 Distribution of Pupil-Teacher Ratios by School Type and Accessibility

Source: Statistics derived from ASC 2019.

40 percent of mission schools have STRs that exceed 40:1. At the other end of the spectrum there seems to be certain schools that are operating under-capacity; 9.5 percent of government schools have STRs that are less than 20:1. This suggests that there is potential for a more equitable distribution of teachers in government schools. For private schools, it seems that many schools are operating under-capacity with 66 percent of private schools having STRs 20:1 or less. When examining STRs by accessibility of schools it is evident that 72 percent of schools in easily accessible areas have STRs of 40:1 or less as compared to only 53 percent schools located on islands. In areas not accessible by road, 72 percent of schools have STRs of 40:1 or less, while schools located in rough terrain have much higher STRs on average with only 52 percent of schools with STRs of 40:1 or less.

The existing data shows that teacher absenteeism is high.

In the unannounced school visit of the PBF program in 2019, 20 percent of teachers in the beneficiary schools were absent. Research by Sabarwal et al. (2014) shows that 23 percent of teachers were absent. Allen and McDermott (2018) also observed this phenomenon in hard to reach rural schools, mainly because of the difficult teaching conditions and the little or no pay received by volunteer teachers. Another research shows that on average JSS and SSS teachers teach for less than half of the standard school day and one in three JSS and SSS classes surveyed had students but no teachers. According to school principals, the reason for teacher absenteeism is largely due to low pay. Given the relatively high salaries paid to government school teachers, this explanation for high absentee rates may be more applicable to non-government paid or volunteer teachers.

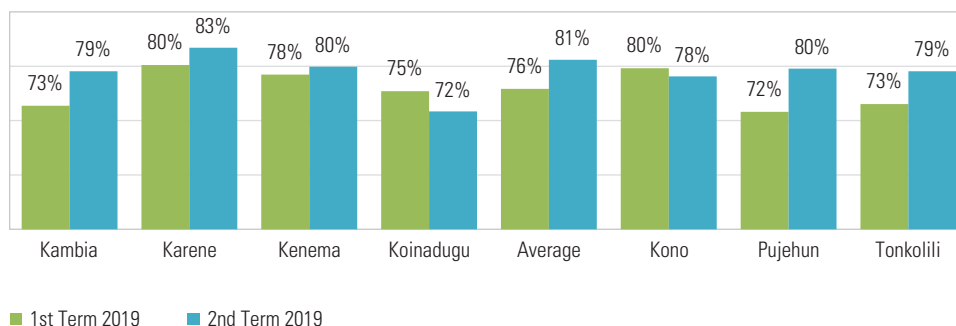
Even when teachers are in school, a significant percentage of them are not teaching in the classroom. Teachers sampled as part of the Secondary Grades Learning Assessment (SGLA) (2019) were found to only be engaged in two and half hours of teaching per day. The PBF data shows that out of the 80 percent of teachers who were present, 81 percent were in class teaching. As shown in Figure 33, in the second term of 2019, the share of teachers found teaching in the classroom varied from 72 percent in Koinadugu to 83 percent in Karene. Thus, the proportion of teachers who were actually in school and were engaged in teaching was only about 50–65 percent. This implies that teacher resources are not utilized efficiently.

6.3. Technical Efficiency

This section examines the technical efficiency in the education sector. Specifically, we explore the efficiency of the education system and the relationship between education resources and outcomes. First, the internal efficiency of the education system is evaluated by determining the time it takes to produce a primary, JSS and SSS completer. Next, the relationship between public expenditures and enrollment and learning outcomes is explored. Lastly, the impact of the performance-based financing pilot on student attendance is evaluated to determine whether performance-based grants to schools have increased student attendance.

Assessing the internal efficiency of the education system is important to determine wastage in the system in the form of repetition and drop out. Increased repetition results in increased public and private resources spent on students to

FIGURE 33 Teachers Found Teaching



Source: The World Bank Project (REDiSL) data, 2019.

get through the education system. An internal efficiency coefficient (IEC) can be calculated which is the ratio between the ideal duration of an education cycle and the average number of student-years it takes to produce a graduate for that particular education level. An IEC of 1.00 represents a situation where all students complete the education cycle without repetition or drop out (MBSSE, 2020). A low IEC represents a situation where there is significant repetition and/or dropout which results in inefficiency as greater resources will be required for students to complete a given cycle of education.

There is a relatively high level of system inefficiency in primary education due to dropouts and repetition in early grades. Using promotion, dropout and repetition rates, the average number of student-years to produce a primary, JSS and SSS graduate and corresponding IECs are calculated and presented in Table 15 following the reconstructed cohort method. It is evident that the IEC for JSS and SSS is close to one suggesting that there is little wastage of public resources at both levels. In fact, at the SSS level the IEC exceeds one, this is due to an influx of new students coming into the senior secondary education system. However, at the primary level the IEC is very low, as it takes more than 12 student-years to produce a graduate at the primary level. This implies that 51 percent of resources are wasted due to dropouts and repetition. At the primary level, this wastage is mostly due to relatively high dropout rates in grades one through three. When examining school completion rates, however, it is evident that only 64 percent of the 14 to 16-year-olds have completed primary schooling and completion rates for JSS and SSS are even lower (44 and 19 percent respectively). However, due to lower repetition rates and higher early dropout rates, despite lower completion rates, internal efficiency is higher at JSS

and SSS compared to primary schooling. The low completion rate and low internal efficiency suggest not only enrolling children in school is a challenge, keeping them in school to complete the education cycle is a bigger challenge.

Decreasing the amount of time it takes to produce a primary school completer from 12.4 years to 9 years would yield efficiency savings in the amount of US\$27 million dollars. The financial savings in the form of reduced public and private expenditures on education as a result of increased efficiency (that is, reducing dropouts and repetition rates) can be as high as US\$27 million if the time it takes to produce a primary graduate is reduced to nine years. This represents significant savings for the state and households alike.

Another important aspect of efficiency in the education sector is determining whether there is a relationship between public expenditures and sector outcomes. It is important to note here that the existence of a relationship between spending and outcomes does not necessarily represent a causal relationship. However, it is worth exploring whether public spending on education at the district level has any association with enrollment and learning outcomes.

There is a weak link between school-level expenditures and increases in enrollment. The annual school census 2019 provides some information about expenditures at the school level. Using this information along with enrollment figures from 2018 and 2019, the relationship between school level expenditures and enrollment outcomes can be examined. The question this analysis attempts to address is whether per pupil school-level expenditures are associated with the percentage change in school enrollment between 2018 and 2019. In an ideal situation, increased expenditures per pupil could allow schools to hire more teachers, improve school facilities and purchase teaching and learning materials which could in turn incentivize parents to send children to school. In this scenario, we would expect to see a positive correlation between per pupil expenditure and changes in enrollment at the school level. However, previous studies from the region have found that there is a weak relationship between public spending and increasing education access (Al-Samarrai, 2003). The results of the correlations are presented in Table 16 below by school type in the form of correlation coefficients. Correlation coefficients close to one represent a strong relationship while coefficients close to zero indicate a weak relationship between

TABLE 15 Internal Efficiency Coefficients (IECs) and Completion Rates

Level of Schooling	Years to Produce a Graduate	IEC	School Completion Rate
Primary	12.37	0.49	64.1
JSS	3.49	0.86	44.1
SSS	2.41	1.25	18.9

Source: Statistics derived from ASC 2019.

Note: School completion rate obtained from World Bank EduStats.

TABLE 16 Correlation between School Level Expenditures on Enrollment

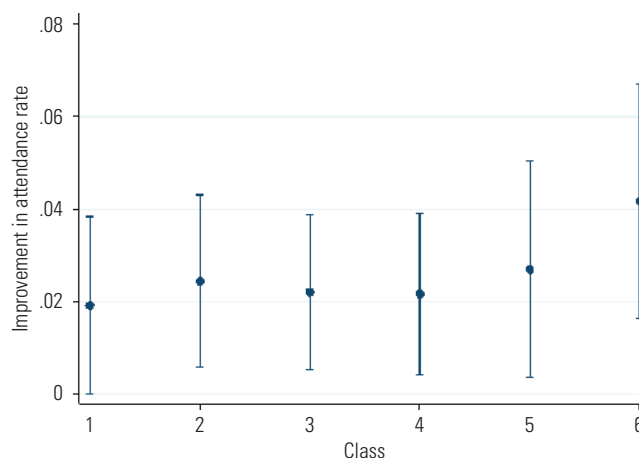
	% Change in Enrollment 2018–2019			
	Government	Community	Mission	Private
Per pupil expenditure	0.03	−0.01	−0.01	−0.04
Per pupil expenditure on wages	0.00	0.00	0.00	−0.04
Per pupil expenditure on meals	0.03	−0.02	0.00	0.00
Per pupil expenditure on water and sanitation	0.00	−0.02	−0.01	−0.02
Per pupil expenditure on learning materials	−0.03	0.01	−0.02	−0.04
Per pupil expenditure on rehabilitation	0.08	−0.01	−0.01	−0.02
Number	1,197	935	4,668	663

Source: Statistics derived from ASC 2018, 2019.

Note: The numbers represent correlation coefficients between the percentage change in enrollment between 2018 and 2019 and per pupil expenditures.

expenditures and enrollment outcomes. As evident across all school types and expenditure categories there does not seem to be an association between school-level expenditures on education and changes in enrollment. The strongest relationship between spending and enrollment increases is for per pupil expenditure on rehabilitation; however, this relationship is also found to be quite weak ($r = 0.08$).

PBF has had a positive impact on student attendance. In addition to enrollment outcomes, it is worthwhile exploring whether the school-based financing pilot, implemented under the World Bank-assisted project, had an impact on student attendance. Under the PBF, about 1,800 primary schools in six targeted districts were provided funds based on performance related to enrollment, teacher and student attendance, classroom practices and reading performance. Using ASC data from 2019, the impact of this pilot on student attendance in grades one through six is estimated using a propensity score matching (PSM) method. Simple comparisons of student attendance between PBF and non-PBF schools reveal that PBF school student attendance is on average two to five percentage points higher than non-PBF schools depending on grade. However, this simple comparison may be misleading because the higher attendance rates of PBF schools could be the result of other school-related characteristics not necessarily due to the incentives of the PBF pilot.

FIGURE 34 Treatment Effect of PBF on Student Attendance

Source: Statistics derived from ASC 2019.

Note: The point estimates represent the treatment effect on student attendance in classes 1 through 6.

Using a PSM approach, counterfactual schools are matched to PBF schools based on school characteristics (such as school facilities and infrastructure) to determine whether there are systematic differences in student attendance due to the PBF intervention. The results are depicted graphically along with the lower and upper bounds in Figure 34. It is evident that across all grades, PBF has had a positive impact on student attendance. The effect is lowest for grade one (PBF schools have approximately two percentage points higher attendance rates than non-PBF schools) and highest for grade six where PBF school attendance rates are four percentage points higher than non-PBF counterfactual group schools. The results show that community-managed and performance-based financing has contributed to strengthening school-based planning for improved school performance.

6.4. External Efficiency

Assessing the external efficiency of the education sector is important to determine whether education is increasing the productivity of individuals once they enter the labor market. This is evaluated by comparing the returns to education using SLIHS data from 2003 and 2018. The key question of interest is whether rates of return to completing primary education (relative to less than primary education), junior secondary education (relative to completing only primary

FIGURE 35 Rate of Return to Schooling

Note: (a) Statistics derived from SLIHS 2003 and 2018 (b) Point estimates calculated using Mincerian regressions with log wages as the outcome variable and controls for age, education level, and urban/rural (c) "CI" refers to confidence intervals.

education), senior secondary education (relative to completing JSS) and university education (relative to completing SSS) have increased between 2003 and 2018. If so, this is a positive indication that investing in education is leading to greater private returns to education over time.

Rates of returns (RoR) to education for males and females are approximately the same, however trends vary between 2003 and 2018. Mincerian wage regressions are estimated separately for males and females for 2003 and 2018 (Figure 35).¹² For females, the highest RoR to education is at

the SSS (25 percent) and university levels (20 percent) while for boys the highest rate of return is for university education (23 percent) and JSS education (12 percent). The RoR to primary education (relative to less than primary education) are quite low (3 percent in 2003) and not statistically significant from zero in 2018. For males, in 2003 and 2018 the rates of return of primary education are not statistically significantly different from zero. For females, the rate of return to primary education was seven percent in 2003. In 2018 a decline has been registered, however this is within the 2003 confidence interval range suggesting that the rate of return to primary education has also stayed the same for girls. At the JSS level (relative to primary education) the RoR to JSS education for

¹² The approach used here follows that of Psacharopoulos (1981).

males and females are not statistically significantly different from zero in both 2003 and 2018. The relatively low rates of return at the primary and JSS levels could be a reflection that while the supply of primary and JSS graduates has increased, the demand for primary and JSS graduates workers has not kept up pace due to slow economic growth.

At the SSS level (relative to JSS education) for females the rate of return to education was 11 percent in 2003 and 25 percent in 2018. However, the 2018 estimate falls within the 95 percent confidence interval of the 2003 estimate indicating that the rates of return to SSS education have remained the same, while for males there is a decline in the return to SSS education. The returns to university education have increased for both males and females since 2003; however, this increase is not statistically significant.

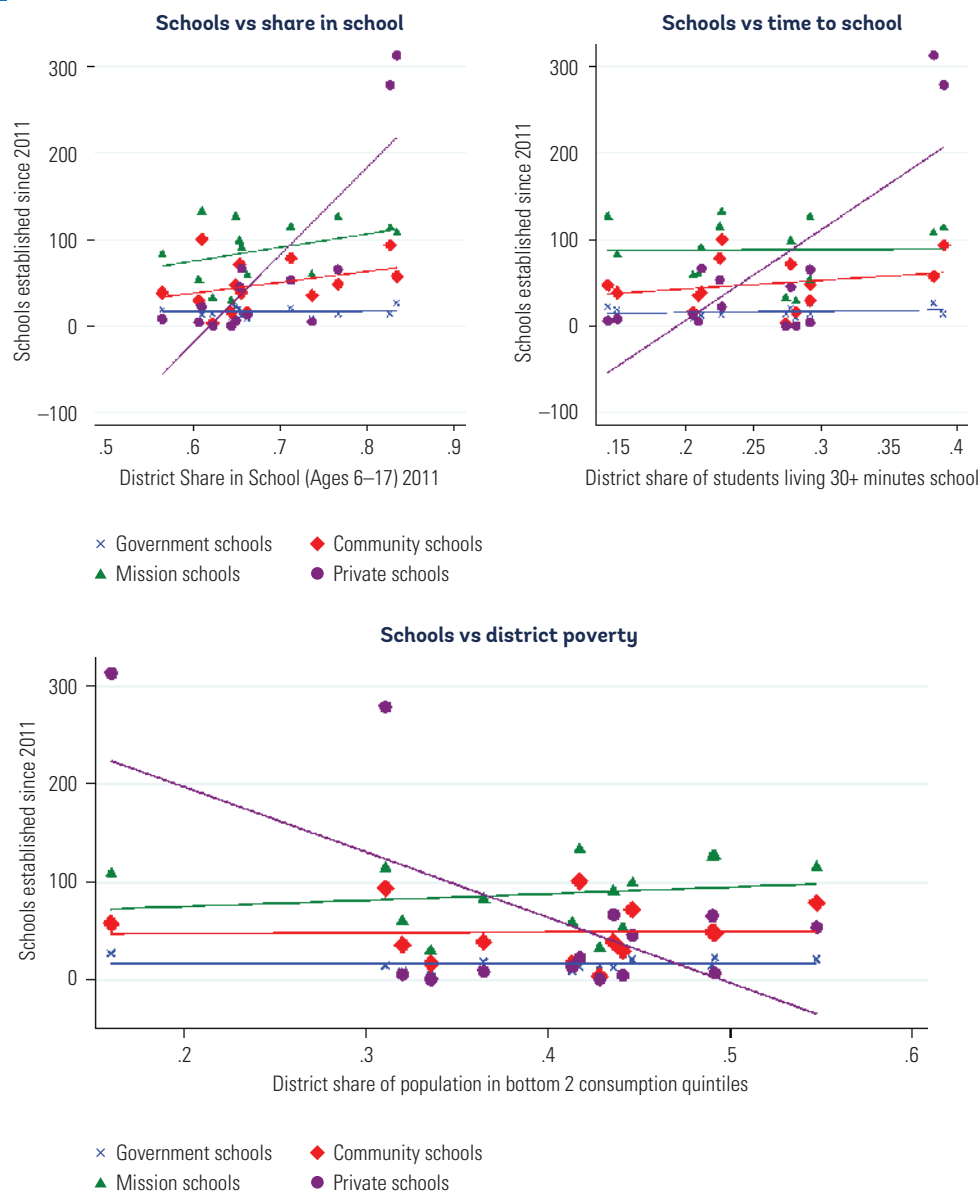
6.5. Equity of Education Expenditures

This section explores whether resources are being allocated equitably at the district level. For this analysis, four dimensions of equity are explored at the district level: (i) the share of children ages 6 to 17 in 2011, (ii) the share of children living more than 30 minutes from a school, (iii) the share of the population in the district belonging to the two poorest welfare quintiles, and (iv) whether there are differences in the access to age-appropriate schools at the district level. For the first part of the analysis, rather than utilizing district level expenditures on education, we utilize the number of schools established since 2011 at the district level. The rationale for using these measures is to determine whether the expansion of education services since 2011 has been concentrated in districts that are relatively poor, where children are more likely to be out of school, and where they live further away from schools. This is done by school type to determine whether particular types of schools are more likely to be located in disadvantaged districts. Scatter plots capturing these associations are presented in Figure 36.

The establishment of schools since 2011 has not prioritized disadvantaged districts. As reflected in the graph below there does not seem to be a relationship between the number of government schools established since 2011 and the share

of children in school in 2011 ($r = 0.05$). Similarly, there is no association between the number of government schools and the share of population in the two poorest welfare quintiles in a district. For community and mission schools there is a weak positive relationship between schools and the share of children in school. For private schools there is a strong positive relationship between the number of private schools and the share of children enrolled in school ($r = 0.82$). This suggests that private schools do their market research and have tended to locate in districts with high shares of school-going children. The association between the number of private schools and the share of population in the bottom two welfare quintiles is moderate and negative, suggesting that private schools have not prioritized setting up schools in relatively poor districts. When assessing whether schools are increasingly being established in more remote districts (as measured by the time it takes to get to school) the evidence suggests that there is a weak positive relationship between the number of schools and the share of population living more than 30 minutes away from school for public and community schools. The relationship is stronger for private schools ($r = 0.76$). These findings imply that government schools can do more to increase the supply of schooling in disadvantaged districts. Engaging with existing private sector providers may do little to expand the supply of education in these districts since they are more likely to be present in relatively more advantaged districts.

There is disparity in access to age-appropriate schooling in Sierra Leone, with southern districts lagging behind other regions. Using the GRID3 (2020) data, the spatial distribution of schools and their proximity to children of school age is presented in Figure 37. The map presents the number of children ages 3 through 17 who do not have access to an age-appropriate school within a three mile radius. Overall, it is evident that districts in the South have the largest numbers of children without access to a nearby school: Moyamba fares the worst with 112,411 children without access to school, followed by Bonthe (108,863) and Kenema (95,730). In fact, these three districts alone account for almost one-third of the total school-age population without access to an age-appropriate school. The western area with both urban and rural districts ranks at the top with zero and one percent of the school-age population not having access to school (respectively), followed by Kambia with only 41,590 children not residing within three miles of a school.

FIGURE 36 Schools Established after 2011 and Share in School, Time to School, and District Poverty

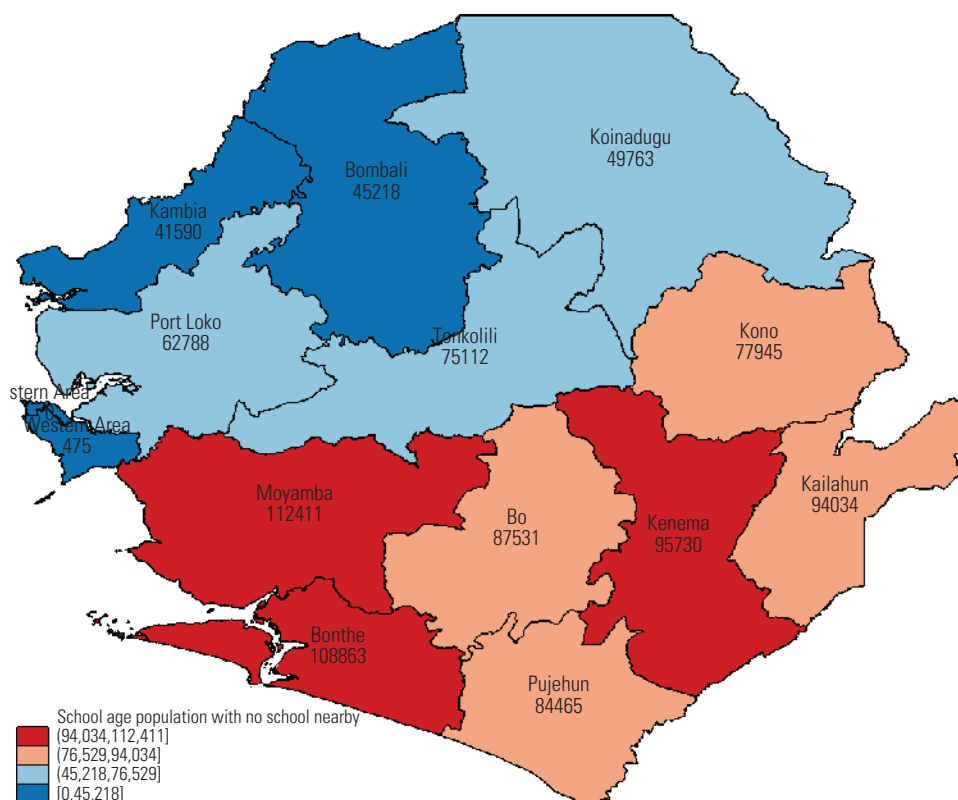
Source: Statistics derived from SLIHS 2011 and ASC 2019.

6.6. Adequacy of Financing

This section explores the additional financing requirements for hiring more teachers and constructing additional classrooms to keep pace with enrollments. First, the analysis identifies the number of additional teachers and classrooms required under different scenarios. Next, funding requirements are forecasted to determine the additional financing required to meet teacher and classroom require-

ments by using teacher salary and classroom construction cost information.

Using forecasted teacher estimates from the Education Workforce Initiative (EWI, 2020), additional financing requirements for teachers are identified in Table 17. The EWI forecasts teacher requirements under three different scenarios using assumptions about enrollments, repetition and drop outs and teacher attrition rates. Using teacher salary

FIGURE 37 School Age Population without Age Appropriate School within 3 MilesSource: GRID³ (2020).

Note: Numbers represent the number of children ages 3–17 without access to age-appropriate school within a 3 mile radius. The corresponding figure for Western Area Urban is 0.

information, the additional financing requirements to recruit additional teachers to reduce the pupil to qualified teacher ratio are also presented in Table 17. Under scenario A, the target by 2023 is to reduce the pupil to qualified teacher ratio to 52:1 at the pre-primary and primary levels, 35:1 at the JSS level and 45:1 at the SSS level. Under scenario B, the target is to reduce the pupil to qualified teacher ratio to 45:1 at the pre-primary level and to 40:1 at the primary, JSS and SSS levels. Scenario C sets a target to reduce the pupil to qualified teacher ratio to 25:1 at the pre-primary level and 40:1 at the primary, JSS and SSS levels.

Improving the quality of education would require investments in teachers. Overall, 27,000–62,000 additional teachers and SLL 1.4–3 trillion (US\$137.0–293.6 million) are required between 2019 and 2023 to reduce the pupil to qualified teacher ratio to acceptable levels. The greatest demand is for primary school teachers; an estimated 19,000–40,000 additional teachers are required to meet the targets under the different scenarios,

followed by JSS, SSS and pre-primary school teachers.¹³ To achieve the target ratio of pupil to qualified teacher under the most conservative scenario (scenario A), an additional SLL 569 billion (US\$55.7 million) would be required in 2023 to hire the requisite number of teachers. Under the most ambitious scenario (scenario C) an additional SLL 1.3 trillion (US\$137.0 million) would be required in 2023 to achieve the pupil to qualified teacher ratio targets. To put these amounts into perspective, the wage bill just for the additional teachers required in 2023 would be 30 percent higher than the current wage bill under scenario A. Under all scenarios, it is evident that the highest proportion of funds would go towards paying salaries of primary school teachers. Of the additional funds required to hire new teachers by 2023, 72 percent would go towards primary school teachers followed by 22 percent for

¹³ Except under scenario C where the pre-primary school teacher requirement is second to the primary school teacher requirement.

TABLE 17 Forecasted Teacher Salary Requirements, SLL Millions

	2019	2020	2021	2022	2023
Scenario A					
Pre-primary additional teachers required	69	140	214	290	368
Primary additional teachers required	3,779	7,520	11,311	15,161	19,198
JSS additional teachers required	525	1,522	2,848	4,376	5,767
SSS additional teachers required	225	424	615	880	1,394
Salary expenses for additional pre-primary teachers	983	2,204	3,724	5,578	7,823
Salary expenses for additional primary teachers	52,109	114,602	190,509	282,217	394,959
Salary expenses for additional JSS teachers	8,145	26,096	53,969	91,648	133,486
Salary expenses for additional SSS teachers	3,491	7,270	11,654	18,430	32,266
Total additional salary expenses	64,727	150,173	259,857	397,874	568,535
Scenario B					
Pre-primary additional teachers required	165	357	584	850	1162
Primary additional teachers required	4,453	9,154	14,209	19,667	25,773
JSS additional teachers required	492	1,464	2,768	4,276	5,664
SSS additional teachers required	404	830	1,298	1,907	2,928
Salary expenses for additional pre-primary teachers	2,351	5,622	10,164	16,350	24,703
Salary expenses for additional primary teachers	61,402	139,503	239,319	366,095	530,226
Salary expenses for additional JSS teachers	7,633	25,102	52,453	89,554	131,102
Salary expenses for additional SSS teachers	6,268	14,231	24,597	39,939	67,773
Total additional salary expenses	77,654	184,458	326,534	511,938	753,805
Scenario C					
Pre-primary additional teachers required	610	1,565	3,047	5,356	9,065
Primary additional teachers required	6,012	12,798	20,509	29,293	39,603
JSS additional teachers required	808	2,183	4,032	6,254	8,480
SSS additional teachers required	546	1,162	1,880	2,834	4,387
Salary expenses for additional pre-primary teachers	8,692	24,646	53,032	103,026	192,715
Salary expenses for additional primary teachers	82,899	195,036	345,429	545,280	814,750
Salary expenses for additional JSS teachers	12,535	37,430	76,406	130,980	196,283
Salary expenses for additional SSS teachers	8,471	19,924	35,626	59,353	101,544
Total additional salary expenses	112,597	277,035	510,492	838,639	1,305,292

Notes: (a) source for forecasted teacher requirements is the education workforce initiative (2020). Teacher salaries are forecasted using figures provided in the MBSSE (2020). (b) teacher salaries have been adjusted for expected inflation. (c) salary expenses are in millions of SLLs (d) additional teacher requirements are cumulative (for example, 2020 figures represent additional teachers to be recruited in 2020 *plus* additional teachers recruited in 2019 and so forth).

JSS teachers, five percent for SSS teachers and one percent for pre-primary teachers under scenario A.

To address the large classroom shortage in government schools, an estimated SLL 760 billion (US\$74.4 million) is required to construct new classrooms. As already discussed, classrooms constructed from solid materials are in short supply in Sierra Leone. With increasing enrollments in schools it is expected that classroom requirements will increase over

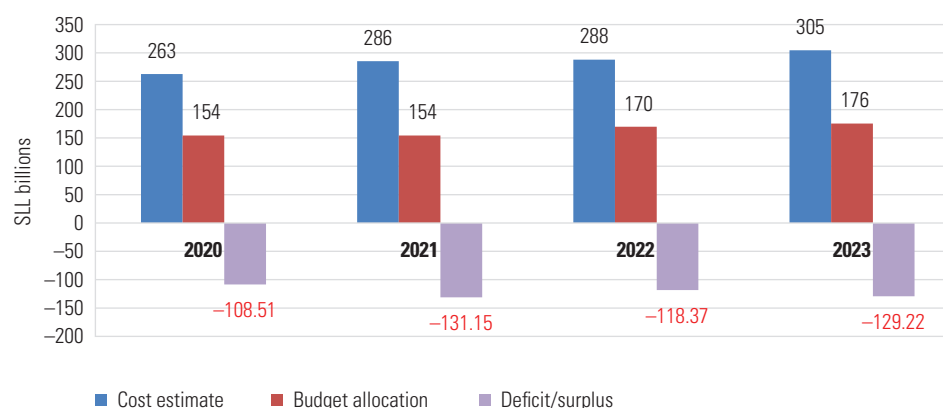
the coming years. Table 18 presents three different scenarios to help identify classroom needs and financing requirements for schools using ASC data (2019). Under the first scenario, classroom requirements are first calculated by dividing school enrollment by 40 to determine the number of classrooms the school should have in an ideal situation.¹⁴ The number of

¹⁴ Here we use a benchmark that schools should have a pupil to classroom ratio of 40:1 or better.

TABLE 18 Classroom Requirements

	Scenario 1		Scenario 2		Scenario 3	
	Classrooms Required	Cost (SLL Millions)	Classrooms Required	Cost (SLL Millions)	Classrooms Required	Cost (SLL Millions)
Community	2,211	404,966	4,067	744,910	4,934	903,709
Public	4,261	780,443	4,158	761,577	6,280	1,150,242
Mission	13,923	2,550,130	17,606	3,224,706	23,626	4,327,326
Private	431	78,942	1,885	345,256	1,270	232,613
Total	20,826	3,814,480	27,716	5,076,449	36,110	6,613,890

Note: Calculations are based on ASC data 2019. Per unit costs for classroom construction are from the World Bank. Costs are presented in millions of SLLs.

FIGURE 38 School Subsidies Estimation

Source: MBSSE's estimate.

classrooms classified as 'good' is then subtracted from this number to determine the additional classrooms required. For the second scenario, the classroom requirement is solely determined by the total number of classrooms classified as 'in need of repair'. Lastly, under the third scenario the total number of classrooms constructed out of solid materials is subtracted from the ideal classroom requirements calculated under scenario A. In this scenario, only classrooms constructed out of solid materials would be considered as adequate, all other classrooms would have to be constructed depending on enrollment. For government schools, under the different scenarios between 4,000 to 6,300 additional classrooms are required with an estimated cost of SLL 760 billion (US\$74.4 million) to SLL 1.15 trillion (US\$112.5 million). For community schools, between 2,000–5,000 additional classrooms are required under different scenarios with an associated cost ranging from SLL 400 billion (US\$39.1 million) to SLL 900 billion (US\$88.1 million). In order to address the

classroom shortage, the spending on infrastructure must drastically increase in coming years, particularly as enrollments continue to grow.

While the Government's budget allocation to the education sector has increased, the MBSSE's costing of the FQSE Program estimates that US\$3,620 million will be required to deliver the Government's FQSE Program fully between 2020 and 2023. For instance, the cost estimate for school subsidies will increase from SLL 263 billion in 2020 to SLL 305 billion in 2023. Budget allocation will increase from 154 billion in 2020 to 176 billion in 2023. This implies that the financing gap increases over time and total budget deficit for the same period is SLL 487 billion (US\$47.7 million) (Figure 38). Support from development partners will help ease the GoSL's fiscal constraints. The financing gap, however, is still very large—around US\$2.8 billion—mainly due to a sizable infrastructure gap and salaries for additional teachers.

CONCLUSIONS AND POLICY RECOMMENDATIONS

7

This chapter summarizes the main findings and presents related strategic priorities and policy recommendations that Sierra Leone can consider for increased investment in education in an efficient and effective manner and improve education sector performance. Table 19 shows overview of key policy options.

7.1. Summary of Findings

- **Human capital development is at the heart of the government's national strategy.** The GoSL has made its further commitment to strengthening the education sector through the launch of its flagship FQSE Program in 2018. The key elements of the program include: (a) reducing barriers to accessing education (government payment for public examination fees and per pupil subsidies in government and government-assisted schools); (b) providing essential elements for quality education provision (policies to motivate teachers, provision of textbooks in core subjects and teaching-learning materials); and (c) enhancing the role of parents in students' learning and the support of local council education committees, DEOs, and the MBSSE in program delivery.
- **While the FQSE Program supports universal access to education for children, financing such an ambitious program adds additional financial stress to the government's education budget.** To support its program, the GoSL reaffirms its commitment to increase the budgetary allocation on education annually.
- **The majority of schools delivering primary and secondary education lie outside government ownership.** The GoSL has in place a school approval process that can qualify non-government (community/mission) schools for government financial assistance. In 2019, three-quarters of schools have been approved for government assistance. Government approval implies the payment of subsidies, textbooks, teacher salaries, and examination fees. Considering the majority of schools are non-government schools, the increase in government-approved schools shows the Government's strong commitment to strengthening education service delivery, but it adds substantial fiscal outlay to the GoSL.

Education Sector Performance

- **Sierra Leone has made substantial progress in increasing access to education.** The education system has expanded extremely quickly. The primary school completion rate increased over time. There was a sharp increase in female enrollment, which has resulted into closing the gender gap in primary enrollment and reducing it substantially at JSS level.
- **Despite gains in enrollment, the Sierra Leone education system faces a set of major challenges.** They include the following:
 - (a) **The progression through the school system in Sierra Leone is inefficient.** While completion rates have improved over time, still many students drop out in the middle of the education year and therefore do not complete the full education cycle.
 - (b) **There is still significant variation in students' access to education by gender, socioeconomic status, and location.** School retention rates among poor and adolescent girls are low. Key factors generating the inequity include: (i) cost burden especially for poor families (e.g., uniform etc.); (ii) distance to schools and safety issues; (iii) school-related GBV; and (iv) teenage pregnancy.
 - (c) **Sierra Leone suffers from severe learning poverty due to lack of quality in education.** Children lack basic foundational literacy and numeracy skills. Sierra Leone's HCI 2020 is 0.36, which is lower than the average for Sub-Saharan Africa region. A child born in Sierra Leone today will be only 36 percent as productive when she grows up as she could be if she enjoyed complete education and full health. There are serious disparities in learning outcomes by gender, economic group, and location.
 - (d) **The key challenges that result in poor learning quality include insufficient and poor-quality teachers.** Particularly, there is a shortage of qualified and specialized subject teachers. Weak teacher management contributes to teacher absenteeism and less time spent in teaching. In addition to shortage of teaching, there is also a shortage of learning materials.

- (e) **Classrooms are limited in supply, and many schools still lack basic facilities.** The Government is developing a school catchment area plan to guide expansion of the provision of education, a national school construction strategy, construction standards, and a quality assurance mechanism to assess and ensure the viability and safety of school infrastructure. Textbooks to pupil ratios vary by grade and utilization of textbooks is low.
- (f) **Sector management and governance need to be improved.** Key challenges include: (i) a weak policy and regulatory environment; (ii) inadequate quality assurance systems across sub-sectors; (iii) an education management information system (EMIS) is in place for general education but is fragmented and under-used; (iv) weak aid management—characterized by aid fragmentation, with various donors operating parallel implementation arrangements (many of which bypass country systems).

Education Sector Expenditure Analysis

Government Education Spending

- **Although the government education expenditure has increased, it still does not meet international standards.** Primary and secondary expenditures on education as a percentage of GDP per capita are lower in Sierra Leone than most of regional peers. The COVID-19 pandemic has put additional pressure on the financing landscape and the already tight education financing. This further highlights the importance of efficient, effective, and equitable use of public resources.
- **The highest share of education expenditures goes towards pre-primary and primary education; however, the priority is shifting to secondary education.** In 2019, 38 percent of total education expenditures were classified as expenditures on pre-primary and primary education. The share of education expenditures on secondary education increased from 21 percent to 30 percent between 2017 and 2019.

- **Under-investment in the capital education budget has negative consequences for the performance of the education system.** Most public expenditure on education (99 percent) is on recurrent items. Under-investment in the capital items is a contributing factor to the poor quality of school facilities and infrastructure.
- **Wages and salaries continue to dominate education expenditures although non-salary recurrent expenditures have drastically increased recently.** In 2019, 61 percent of total primary and secondary education expenditures went towards wages and salaries, while 37 percent of expenditures went towards recurrent non-salary expenditures.
- **The budget on primary and secondary education was on average under-executed at 83 percent,** which was driven mainly by low levels of capital budget utilization.

Decentralized Financing

- **The devolution of functions on basic education to Local Councils is partially implemented.** On average more than 90 percent of education funds are spent at the central level while education spending at Local Councils accounts for below 10 percent. Spending at Local Councils varies from year to year. There is extremely low capital education spending at the local level, raising concerns about the potential risks for effective long-term investment on schools.
- **There is no clear written policy document, guidelines or mechanism that clarifies roles and responsibilities at the local level among the DEO, FQSE, TSC, and Local Council.** This leads to confusion and duplication of work among these agencies.

Government Spending for Students

- **School fee subsidies have increased significantly mainly due to increased number of students, and government and government-assisted schools.** The main source of funds received by schools is government, particularly at higher levels of schooling. Schools utilize funds primarily for paying salaries and improving the quality of school infrastructure.

Schools do not invest enough funds in activities which directly support students' learning (e.g., reading books).

Government Spending for Teachers

- **Teacher salaries have increased across the board, with the largest increase for primary school teachers.** In real terms, the increase is more with pre-primary and primary school teacher salaries, which have doubled since 2010, while secondary school teacher salaries have increased by 66 percent. Across all pay grades and levels of schooling, teachers are relatively well paid compared to other more developed countries, corresponding to approximately 3.3 times the per capita GDP.
- **Teacher salaries constitute a large part of public expenditures on education, and the allocation of teachers to government schools appears to be relatively efficient compared to other type of schools.** Of the various school types, the allocation of teachers in government schools is most efficient followed by mission schools.
- **While about half of public schools are operating over capacity with STRs exceeding 40:1, certain schools are operating under-capacity.** There is a need to re-allocate teachers from surplus schools to deficit schools.

Government Spending for the Supply of Schooling

- **The establishment of schools has not prioritized disadvantaged districts.** There is a weak positive relationship between the number of schools and the share of population living more than 30 minutes away from school for public and community schools. As a result, still over one million children do not have access to an age-appropriate school. At the primary level, education coverage is the most extensive with 99 percent of children ages six to 11 having access to a primary school within a three mile radius. However, the supply of schooling at other levels of education is more limited.
- **There is a relatively high level of system inefficiency due to dropouts in early grades.** About half of

resources are wasted due to dropouts and repetition at the primary level. There is little wastage of public resources at the secondary education level.

- **There is a weak link between school level expenditures and enrollment outcomes.** Increased expenditures per pupil could allow schools to hire more teachers, improve school facilities and purchase teaching and learning materials which could in turn incentivize parents to send children to school. However, per pupil school level expenditures do not have any association with the percentage change in school enrollment.
- **PBF supported under the World Bank-assisted Project, has had a positive impact on student attendance across all grades.** PBF funds were provided to 1,800 primary schools in six targeted districts, based on performance related to enrollment, teacher and student attendance, classroom practices and reading performance. Community-managed and performance-based financing has contributed to strengthening school-based planning for improved school performance.

External Efficiency

- **Rates of returns to SSS and university levels are high.** For females, the highest rates of returns to education is at the SSS (25 percent) and university levels (20 percent) while for boys the highest rate of return is for university education (23 percent) and JSS education (12 percent). Rates of returns to primary and JSS levels are relatively low.

Private Spending on Education

Households also contribute to education, and the richest households spend 4–8 times more on education than the poorest households in Sierra Leone. On average, households spend more on educating girls than boys. Household education spending primarily goes towards fees, tuition and learning materials for children. Along with the government, the ability of the households to spend on education has also been affected negatively by the COVID-19 pandemic.

Adequacy of Financing

- **To achieve the pupil to qualified teacher ratio targets under the most conservative scenario, an additional SLL 569 billion (US\$55.7 million) would be required in 2023** to hire the requisite number of teachers. The highest proportion of funds would go towards paying salaries of primary school teachers.
- **To address the large classroom shortage in government schools, an estimated SLL 760 billion (US\$74.4 million) is required.** In order to address the classroom shortage, the spending on infrastructure must drastically increase in coming years, particularly as enrollment continues to grow.
- **While the Government's budget allocation to the education sector has increased, the financing gap also increased over time.** Total budget deficit is very large—around US\$2.8 billion to deliver the FQSE Program fully between 2020 and 2023, mainly due to a sizable infrastructure gap and salaries for additional teachers. It is assumed that the GoSL will continue to struggle to meet its commitment to education, especially through FQSE Program.

7.2. Policy Recommendations

Policy recommendations are presented in order to answer the following questions:

- What should the country spend on?
- How can existing resources be more efficiently utilized?

(1) Prioritize Education Spending to Improve the Efficiency and Quality of Education

Prioritize education spending to improve the efficiency and quality of education. The GoSL's strategic planning and budgeting—setting goals, priorities, and targets—is imperative for efficient, effective and equitable use of public resources. The GoSL should spend more for non-salary inputs, including instructional support and teaching and learning materials for children, that are critical for improving teaching and learning.

The availability of adequate school inputs and favorable learning environments are key for ensuring good learning outcomes. There should be adequate classrooms of good quality to accommodate all children in Sierra Leone. The GoSL should use school catchment data to identify unserved and underserved areas.

Invest more in programs targeting disadvantaged groups and students who lag behind in learning. There are supply and demand side barriers preventing children from participating and remaining in school. Supply side barriers include poor school infrastructure, poor quality teachers, shortage of teaching and learning materials, and overcrowded classrooms, while demand-side barriers include direct and opportunity costs of schooling, distance to school, lack of motivation and support, teenage pregnancy, early forced marriages, and school-related GBV and sexual harassment in schools. The key is to pay special attention and provide additional support to students who lag behind in learning. The MBSSE's efforts to remove these barriers (e.g., radical inclusion policy, zero pregnancy campaign, girls education support program) by developing policies and programs targeting disadvantaged groups are commendable.

Link up school subsidies with school performance outcomes and/or school-based planning through PBF. School subsidies, which are currently given to schools based on student enrollment, are used primarily for paying salaries and improving the quality of school infrastructure. School subsidies should be linked with school performance outcomes (e.g., student attendance, teacher attendance, etc.) and/or school-based planning. The key is to expand PBF that had a positive impact on student attendance and had strengthened school-based planning by empowering school management committees.

Improve efficiency in teacher recruitment, deployment, and development of teachers. The quality of teachers is critical to the performance of schools. In government schools, the TSC should avoid incorporating any teacher who does not meet the minimum standards to their payroll. The TSC's current efforts to regularize the teaching force by only incorporating individuals who meet minimum standards and strengthening teacher registration and licensing process

are worth continuing. The GoSL should also ensure more equitable distribution of teachers in government schools. The newly recruited teachers should be allocated to schools with the greatest needs (e.g., higher pupil to qualified teacher ratio and subject needs). The protocol recently adopted by the TSC is an important and commendable step. While some schools are operating over capacity, other schools are operating under-capacity. There is a need to re-allocate teachers from surplus schools to deficit schools. Given the low supply of teachers in some disadvantaged areas, the GoSL should consider the introduction of rural/hardship allowances to incentivize teacher mobilization and retention. These types of allowances are common in developed countries. However, given the current tight macro-fiscal situation in the country, the additional fiscal burden of these allowances might be hard to absorb. The GoSL should think of introducing a creative teacher incentive scheme, including career progression benefits and other non-monetary incentives. It is also important to strengthen teacher management to motivate teachers through continuous professional development and reduce teacher absenteeism.

(2) Improve Institutional Effectiveness

Strengthen the school quality assurance system to monitor quality of teaching not only in government schools, but also non-government schools. The MBSSE and TSC have a critical role in ensuring coherence and quality in the education system. Since a significant part of the education service delivery is managed by non-government entities, the creation of standards, guidelines, and protocols is critical to ensure school quality assurance. It is vital for the GoSL to build a strong supervision mechanism at the local level and provide necessary support to schools. The MBSSE's recruitment of school inspectors, who are deployed at the direct level, is an important and commendable step.

Strengthen capacity of local agencies at the district level with a clear division of labor. The devolution of functions on basic education to Local Councils is only partially implemented, while more than 90 percent of education funds are managed at the central level. Effectiveness of education service delivery at the local level is being undermined by unclear roles and responsibilities among local agencies engaged in

education, including the DEO, FQSE unit, regional TSC office, and Local Councils. They are taking increased responsibilities in supporting and monitoring school operations and service delivery. Increased investment is needed to train staff at the local level, better equip the offices, and employ more professionals at the local level.

(3) Increase Overall Education Financing

Gradually increase overall education financing. The MBSSE's data shows that the total budget deficit is very large—around US\$2.8 billion over the next four years to

implement the FQSE program fully. In addition to utilizing existing resources more efficiently, the country needs to increase overall education financing to meet international standards and fulfil the country's education strategy. Given the current tight macro-fiscal situation in the country, this might be hard to achieve in the short-term, but in the medium- and long-term, the GoSL should increase education spending by both increasing the overall education envelope and improving the rate of budget execution. The education sector is supported by various actors, including donors, non-governmental organization, private sector, and communities. Funds from these partners have contributed to reducing the financing gap, but need to be further harnessed. In the long-term, relying on these funds is not necessarily sustainable.

TABLE 19 Overview of Key Policy Options

Strategic Area	Policy Options	Time Frame	Responsibility
Prioritize education spending to improve the efficiency and quality of education	Spend more for non-salary inputs that are critical for improving teaching and learning (e.g., school inputs, favorable learning environments)	Short to medium term	MBSSE and TSC
	Invest more in programs targeting disadvantaged groups and students who lag behind in learning	Short to medium term	MBSSE and TSC
	Link up school subsidies with school performance outcomes or school-based planning	Medium term	MoF and MBSSE
	Improve efficiency in teacher recruitment, deployment, and development of teachers	Short to medium term	TSC
Improve institutional effectiveness	Strengthen school quality assurance system to monitor quality of teaching not only in government schools, but also non-government schools	Short to medium term	MBSSE
	Strengthen capacity of local agencies at the district level with a clear division of labor	Short to medium term	MBSSE, TSC, and Local Councils
Increasing overall education financing	Gradually increase overall education financing by increasing overall education envelope and improving the rate of budget execution.	Medium term	MoF and MBSSE

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