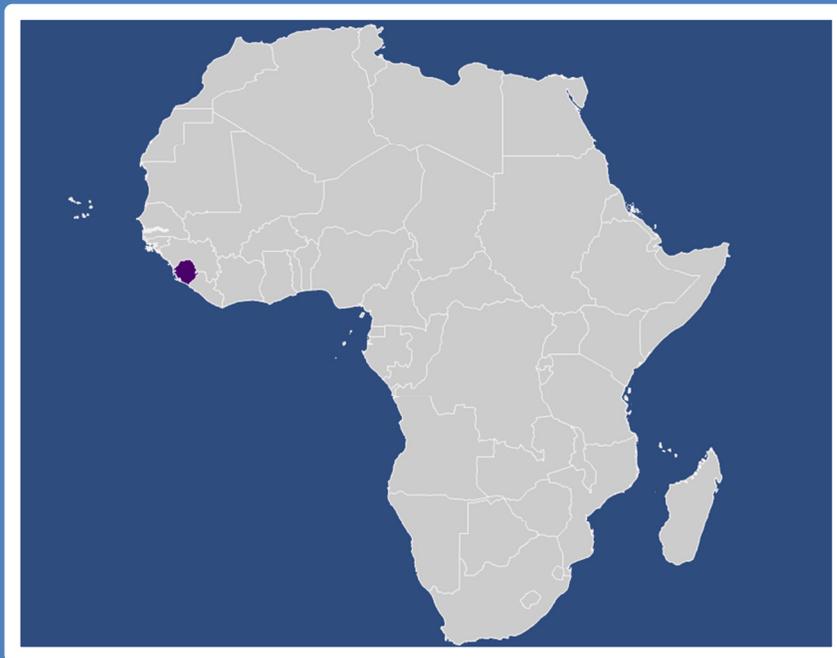


SIERRA LEONE POVERTY ASSESSMENT SUMMARY CHAPTER



The World Bank

Poverty Reduction
& Economic
Management Unit

Africa Region



Currency Equivalents

Currency Unit = Sierra Leonean Leone

US\$1 = 4,340 Le.

(As of May 5, 2014)

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Summary Chapter

INTRODUCTION

1. **This summary chapter presents the main findings from the World Bank's Poverty Assessment of Sierra Leone.** The six additional chapters that comprise the full report cover poverty, agriculture, labor, education, rice prices, and fuel subsidies. With the exception of the poverty chapter, which was written jointly with Statistics Sierra Leone (SSL), the analysis reflects the insights of various regional and sectorial experts within the World Bank. The key objective of this work is to provide inputs to the government of Sierra Leone's policy making process.

2. **The main data source for this report is the two rounds of the Sierra Leone Integrated Household Survey (SLIHS) conducted by Statistics Sierra Leone.** The first was implemented between March 2003 and April 2004, and the second between January and December 2011. Both surveys are nationally representative, with sample sizes of 3,714 and 6,727 respectively. Various individual chapters also draw from other data sources, including Consumer Price Index (CPI) data and agricultural statistics produced by the United States Department of Agriculture in the rice price chapter, and 2011 Public Spending on Education from the Ministry of Finance and Economic Development in the education chapter.

MAIN FINDINGS

3. **The main message of the Sierra Leone Poverty Assessment is one of cautious optimism based on continuous progress.** Since 2003, the government has made substantial progress in reducing poverty and improving access to basic services. In addition, as iron ore extraction activities expand, expanding tax revenue will provide the government with new resources for poverty reduction and infrastructure development. Despite this progress, substantial challenges remain. Though decreasing, high poverty levels persist, particularly in rural areas. The economy remains centered on agriculture, which is the main source of livelihood for Sierra Leone's 3.1 million poor. Transformative change is needed to move the sector from current subsistence levels to higher value market crops, and to continue to generate employment for the bulk of the estimated 120,000 young people entering the labor market each year. In urban areas, higher productivity from self-employment sector is necessary to drive growth as formal wage employment remains scarce. Also the education sector needs to continue to expand inclusiveness for poor and rural children, and to produce a sufficient number of high-quality graduates to move the economy forward.

MACROECONOMIC STRUCTURE & CONDITIONS

4. **Ensuring that core conditions for development are met is essential to meeting poverty reduction targets.** Beyond the initiation of any new targeted programs, such as those outlined in the Agenda for Prosperity, the government must maintain a climate of stability and economic expansion. Sierra Leone has shown above-average growth in the post-conflict period. From 2003 to 2011, growth rates averaged 2.5 percent, slightly above the sub-Saharan average of 2.4 percent and substantially above the global average of 1.5 percent. Despite this period of growth, Gross Domestic Product [GDP] per capita in 2011 was less than one-third of the sub-Saharan Africa average, and grew more slowly than

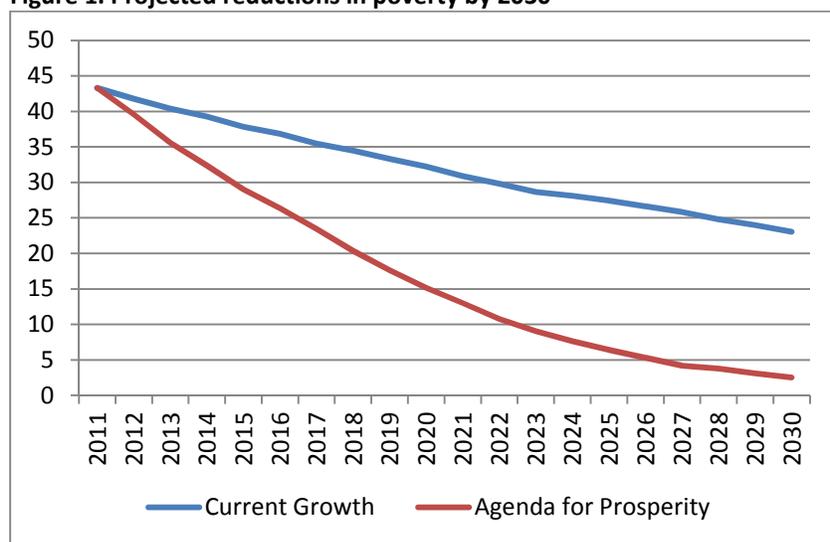
the average in Sierra Leone during this period, increasing 78 percent compared to a regional average of 132 percent.

5. **The current structure of the economy is heavily dependent on agriculture in general and rice cultivation in particular.** The percent contribution of agriculture to GDP has consistently been the largest of any sector, averaging more than 50 percent between 2003 and 2011. During this time period, the crop subsector made a larger contribution to agriculture’s share of GDP than the contributions of fishery, forestry, and livestock combined, and food crops were the largest contributors to GDP within the crop subsector. Rice represented nearly 40 percent of the crop subsector’s contribution to GDP and 15 percent to GDP overall, while cassava represented 25 percent of the crop subsector’s contribution and 10 percent overall. In addition, the Sierra Leone Ministry of Agriculture, Forestry, and Food Security (MAFFS) estimated that agriculture accounted for over 25 percent of export earnings (MAFFS, 2009), with the key export commodities being cocoa and coffee. Of the remaining sectors of the economy, industry, including mining, represents a quickly growing percentage, with services comprising the remainder. Unfortunately the industrial growth has not readily translated in to employment opportunities. Of those sectors leading economic growth – mining, construction, and telecommunications – only construction contributes substantially to job growth. This leaves the agricultural sector to absorb the large number of new entrants into the work force each year.

POVERTY

6. **Between 2003 and 2011, the poverty headcount has declined from 66 percent to 55 percent.** Underlying this poverty reduction was an annualized 1.6 percent per capita increase in real household expenditure from 2003 to 2011. While steady positive progress is encouraging, much higher growth rates will be necessary to meet government’s 4.8 percent targets outlined in the new Agenda for Prosperity. Comparing expenditure in purchasing power parity (PPP) adjusted dollars, per capita expenditure increased by 1.2 percent per year between 2003 and 2011. This growth in per capita expenditure translated into a 3.7 percent annual decrease in poverty. At this current trend, the national poverty level would be at approximately 23 percent in 2030, excluding population growth. The AfP target of 4.8 percent per capita expenditure growth, also excluding inflation and population growth, would bring national poverty down to just under three percent. This would also meet the international goal of reducing poverty below three percent

Figure 1. Projected reductions in poverty by 2030



Source: Calculations based on SLIHS (2003 & 2011)

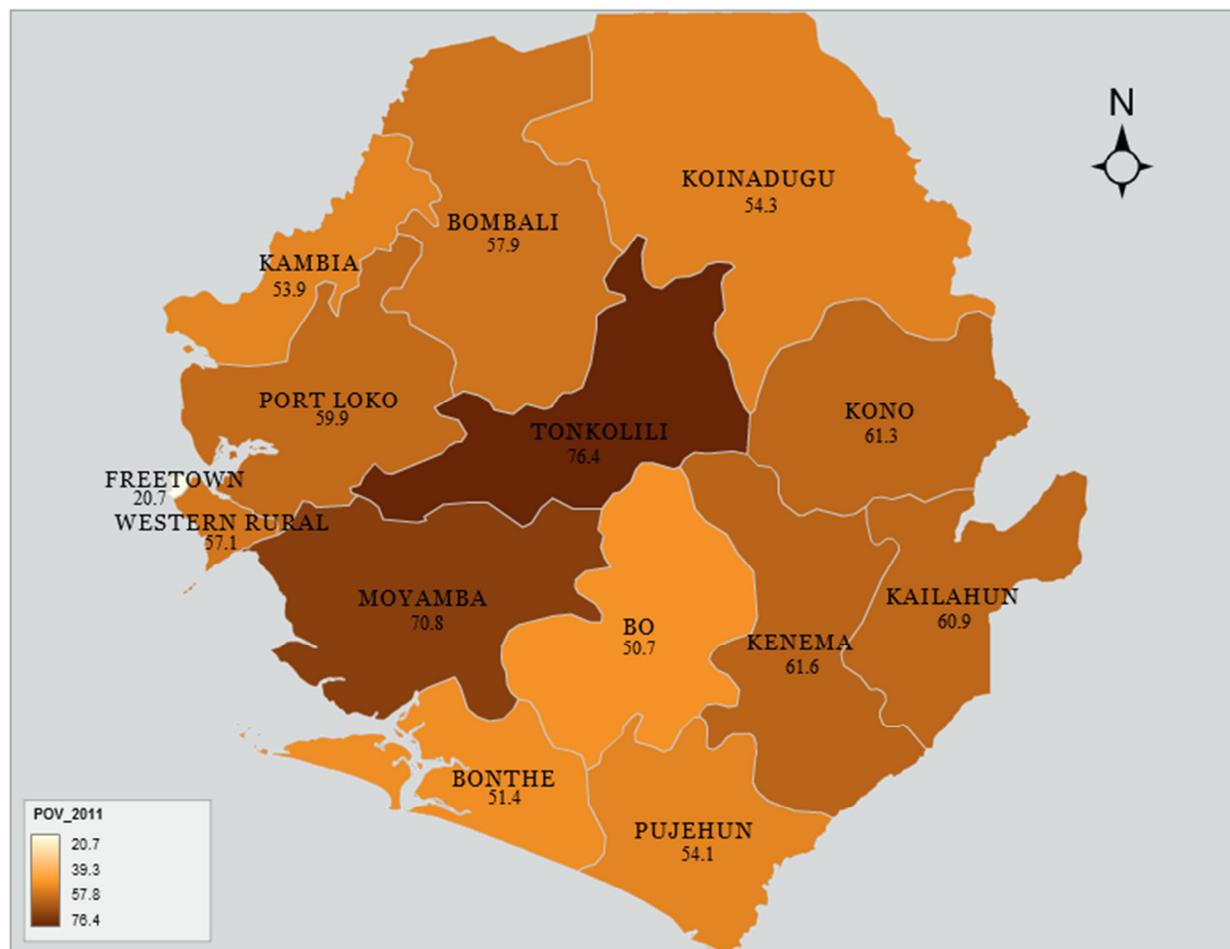
by 2030. Per capita growth of this magnitude would require GDP growth of around nine percent, substantially higher than the average 6.4 percent achieved since 2003.

7. **Rural poverty declined from 2003 to 2011 from 79 percent to 66 percent.** This represents a decrease of just over 15 percent, though the overall number of rural poor increased during this period due to population growth. Poverty levels in rural areas remained well above those of urban areas and poverty declined more slowly in rural areas. Higher poverty in rural areas was linked to slower growth among agricultural households, which comprise the vast majority of rural households. In rural areas, 78 percent of household heads listed their primary occupation as agriculture, compared to just over half nationally. The poverty headcount for agricultural households showed an approximately 20 percent decrease from 75 percent in 2003 and 61 percent in 2011, while other non-agricultural households showed about a 25 percent decrease from 41 percent to 31 percent.

8. **Urban poverty declined from 47 percent in 2003 to 31 percent in 2011, despite an increase in the country's largest metropolitan area, Freetown.** This decline represented a decrease of approximately 35 percent in the urban poverty headcount, but poverty in Freetown specifically increased 50 percent from a headcount of 14 percent to 21 percent. Though other factors, such as methodological issues with the data collection and some post-conflict return migration to regional capitals, probably contributed to the increases seen in Freetown, the main drivers were likely economic migration by poor rural individuals to urban areas and increases in imported rice prices. Though poverty reduction was higher in rural areas than in Freetown from 2003 to 2011, overall the capital remained far more prosperous than the countryside. In addition, those living in Freetown had much better access to public services, including health and education. These disparities, coupled with the limited employment possibilities outside of agriculture in the countryside, fuel movement to the cities. Compounding the impacts of migration, there has been a substantial increase in the cost of imported rice since 2007. Freetown is particularly dependent on imported rice as high transportation costs from the remote domestic rice-growing regions increase costs for local rice in the capital. Between January 2007 and December 2013, imported rice prices more than tripled. Consequentially, the percentage of total household spending on rice doubled from about ten percent in 2003 of total spending to nearly 20 percent in 2011. In Freetown, the increase was 135 percent, from a value of 4.7 percent of spending in 2003 to 11 percent in 2011. If the increased spending on rice limited resources available for other consumption, the resulting poverty levels would rise.

9. **District level poverty rates for 2011 show the geographic divisions of prosperity and poverty.** The lowest levels of poverty were found in the capital city of Freetown. Outside of the capital, poverty was relatively consistent across the country. Eleven of the 13 remaining districts had a poverty headcount ranging between 50 and 62 percent, with the lowest being in Bo district with 51 percent and the highest in Kenema with 62 percent. The two exceptions which showed higher than average poverty levels were Moyamba district, with 71 percent, and Tonkolili district, with 76 percent. These two regions represent just over ten percent of the Sierra Leonean population, but nearly 15 percent of the poor. Between 2003 and 2011, the overall decline in national poverty was driven by significant declines in Bonthe, Kailahun, Kenema, Port Loko, Bombali, Kambia, and Koinadugu districts.

Figure 2. Poverty Headcount by District



Source: Calculations based on SLIHS (2011)

CHARACTERISTICS OF THE POOR

Household Demographics

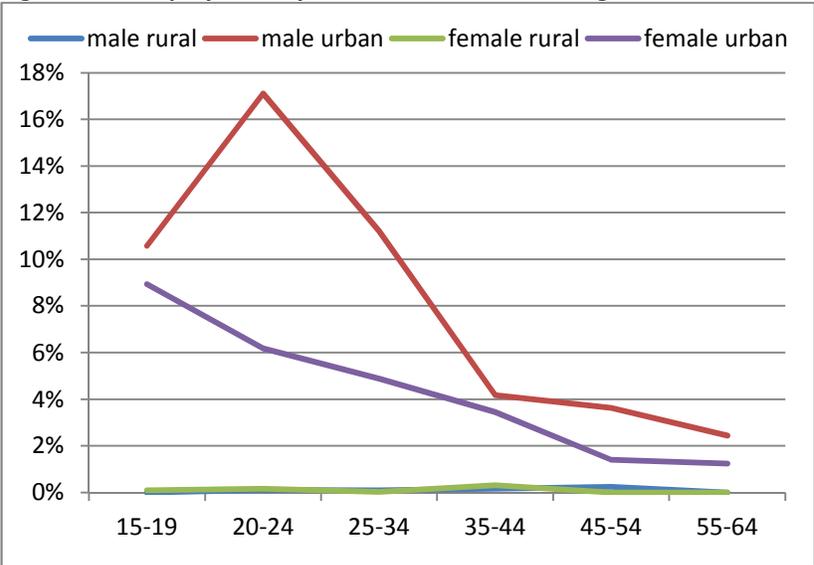
10. **Households with more children were more likely to be poor.** Though fertility has declined in recent years, from a high of approximately five percent per year in 2003 to just over two percent in 2011 (WDI, 2012), median age for a woman's first birth was still only 19 years old in 2011. Earlier age at first birth was associated with higher number of children overall, as the average number of total births was almost double for a woman that had her first child at 16 as opposed to 31. High fertility and early child bearing lead Sierra Leone to be an extremely young country. Nearly 40 percent of the population was below the age of 15 in 2011, and 75 percent below age 35. This poses significant challenges to poverty reduction as limited household resources are stretched to cover greater needs.

11. **Female headed households were no worse off than male headed households in 2011, though men had stronger labor market outcomes.** Female headed households comprised 18 percent of total households in 2003 and 26 percent in 2011, and overall showed lower poverty rates than male headed

households. The poverty differences between gender of household head disappear when other household characteristics were considered, indicating, for a given set of circumstances, male and female headed households are doing about the same. The lower rates are driven by a higher percentage of female headed households residing in Freetown, where overall poverty rates were lower. Despite this, on an individual level, the characteristics of the jobs held by men and women differed, particularly in urban areas. Labor force participation in rural areas was high for both genders, approaching 100 percent when school and household activities were included. Unemployment was almost non-existent and 90 percent of participants were engaged in agriculture. In contrast, in urban areas, women participate at a lower rate but also have lower unemployment. Self-employment was the most common category of employment, though women were more likely to operate household enterprises. Wage employment was rare for both groups, though much more common among men. Despite this, of wage workers, women were more likely to be in the formal sector, and therefore receive employment benefits, as most work in the public sector.

12. **Older household heads were more likely to be poor in rural areas, while younger men faced particular challenges in becoming household heads in urban areas.** In rural areas, older household heads are more likely to be poor, likely attributable to the physical nature of farm labor, while there was no difference in urban areas. This finding for urban areas, however, masks the difficulties that youth, particularly male youth, are having making the school-to-work transition. Unemployment, using the International Labor Organization definition of available and seeking work but not currently working, was higher among urban populations, and for those with higher levels of education. The unemployment rate in urban areas was six percent compared with one-half percent in rural areas. The highest unemployment rates were found in urban men aged 20-24, which exceeded 17 percent. The inability to find permanent employment hampers the school-to-work transition. The clearest demonstration of these delays was seen in marriage rates. In Sierra Leone, traditionally women are considered eligible to marry once they reach childbearing age; young men must be established both financially and within the eyes of the community before they can marry. Compared with 58 percent of rural males, 67 percent of urban females, and 91 percent of rural females aged 25 to 29, only 31 percent of urban males have ever been married. But for urban males in the same age group, 73 percent of those with wage employment were or had been married. Overall, it was not until the 40 to 44 age category that urban and rural men have comparable rates of marriage.

Figure 3: Unemployment by Residence, Gender, and Age



Source: Calculations based on SLIHS (2011)

Education

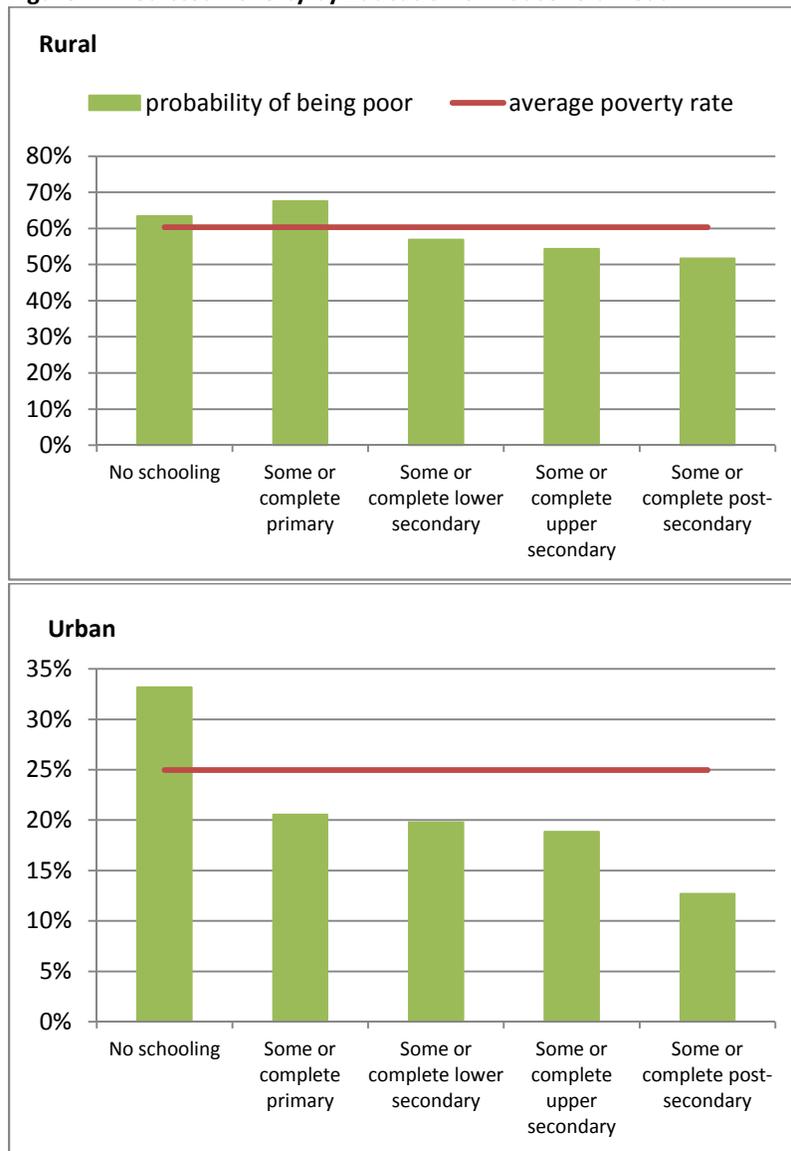
13. Households with lower levels of education of the head were more likely to be poor.

Though overall poverty levels decreased across all five education categories (no schooling, some or complete primary, some or complete lower secondary, some or complete upper secondary, some or complete post-secondary) between 2003 and 2011, the largest percentage reductions were for post-primary levels of education. Poverty decreased 27 percent for households in which the head has no education, but 44 percent for households in which the head had some or complete secondary education. The correlation between higher education and lower poverty is stronger in urban areas than in rural. In rural areas, compared to a mean poverty rate of 60 percent of households, households in which the head has no education have a 63 percent probability of being poor compare to 52 percent for those with at least some post-

secondary. In urban areas, compared to a mean rate of 25 percent of households, households in which the head has no education have a 33 percent probability of being poor compared with a 13 percent for those with at least some post-secondary. The high returns to education, particularly in urban areas, are likely a key reason the poor continue to invest a disproportionate percentage of their available resources in education.

14. **The level of education for the adult working age population is low.** In 2011, the working age population had an average of four years of education, but more than half of the working age population in Sierra Leone had no formal education. Working age adults in rural areas had two years of education and fewer than seven in urban areas. Men had more education than women, averaging five years

Figure 4: Predicted Poverty by Education of Household Head



Source: Calculations based on SLIHS (2011)

compared to three years. Programs in adult or second-chance education are needed to address the large percentage of the workforce with very low or no education.

15. **Despite recent gains in new enrollments, Sierra Leone faces substantial challenges regarding education.** Massive gains in education have occurred during the post-war years. Political economy factors, including the post-war “catch up” phase often seen in post-conflict situations, the Education Act of 2004 which abolished primary education fees for all students, and the construction boom supported by donors helping revive war-torn Sierra

Figure 5: Probability of having ever attended school by year of birth

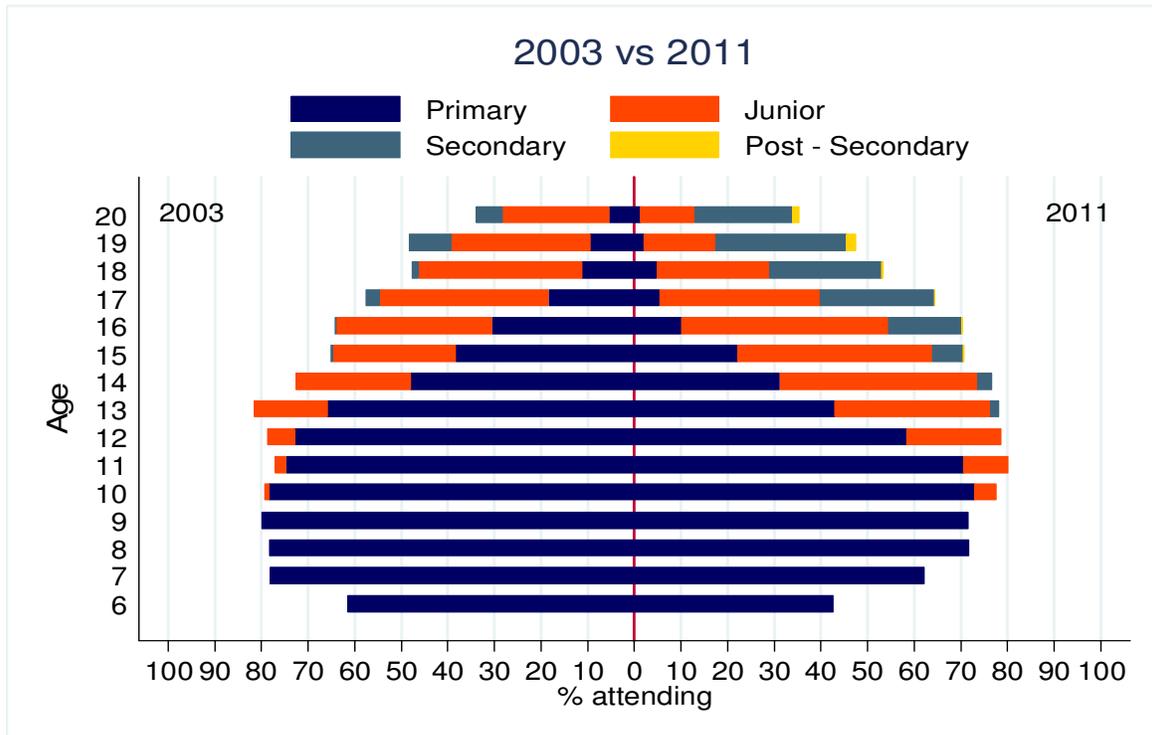


Source: Calculations based on SLIHS (2011)

Leone, all contributed to the increase in access and the sharp climb in gross enrollment. By 2011, the gender gap in ever having attended school had largely closed and the gap between rich and poor had narrowed considerably. The expansion of education meant that students, even those outside of school-age that were unable to attend during the conflict, were able to attend school after the war, albeit with a late start.

16. **Current enrollment indicators show mixed results from 2003 to 2011.** During this period, both net and gross primary enrollment rates have decreased, though this is likely attributable to the large numbers of children and young adults entering and re-entering the system in 2003 after a prolonged period of absence. Despite lower enrollment, there have been improvements in age appropriate schooling and in enrollments in higher levels of schooling. In 2003, 18 percent of 17 year olds, who should have been in their final year of secondary school, were enrolled in primary school, compared with three percent in secondary. The remainder was out of school. By 2011, only six percent of 17 year olds were enrolled in primary school, compared with 24 percent in secondary. The number of secondary school enrollments tripled to approximately 240,000 students, and there was a more than ten-fold increase in post-secondary enrollments to nearly 50,000. The primary completion rate, however, was just 68 percent, and grade repetition was common. Approximately five percent of students were repeating their current grade at the time of the survey and 12 percent overall classified as multiple-repeaters. These rates were higher for girls, children from poor households, and those living in urban areas, though girls and those living in urban areas had higher initial enrollment rates. The estimated cost of repetition in 2011 was a deadweight loss of 13 percent of GDP and the opportunity cost of the lost income of a dropout over their lifetime was equivalent to 12 percent of GDP per capita. If the current trend of repetition and dropping out persisted, close to 30 percent of youth ages 15 to 34 would be entering the labor market in 2040 without completing primary education.

Figure 6 : School Attendance by Age (2003 & 2011)

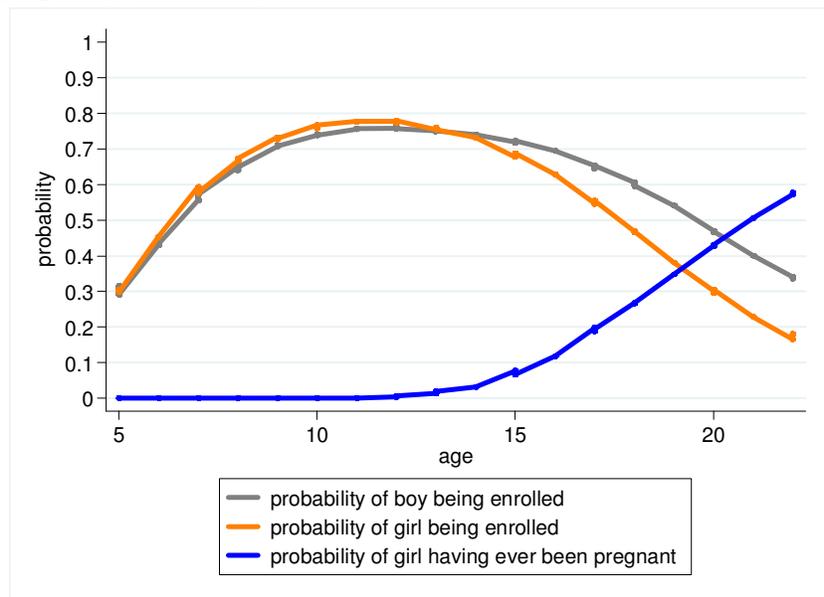


Source: Calculations based on SLIHS (2003 & 2011)

17. **Financial constraints impacted the educational outcomes of poor children.** Despite gains, in 2011 a half million children aged 6 to 17 were out of school. This translates to 30 percent of the school age population, higher than the sub-Saharan regional average of 25 percent. Cost was cited most frequently as the reason for being out-of-school at all levels of education in Sierra Leone. While overall private spending on education represented about 15 percent of total non-food household consumption for both poor and non-poor households, the nominal expenditure was lower for poor households and it was spread across more students due to larger household sizes among the poor. Per student spending was more than 350 percent higher for non-poor students compared to poor students, with the largest differences being expenditure on room and board and on extracurricular activities. Significantly, spending on learning materials, such as books, was nearly three times higher for non-poor students compared to poor students. Additionally, though the primary education fees have been abolished, approximately 20 percent of education spending at the primary level went to tuition. The benefit incidence analysis on public spending on education concludes overall public spending on education in Sierra Leone was regressive overall. At primary level, spending was poverty-neutral with the poorest quintile receiving 23 percent of public benefits, matching their 23 percent share of the primary school age enrolled population. Spending became increasingly regressive at higher levels, benefiting those from higher quintiles, as fewer individuals from poor households were enrolled.

18. **Beyond financial constraints, distance and the socio-economic characteristics of the household head were associated with enrollment, as was gender for older students.** In addition to financial constraints, econometric analysis identified a number of reasons for a primary school age child not being enrolled in school. These included rural residence and longer distances to primary school, lower levels of education of the household head, female headed

Figure 7 : Probability of enrollment (by gender) and probability of pregnancy (women only)



Source: Calculations based on SLIHS (2011)

households, and household in which the heads were not married. Gender was not a significant determinant of attendance for younger students but becomes increasingly important as girls enter childbearing years. The gender of the child, however, was not a significant determinant at this level in either rural or urban areas. At the primary level, there were 102 girls enrolled for every 100 boys in 2011, but this decreases to 84 in lower secondary, 70 in upper secondary, and 59 in post-secondary school. Further analysis shows the probability of enrollment was equal for boys and girls up to approximately age 13. After this point, enrollments for both groups decline, but the declines were much sharper for female students. This coincided with an increasing likelihood of pregnancy for girls. This is consistent with anecdotal evidence that girls leave school to marry once they reach childbearing age, while boys must be financially established before they can marry.

Agriculture

19. **Poverty was higher and decreased more slowly for agricultural households in rural areas.** In rural areas, agricultural households had a 66 percent predicted probability of being poor, holding other factors constant, while the predicted probability for households which did not primarily practice agriculture was 51 percent. In addition, overall percentages of poverty declined faster for non-agricultural households than for agriculture between 2003 and 2011, with poverty declining 19 percent to a total of 61 percent in 2011 for agricultural households, and declining 26 percent to a total of 31 percent for non-agricultural households. For rice growing households, the main staple crop, poverty was about the same in both 2003 and 2011 for those households which grew rice and those which did not, though the main rice producing districts of Kailahun, Kenema, and Port Loko were among those that saw the largest declines in poverty in this period.

20. **Agriculture is the backbone of the labor market.** Nearly 70 percent of those participating in the labor force in 2011 were engaged in agriculture. This figure rose to over 90 percent in rural areas.

Agriculture was the most common profession among both rural populations and the poor. In addition, since education levels are low and the majority of the population continues to live in rural areas, the agricultural sector will have to absorb the bulk of new working age population.

21. **Agricultural production was focused mainly on food crops, with only one in five farmers growing cash crops.** Rice was the main agricultural crop, grown by nearly all agricultural households, followed by cassava. The main cash crops were cocoa, coffee, and oil palm, grown by approximately 20 percent of households, though cocoa and coffee production have declined since 2003. Cash crop production was centered in the Eastern region, where approximately 40 percent of crop-growing households in the Eastern region grew cash crops in 2011, compared with about 20 percent in the Southern region and eight percent in the Northern region. Oil palm was the most common cash crop in the Northern and Southern regions and has shown significant growth since 2003. Oil palm, in addition to rice and cassava, was believed to have the highest potential to contribute to economic growth and reduce poverty (MAFFS, 2009). Despite this, neither rice growing households, nor those that grew one of the three main cash crops, were less likely to be poor than agricultural households in general. Households growing maize and cassava, however, were less likely to be poor, while households growing beans were more likely.

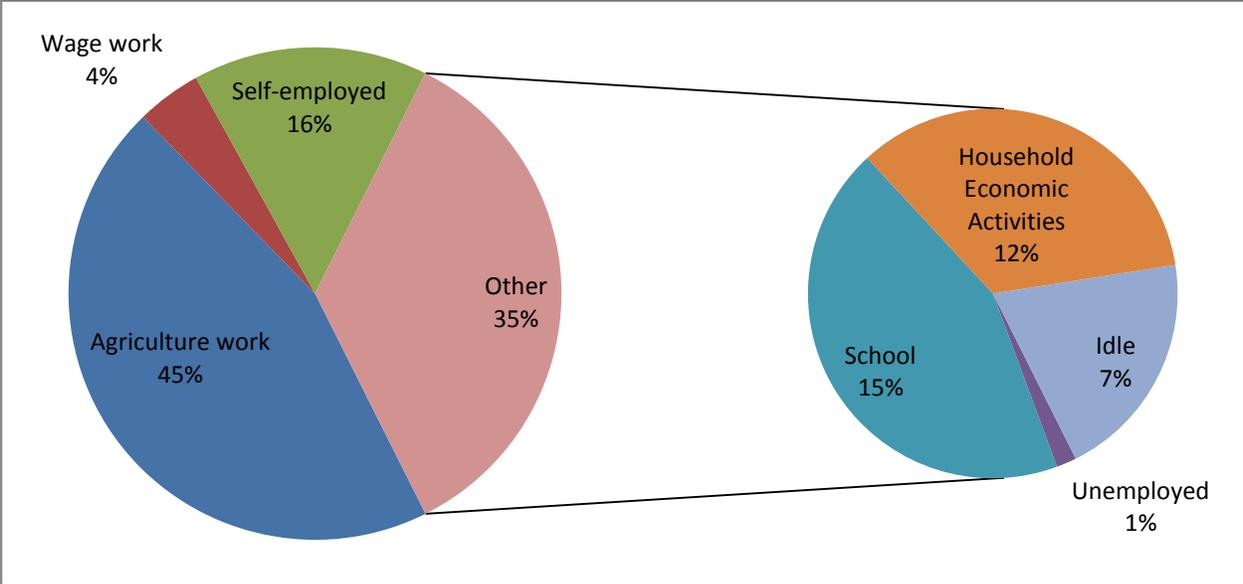
22. **Both productivity and production have increased but still remain well below potential.** Between 2003 and 2011, productivity increased threefold for rice, though yields still remained below their potential. In 2003, total rice production was estimated at 253 metric tonnes. By 2011, an estimated 648 metric tonnes were produced (USDA, 2014). These increases went disproportionately, however, to a small percentage of households. For example, the top ten percent in terms of production of rice producing households generated 63 percent of total estimated production, compared to less than one percent by the bottom ten percent. The top ten percent showed 70 percent higher yields for rice than the remaining 90 percent. The top ten percent also possessed larger farms, with approximately 50 percent more land, though did not use agricultural inputs such as mechanized equipment, fertilizer, or irrigation at a greater rate than the remainder of producers. Similarly with cash crops, less than ten percent of households in the lowest quintile of landholdings cultivated one of the three main cash crops, compared with over 50 percent in the highest quintile. Multivariate analysis also supports the finding that larger landholdings in rural areas were associated with lower levels of poverty. Average landholdings between poor and non-poor households were almost the same in 2003, but a gap had opened by 2011. While it is not possible to make casual determinations with available data, one possible explanation is that households with larger landholdings were better able to move out of poverty. Alternatively, non-poor households may have been better able to expand their landholdings in the post-conflict period. The latter is supported by the consistent land size for poor households between 2003 and 2011.

Employment

23. **Of working age Sierra Leoneans, 64 percent participated in the labor market, mainly in agriculture or self-employment sectors.** The participation rate was on par with regional neighbors. As discussed above, the most common sector was agriculture, which employed about half percent of the working age population overall and nearly the entire rural workforce. The second largest category was

non-agricultural self-employment, which was the most common sector in urban areas. Wage work was rare, employing less than five percent of the working age population. , compared to a sub-Saharan Africa average of 16 percent (Filmer et al, 2013). Wage work comprised approximately 20 percent of those employed in urban areas, but less than two percent in rural areas. Approximately 60 percent of wage workers had public sector employment, with an additional three percent working for parastatal institutions. Of the remainder of the population, most were either in school or engaged in household economic activities. Only a small percentage was classified as idle or unemployed. Those households in which the household head was engaged in non-agricultural wage labor were less likely to be poor. In urban areas 16 percent of households in which the head’s primary occupation was wage labor were poor, compared with 23 percent in which the head is self-employed, 30 percent in which the head was out of the labor force or engaged in household activities, and 40 percent in which the head was primarily involved in agriculture.

Figure 8 : Main Activity of Working Age Population (2011)



Source: Calculations based on SLIHS (2011)

24. **Unemployment was rare but underemployment was common.** Using a twelve-month recall measurement, unemployment was two percent in 2011. In the context of Sierra Leone, where much of the population is engaged in low productivity subsistence agriculture, underemployment is a more salient concern. Underemployment is, however, more difficult to measure. Time underemployment, defined as those working less than 40 hours per week who would work more if possible, was fairly low. Though about 55 percent of those participating in the labor market worked 40 or more hours a week, only 12.3 percent indicated that they would want to work for more hours or would work more hours if given the opportunity. This translated into a 6.6 percent time underemployment rate. Youth, men, and workers in rural areas are more likely to report being underemployed according to the time-based measure. The highest rates of time-based underemployment were found in rural areas, 10.7 percent, and for the 20 to 24 and 25 to 29 age groups, also around ten percent. In contrast to time underemployment, wage unemployment showed a higher base level and nearly opposite trends.

Overall wage underemployment was 15.5 percent for those with wage employment. For wage underemployment, the incidence was higher for women, those with lower education, and the poor.

Geography

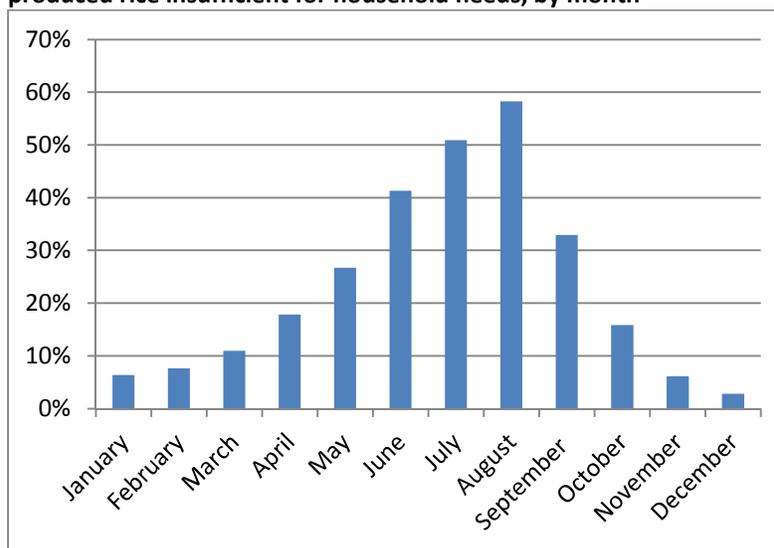
25. **Urban areas were much better-off than rural areas.** Though there are important differences between genders and age categories in poverty incidence, these differences were dwarfed by the gap between urban and rural areas. In addition urban areas had better access to public services. More than half of rural residents were more than one hour from a secondary school, compared to less than ten percent of Freetown residents. Access to health facilities was also much better in urban areas. Of rural residents, approximately 35 percent lived more than one hour from a clinic and nearly three-quarters lived more than one hour from a hospital, compared to less than five percent and about ten percent in Freetown, respectively. Less than one percent of households in rural areas listed electricity as the main source of lighting, compared with nearly 60 percent in Freetown. Even if growth rates remain higher in rural areas, internal migration to Freetown is likely to persist until the gap in public services between the capital and the countryside is narrowed.

26. **In both 2003 and 2011, certain areas were overall better off than others, but which areas those were differed between the two time periods.** Compared to the reference group in Bo, and all other factors being equal, rural households in Kailahun and Kenema were substantially more likely to be poor, as well as but to a lesser extent, those in Bombali and Bonthe. These differences can likely be attributed to remoteness and uneven recovery from conflict. By 2011, these regions had recovered and Bonthe was actually less likely to be poor than the reference. Similar trends were seen for urban households, with Kailahun, Tonkolili, Bonthe, and Western district excluding Freetown converging with the reference, though urban households in Kenema remained more likely to be poor in both periods.

FOOD SECURITY & RURAL LIVELIHOODS

27. **Due to its heavy dietary dependence on rice, Sierra Leone is vulnerable to future food crises.** Rice represented 32 percent of food consumption for the average household, and 41 percent for the rural poor. The SLIHS 2011 indicated more than 96 percent of all households reported having consumed rice in the six weeks covered by the survey. However, rice consumption, and by extension food security in general, is dependent on a number of external factors, including seasonal rains, fluctuations in

Figure 9: Percentage of rice-producing households indicating that home-produced rice insufficient for household needs, by month



Source: Calculations based on SLIHS (2011)

world prices, and decreases to the exchange rate. Three-quarters of Sierra Leonean households were net consumers of rice, including nearly all urban households and two-thirds of rural households. Amongst rice-growing households, approximately 60 percent were net consumers, with no difference between poor and non-poor households. Koinadugu was the only district in which the majority of households were not net buyers of rice. Nationally, 84 percent of the total value of rice consumed was purchased rice. In urban areas, nearly all rice was purchased. In rural areas, more than three-quarters of rice was purchased. Those most vulnerable to another short-term food price shock are those least likely to be net producers: urban households, non-farm households, female headed households, and households with older household heads. Even those households that consumed home-produced rice did not produce enough to meet needs at some point during the year.

28. **In some areas overall poverty was higher than food poverty.** Despite higher overall poverty incidence, there is some evidence that agricultural households are better able to meet food security needs. For example, food poverty was higher than total poverty in Freetown. This was likely attributable to the fact that food is not home-produced in this area, and households may have opted, either out of preference or necessity, to purchase non-food items with limited resources. In contrast, in the Moyamba district, which was more than 90 percent rural, total poverty was higher than food poverty. In 2011, food poverty was higher among agricultural households, but within the poor, food poverty was lower among agricultural households. Overall, nearly half of agricultural households were food poor, compared with one-third of non-agricultural households, which is consistent with higher poverty levels in rural areas. Among poor households, however, only 70 percent of agricultural households were food poor, compared with 77 percent of non-agricultural households. This trend was similar in 2003, and demonstrates that poor agricultural households were better able to meet their food needs than poor non-agricultural households.

29. **The nature of rice markets has changed substantially since 2008.** From the end of the civil war up until 2008, local rice was consistently more expensive than imported rice and there were substantial seasonal price fluctuations on local rice. Since 2008, however, the seasonal price changes have diminished as markets have become more integrated and the price of imported rice has increased to converge with that of local rice. This increase in price cannot be fully explained by either changes in the exchange rate or the world price. Also, demand has increased dramatically during this period. Consumption increased from 311,000 metric tonnes (MT) at the end of the war in 2002 to 545,000 MT in 2008, and then to 1,094,000 MT in 2013 (USDA, 2014). Both imports and domestic production have increased in this period, but production at a faster rate. As most households are net consumers, particularly in urban areas, there is a clear, direct relationship between higher food prices and increasing inflation on poverty levels. The convergence, however, can potentially bring a number of medium-term benefits that outweigh the short term costs. First, import prices are less volatile than domestic prices and increased imports therefore bring increased stability to domestic rice markets. Secondly, declining local prices may hurt households that sell rice, but this represents a small fraction of the total population. Net consumers stand to benefit from lower prices. Finally, better integration improves efficiency in production and consumption decisions, and therefore may encourage farmers to adjust to price changes more quickly.

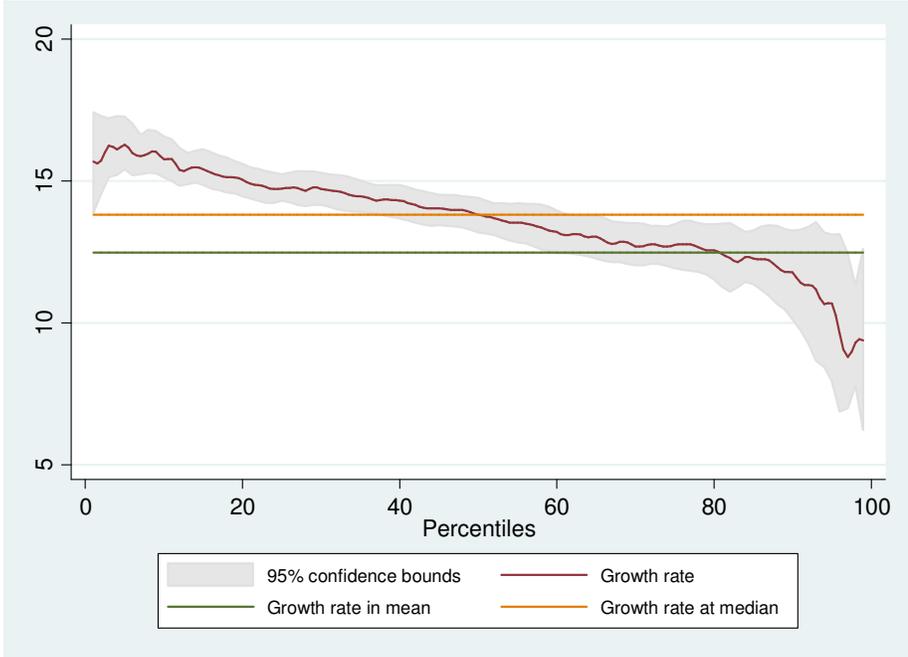
30. **Increasing rice production has benefits for both food security and rural livelihoods.** Even if the ability for farmers to profitably market their production remains small, since most farm households were net rice consumers, increased production frees resources for other types of consumption. To increase farm incomes specifically, a number of different measures can be taken, many of which are outlined in the National Sustainable Agricultural Development Plan (NSADP). These areas include promoting commodity commercialization, rehabilitating and upgrading the agriculture infrastructure, creating incentives for private sector investment, and coordinating the sector’s activities (MAFFS, 2009). The recently approved Agenda for Prosperity’s (AfP) sector focus is to increase agricultural productivity and value-addition. In addition, reforming the traditional land rights system in which decision making is centralized in a small group of elites would encourage the shift to higher values tree crops, such as coffee and cocoa, as tenure rights would be more secure.

INEQUALITY

30. **Overall from 2003 to 2011, national inequality levels have decreased.** The Gini coefficient, calculated for per-capita consumption, decreased from 0.39 in 2003 to 0.32 in 2011. The 2011 levels of inequality vary substantially, however, across districts. The highest level is in Bombali district, with a value of 0.42, and the lowest in Tonkolili, with a value of 0.21. Inequality is also relatively low in the capital Freetown, with a Gini coefficient of 0.27. The decrease in the Gini coefficient was from 0.32 to 0.29 in rural areas, and from 0.31 to 0.27 in Freetown. In other urban areas, there was a small increase in inequality from 0.29 to 0.31. The highest level is in Bombali district, with a value of 0.42, and the lowest in Tonkolili, with a value of 0.21. The overall decrease in inequality can largely be attributed to convergence between Freetown and other urban areas, and by rural areas catching up with urban areas generally.

31. **The growth in Sierra Leone from 2003 to 2011 has been pro-poor.** Comparing annualized growth rates for per capita expenditure adjusted for PPP, the growth rate was the highest for the lowest decile of the distribution, at six percent, and steadily declines until the top decile, which is just over one-half percent. With regard to shared prosperity, an indicator used to measure the inclusiveness of growth,

Figure 10: Per capita growth incidence curve



Source: Calculations based on SLIHS (2003 & 2011)

the annualized growth rate was 5.1 percent for the bottom 40 percent,

compared with 2.9 percent at the mean. The higher growth rate for the lower part of the distribution was further evidence of pro-poor growth. The Freetown growth rates were negative, particularly for the highest deciles. Growth rates for Freetown peaked at the third decile before falling off sharply for the upper deciles. In other urban areas, growth was trending upwards though relatively flat across the deciles. This indicates that growth in other urban areas has favored the upper deciles. It should be noted when discussing the decline of per capita PPP expenditure, the decrease was not necessarily the entire population decreasing in wealth.

32. **Despite pro-poor growth, large gaps still exist between the wealthy and the poor.** Comparing the first and fifth quintiles of the household consumption distribution, the highest quintile had higher levels of education, were more likely to have wage employment, had larger land ownership in rural areas, and were more likely to grow cash crops. Children in households in the wealthiest quintile had higher enrollment rates across all levels in both 2003 and 2011. This group was also largely urban. Two-thirds of the wealthiest quintile lived in urban areas. It should be noted, however, that the current available data can only describe the correlation between the wealthiest quintile and these characteristics, not a causal relationship. Therefore it is not possible to distinguish if the wealthiest quintile having the connections that allow them to secure formal wage employment or if those that have wage employment earn enough to be in the wealthiest quintile regardless of which quintile in which they began.

FUEL PRICES

33. **Reforming the current fuel price regime could bring new resources to the government.** In June 2006, the government introduced harmonized fuel prices for petroleum, diesel, and kerosene across all areas of the country. Currently, retail prices are maintained by waiving certain taxes and duties rather than a direct subsidy while commercial prices reflect the full economic price of fuel. The current retail fuel price is among the lowest in Africa. The tax expenditure, or the tax revenue foregone by the government to maintain fixed retail prices, reduces the price of gasoline by 11 percent and the price of diesel and kerosene by 18 percent relative to the commercial price. For 2014 the tax expenditure is estimated to be one percent of the non-iron ore GDP, and is likely to increase as the economy develops and fuel consumption increases. By means of comparison corporate income tax amounted to 1.3 percent of non-iron ore GDP, mining royalties to 1.2 percent, excises to 1.6 percent, and import duties to 1.5 percent.

34. **Despite the regressive nature of fuel subsidies, any price change would have implications for poverty and inflation.** The top decile of the urban population, which represents just over seven percent of the total population accounts for a disproportionate share of retail fuel consumption. This group consumes approximately 20 percent of kerosene, just over half of the petroleum, and 96 percent of diesel fuel, with the latter mainly used to power generators. Therefore they would bear the bulk of the direct cost of a price change. The poor, however, would be affected by indirect effects, such as increases in the prices of food and public transportation resulting from the increase. For example, a switch to full pass through of the economic price in 2014, effectively raising the retail price to the commercial price, would result in a one percentage point increase in poverty compared to the projected poverty level in the absence of a price increase. Overall poverty would still decline between 2014 and

2016, though at a slower rate. It is possible though to design an offsetting cash transfer program that would allocate a portion of the fiscal savings to compensating those negatively affected by the change. Depending on the structure and implementation of the payments, it may be possible to achieve lower poverty rates with an increase in fuel prices and an expanded offsetting cash transfer than would have occurred in the absence of any action.

35. **Despite the potential fiscal benefits, political economy considerations must also be taken into account in implementing any reform.** Subsidy reforms are usually difficult to implement and are often marred by general discontent, political opposition, and sometimes violence. The myriad stakeholders that are likely to be negatively affected cannot be ignored and instead should be included throughout the design and implementation phases. In addition to the political economy barriers, design and implementation of the fuel subsidy reforms can often extend the administrative, technical and coordination capacities of the government to its limits. These factors combined help explain why many governments hesitate to undertake such reforms despite the strong economic and welfare arguments in favor of undertaking such reform.

CONCLUSIONS AND POLICY RECOMMENDATIONS

36. **There is a vast gap between urban and rural areas.** While there is evidence of differences in development outcomes between the non-poor and poor and between men and women, but far the most substantial inequities are between urban and rural areas. This includes not only those living in Freetown, but also other urban centers, which have shown strong growth and poverty reduction between 2003 and 2011. If all services and opportunities continue to be centered in urban areas, economic migrants will continue to gravitate there. The government must decide if the priority should be to invest in rural areas to raise standards of living there and reduce migration pressures, or if they will accept the rapid expansion of urban areas as inevitable and take steps in urban planning to ensure adequate infrastructure for a growing population.

37. **The most direct way to lower rural poverty is to raise agricultural productivity.** Poverty rates in rural areas are higher and are falling more slowly than in urban areas. As 90 percent of the rural workforce is engaged in agriculture, the most direct channel with which to target rural poverty is through farm production. Increasing production of market crops, including both food crops and cash crops, would in turn increase rural income. Income generation opportunities, as opposed to solely meeting subsistence needs, increase the attractiveness of farming as an option for young people. This is important since agriculture must absorb the bulk of the growing number of entrants into the labor force. In addition, even for those households that do not market crops, increased productivity in food crops consumed by the household, in particularly rice, would have implication for poverty reduction. As the majority of agricultural households face shortages during the year and are net consumers of rice, increasing productivity for rice or other substitute staple starches would free resources previously used for rice purchases. This increased spending power could be used to fund the consumption of other goods and services, or for investments such as education and non-farm enterprise. Boosting productivity in Sierra Leone should focus on improving the business climate for agriculture generally, rather than targeting poor farmers specifically. This is due to the fact there is relatively little difference between poor and non-poor farmers. While non-poor farmers have more land and education, they do

not use improved inputs or implements at a greater rate than poor farmers. There are a number of mechanisms that can be considered to improve the business climate. First, reducing production costs, through productivity-increasing public expenditures in agricultural extension, irrigation, farm-to-market roads, and other public goods, would increase profitability. This is important particularly to the sales of rice and other products where imported substitutes are available. As increasing iron ore production puts upwards pressure on the currency, imports become relatively less expensive. Without productivity gains, local rice will not be able to compete. Second, reducing marketing costs reduces the cost of purchased inputs and allows a larger share of final sale price to go to farmers. Lower costs can be achieved through investments in roads, which lower transportation costs, and rehabilitating rice mills damaged or destroyed during the war, which increase the potential for value addition. Finally, reforming traditional land systems to ensure more secure tenure rights to encourage the cultivation of higher value medium term tree crops, and to encourage more young people to participate in agriculture with greater land access.

38. Large imbalances exist economy-wide in the rice market, endangering food security. Rice was the single most important agricultural commodity in terms of both livelihoods and food security. The majority of households in Sierra Leone grew rice and nearly all households consumed rice. Despite the importance, the country is heavily dependent on imported rice. But while there is a clear need to reduce dependence on imported rice, exclusive internal production would leave food security vulnerable to domestic shocks, which are of particular concern in a system based on small holder rain-fed agriculture. A large rice tariff may theoretically make local rice more competitive, but would also encourage illegal imports over the porous borders. Additionally high transportation costs due to a weak national transportation network would lead to a high burden on consumers in Freetown. The encouragement of dietary diversification into alternative staple starches, including traditional options, such as cassava and maize, and other less traditional options, such as Irish and sweet potatoes, would reduce pressure on rice supplies. Finally, it has been discussed recently that the government should monitor or restrict the informal rice trade with neighboring Guinea and Liberia. While further information on trade and market dynamics would undoubtedly be useful for planning purposes, in the short term there would likely be negative poverty impacts from restrictions as rural households would further loss access to limited revenue sources. Also, a currency appreciation further harms rural households dependent on rice sales for rural livelihoods. The focus therefore should be first of self-reliance at the individual farm household level, with rice market schemes being part of a wider integrated agricultural policy. Systems can be put in place now to mitigate impact of potential future shocks, though each has its drawbacks. First, a modest tariff could be introduced, around ten to twenty percent, to provide the government some leverage in the event of a temporary price spike, such as the 2008 food crisis, though it would increase prices and likely have some short run impacts on poverty. Other options include widening safety net programs, though these can be difficult to accurately target and administer, institute a policy of strategic rice reserves, though this can be difficult to maintain, and institute temporary farm subsidies, though these can be difficult to later remove and can drain limited national resources.

39. As wage employment remains rare and difficult to access, self-employment will continue to be the main source of employment in urban areas. As with many sub-Saharan African countries, informal

positions are much more common than formal ones. Wage employment remains mainly confined to the public sector. Survey respondents also indicated that finding wage employment necessitated having connections, and women and young people were often excluded from these networks. In particular there was a substantial gap, both in terms of opportunity and compensation, between men and women in wage employment. Also, new graduates with secondary and higher education degrees had difficulties accessing the type of wage employment commensurate with their education, and this group had the highest unemployment rates. The bulge in unemployment did not continue to older cohorts, however, indicating that applicants did eventually find positions. Therefore in the short term this would not be a priority area for intervention, though it should continue to be monitored going forward as increasing numbers of new graduates enter the work force. Reforms to improve the business climate will encourage more private sector development, and therefore expand the jobs base, though it is not clear if this will keep pace with new graduates entering the market. In the medium term these jobs will be a minority component of the labor force. This means that it is more beneficial to consider self-employment as a sector with potential and constraints, rather than a transitional period which the country will eventually move beyond. New employment opportunities particularly in urban areas can be created by leveraging this entrepreneurial energy to expand sole proprietors to small enterprises. Expanding training options and access to microloans would provide female entrepreneurs, who have more limited options in formal wage employment, with increased income.

40. Despite strong gains in access to education in the post-war period, the overall attainment of the population remains low. Adult illiteracy and low labor skills in Sierra Leone are among the most challenging in the region. This could be addressed through a two-pronged approach focused on providing cutting edge skills for the modern sectors and improving basic education skills for the majority of the labor force. The latter can be achieved through adult basic education or second-chance programs. Studies evaluating these efforts in Sub-Saharan Africa have shown that such programs not only reduce illiteracy rates among the target population but also have an immediate positive impact on school enrollment and attendance rates of children of the poor, improving the family's health, and raising productivity of livelihoods. To improve the likelihood of the success of these programs, rigorous quality controls should be instituted for instructors. In addition, the use of local language in instruction and development of content relevant for adults expands the likelihood of adult participation.

41. In addition access to education for the current school age generation must be expanded. Of the half million school age children not enrolled, many were poor and living in remote areas. As low population density in certain parts of the country reduce the returns to government financed school construction, alternatives are necessary to address unmet need. The promotion of private sector or community-based expansion of education services could be supported by establishing a clear policy and minimum standards on school registration and personnel support, including the options of multi-grade schools where resources and demand are not enough to establish single grade schools. In addition to location, financial constraints were a major reason for not enrolling. Targeted subsidies or voucher programs to qualifying households to reduce transportation costs, uniforms, instructional materials, and other education expenses, should be explored. Beyond the primary level, analysis shows that government spending is regressive, mainly because very few students from poor households access higher levels of education. Policies requiring parents and students to pay fees for higher education,

combined with loans and scholarships for the neediest, will help improve the government's ability to provide students with academic ability the means to transition from primary to lower secondary or from lower to upper secondary.

42. **Improved data and the integration of advanced technology will support the government in improving the ability to form evidence-based policy in the future.** This includes a regular calendar of data collection, including household living standards surveys, labor force surveys, and agricultural surveys, as well as a dissemination strategy for the results to feed into the policy-making process. In addition, the integration of new technology, such as GIS mapping of public services, would better be able to identify the geographical gaps in services.