ABOUT THE AUTHOR

NIELS-HUGO BLUNCH is Professor in the Department of Economics, Washington and Lee University, where he teaches econometrics and courses related to health, education, and economic development. Previously, Prof. Blunch worked as a Consultant (Economist) at the World Bank, in Washington, DC. He received his PhD in economics from The George Washington University in 2006. His research interests include labor, health, education, development, transition economics, and population economics/economic demography. Prof. Blunch has published in journals such as Economic Development and Cultural Change, Education Economics, Feminist Economics, Journal of Development Studies, World Bank Economic Review, Review of Economics of the Household, and World Development, as well as numerous chapters in edited volumes. Prof. Blunch is also a Fulbright Scholar (2019–20; The Catholic University of Rio Grande Do Sul, Porto Alegre, Brazil; research project: Solidarity Forever? Labor Unions and Wage Inequality in Brazil; course taught: Applied Econometrics with Stata).
BUILDING HUMAN CAPITAL
LESSONS FROM COUNTRY EXPERIENCES

Learning from Ghana’s Recent Human Capital Improvements

Niels-Hugo Blunch
Washington and Lee University
Lexington, VA

June 2020
Building Human Capital

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1818 H Street NW
Washington DC 20433
Telephone: 202-473-1000
Internet: www.worldbank.org

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Ghana

Abstract

Ghana has made deliberate efforts to invest in health and education in the last 60 years, which has resulted in substantial gains in both economic growth and human capital outcomes.

This case study examines the recent human capital developments in Ghana in the context of the World Bank’s Human Capital Index (HCI), launched in 2018. First, it identifies the two components that have been key drivers of the Ghana’s improving HCI scores in recent years, namely childhood stunting and enrollment rates. The study then goes on to identify the specific policies and programs in Ghana that are probable contributors to the favorable developments in childhood stunting and enrollment rates with the aim of enabling policymakers in other countries to learn from what worked and what did not work in Ghana as they embark on their own national journeys to build human capital. In so doing, the paper deliberately focuses on multisectoral initiatives.

The report finds that some of Ghana’s most successful programs and policies have included strong elements of a whole-of-government approach, involving not just either the health or education sectors but frequently both, as well as other sectors—such as agriculture and WASH (water, sanitation, and hygiene). These successful programs and policies include the Ghana School Feeding Program (GSFP); the National Health Insurance Scheme (NHIS) (especially in the beginning as sustainability has increasingly become an issue in later years); water and sanitation, and hygiene (WASH) activities; Free Compulsory Universal Basic Education (FCUBE), including the innovative financing provided by the Ghana Education Trust Fund (GETFund), and adult literacy programs.

Based on our review of these programs and policies, we conclude that Ghana has set an example in terms of its innovative financing methods (including developing special, earmarked, value-added taxes to finance both health and education), the design of its programs, and its long-term and sustained health and education initiatives. It would appear that a combination of the exemptions given to the poor under the National Health Insurance Scheme (NHIS) and the progressivity of the VAT used to finance health and education has been instrumental in reducing stunting rates since the introduction of the NHIS. This is a combination that may prove to be useful and relevant to similar countries seeking to improve for their own human capital policies.
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Building Human Capital
1. Introduction

Governments around the world vary in their ability to develop the human capital of their workforce and foster its productivity. Some governments are consistently among the world’s top performers on standardized tests of learning achievement and in delivering quality healthcare, while others struggle to provide even the most basic services.

The Human Capital Index is a cross-country metric measuring the human capital that a child born today can expect to attain by her 18th birthday, given the risks of poor health and poor education prevailing in her country. The HCI brings together measures of different dimensions of human capital: health (child survival, stunting, and adult survival rates) and the quantity and quality of schooling (expected years of school and international test scores). Using estimates of the economic returns to education and health, the components are combined into an index that captures the expected productivity of a child born today as a future worker, relative to a benchmark of complete education and full health. The index reveals that a child in one country might grow up to be only 29 percent as productive as she could be. That same child, in another country with stronger systems for health and education outcomes, could reach 88 percent of her potential productivity.

There is growing global evidence that outcomes have improved in many countries. Yet less evidence is available on the policies, programs, and processes that these countries have used to achieve their results. Having information on how these countries have invested in their people and on what has and has not been effective would be useful for other governments as they strive to improve their own outcomes.

The goal of this case study is to assess the human capital development trajectory of Ghana, examine the factors that drove that trajectory, and draw lessons from this experience. The study explores not only how improvements were achieved but also what else could be done in the future to sustain and amplify the government’s investments in its people.

Analytical Framework

This case study uses a whole-of-government lens to look at issues of human capital investment and accumulation. This approach is based on three inter-related principles:

- Continuity – sustaining effort across political cycles
- Coordination – ensuring that sectoral programs and agencies work together
- Evidence – expanding and using the evidence base to improve and update human capital strategies.

These basic elements not only cut across politics, institutions, and silos of knowledge but often characterize the investments being made by countries with the best human capital outcomes throughout the lifecycle. Some of these countries have achieved complete
Building Human Capital

economic and social transformations in just a few decades. While the study focuses on cross-sectoral efforts, it also examines the key sectoral initiatives that laid the necessary foundations on which other sectors have been able to build.

This case study focuses on reductions in Ghana’s prevalence of childhood stunting and increases in its enrollment rates. Over the period 2000 to 2017, for 84 countries with comparable data in the HCI dataset, the average reduction in stunting rates was 2.7 percent per year, but Ghana managed to reduce its stunting prevalence by roughly 5.5 percent per year (Figure 1, Panel A).\(^1\) Ghana’s performance in terms of improving enrollment rates has also been impressive (Figure 1, Panel B). Between 2000 and 2017, primary enrollment rates increased from 67 percent to 95 percent, lower secondary enrollments rose from 63 to 88 percent, and upper secondary enrollments went up from 39 to 55 percent.

**Figure 1: The Evolution of Key Human Capital Outcomes in Ghana**

The overall aim of this study is to learn from the steps taken by the Government of Ghana to bring about these improvements as well as to understand what initiatives might not have worked. The paper deliberately focuses on multisectoral initiatives but that is not to say that sectoral initiatives are not important. Indeed, human capital challenges often require specific sectoral initiatives as well. The primary audience for this study is policymakers in other countries who wish to learn from Ghana’s experiences as they embark on their own national journeys to build human capital.

---

\(^1\) The average country in the HCI dataset has stunting data starting in around 2003 and ending around 2013. Using these two end points, we computed the annual rate of change for each country. For Ghana, the data were from 2003 and 2014.
Several of the policies and programs identified in this paper can be seen as examples of a whole-of-government (WoG) approach. Policymakers in Ghana have involved not only the health and education sectors but also agriculture and WASH (water and sanitation and hygiene), which goes straight to the second definition of WoG (coordination) above. Indeed, one of our main conclusions in this paper is that some of Ghana’s most successful programs and policies have included strong elements of a whole-of-government approach.

The study is organized as follows. Section 2 discusses recent human capital developments in Ghana and links these with economic growth. Section 3 examines a range of health and education programs and policies in Ghana in recent years and argues that the reason why Ghana has been more successful than other countries both in terms of health and education outcomes is that it has taken a whole-of-government approach. Section 4 offers some conclusions and presents some policy lessons for adapting Ghana’s successful approach for use in other countries.

2. Recent Developments in Human Capital

Ghana has made deliberate efforts to invest in health and education in the last 60 years, which has resulted in substantial gains in both economic growth and human capital outcomes. Since Ghana gained independence in 1957 (the first Sub-Saharan African country to do so), it has frequently been heralded as a success story of economic development. While one reason for this is unarguably is good governance as exemplified by the stable multiparty democracy that has existed in Ghana since 1992, another equally unarguable component of the country’s success is its sustained focus on developing the human capital of all of the Ghanaian people.

This is the particularly the case for the two main components of human capital—education and health. Ghana has historically had a strong education system, although it deteriorated somewhat during the 1970s and early 1980s, especially education below the secondary level. However, since Ghana’s economic breakdown in 1983, there have been substantial improvements in education outcomes after the government introduced a series of reforms in the sector. Similarly, the health system in Ghana today has come a long way in improving health outcomes and performs well compared with other countries in Sub-Saharan Africa, although there is still room for improvements to be made. Figure 2 presents the key health

---

2 Good governance has frequently been emphasized as a key factor in the economic successes in the developing world in general (Fosu, 2018).
3 Becker (1964).
6 This breakdown had many different reasons, including a major drought that year, the return of more than one million migrant workers from Nigeria within just a few weeks, and severe inflation in the years before.
7 Saleh (2013).
and education reforms in Ghana since Independence and illustrates both their range and depth.

Health and education are related in that improvements in one often lead to improvements in the other and vice versa. For example, healthier children can attend school more consistently and are better able to learn and retain information. At the macro level, meeting the increasing demand for health personnel following the introduction and subsequent expansion of the Ghana National Health Insurance System (NHIS) was achieved by required a similar expansion of the education sector. Also, the National Functional Literacy Program included a substantial health knowledge component, which led to improvements in a range of different health outcomes, even if the participants in most cases did not learn to read and write, which was the program’s formal objective.

Ghana has experienced steady growth in the past several decades and compares favorably against its peers in terms of levels and growth of GDP. As can be seen in Figure 3, per capita GDP in Ghana has shown a steady positive trend since the economic breakdown in 1983. This has led to Ghana being close to the top of a group of comparable peer countries by 2017 in terms of the level of its GDP, surpassed only by Myanmar and Nicaragua and itself exceeding the four Sub-Saharan African peer countries.

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8 World Bank (2018c).
9 There are several similar programs modeled on the NFLP in Ghana (see Blunch and Pörtner, 2005).
10 See Box 1 for details on how comparator countries were chosen.
### Figure 2: Ghana Has Initiated a Multitude of Health and Education Policies and Programs Since Gaining Independence in 1957

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td><strong>1960s</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1965</td>
<td>The (public) Ghana Water and Sewerage Corporation (GWSC)</td>
<td>Government (parliament)</td>
<td>Government</td>
</tr>
<tr>
<td>1966</td>
<td>School-going age fixed at 6 years</td>
<td>Education Review Committee</td>
<td>Government</td>
</tr>
<tr>
<td><strong>1970s</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1973</td>
<td>Dzobo committee formed</td>
<td>Ghana Education Service (under MoE)</td>
<td>Government</td>
</tr>
<tr>
<td><strong>1980s</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1987</td>
<td>The Non-Formal Education Division (NFED)</td>
<td>Government</td>
<td></td>
</tr>
<tr>
<td>1988</td>
<td>Education Sector Adjustment Credit (EdSAC) funded by the IMF, World Bank, DFID and grants from other countries</td>
<td>Government</td>
<td></td>
</tr>
<tr>
<td>1989</td>
<td>National Education Commission</td>
<td>Government</td>
<td></td>
</tr>
<tr>
<td>1990</td>
<td>New Educational Reform Program (NERP)</td>
<td>Government</td>
<td></td>
</tr>
<tr>
<td>1991</td>
<td>Primary Education Project (PREP)</td>
<td>MoE</td>
<td>USAID</td>
</tr>
<tr>
<td>1993</td>
<td>Primary School Development Project (PSDP)</td>
<td>MoE</td>
<td>World Bank</td>
</tr>
<tr>
<td><strong>1990s</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1994</td>
<td>Community Health and Family Planning (CHFP), later emerged into Community-based Health Planning and Services (CHPS)</td>
<td>MoH, District Assemblies</td>
<td>Various, incl. Government &amp; foreign donors</td>
</tr>
<tr>
<td>1996</td>
<td>Free Compulsory Universal Basic Education (FCUBE)</td>
<td>Government</td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>Whole School Development program</td>
<td>Ghana Education Service</td>
<td>DFID</td>
</tr>
<tr>
<td>2000</td>
<td>NFLP II</td>
<td>MoE</td>
<td>DFID</td>
</tr>
<tr>
<td>2003</td>
<td>National Health Insurance Scheme (NHIS)</td>
<td>Government, National Health Insurance Fund (NHIF), National Health Insurance Levy (NHIL), Social Security and National Insurance Trust (SSNIT) contributions per, return on National Health Insurance Fund (NHIF) investments, premium paid by informal sector subscribers</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>The Education Strategic Plan (ESP)</td>
<td>Government</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>Capitation grant</td>
<td>Government</td>
<td>World Bank</td>
</tr>
<tr>
<td>2006</td>
<td>National Early Childhood Development (ECD)</td>
<td>Government</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>Untrained Teachers Diploma in Basic Education (UTDBE)</td>
<td>Government</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>Ghana Education Service</td>
<td>WB, DFID, other donors as part of GPEG</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>Ghana School Feeding Programme (GSFP)</td>
<td>Government</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>Computerized School Selection and Placement System (CSSPS)</td>
<td>Government</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>Ghana Education Service</td>
<td>Ministry of Gender, Children and Social Protection, Government</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>School Feeding Program</td>
<td>Ministry of Gender, Children and Social Protection</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>Ministry of Gender, Children and Social Protection</td>
<td>Government</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>GWCL / Aqua Vitens Rand Limited (AVRL) Contract</td>
<td>Government (through GWCL)</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>World Bank-funded Urban Water Project</td>
<td>Government</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>School duration increase</td>
<td>Government</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>Livelihood Empowerment Against Poverty (LEAP)</td>
<td>MoGACP</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>Ghana Water, Sanitation, and Hygiene (GWASH)</td>
<td>DFID, UNICEF, USAID, World Bank</td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>Hygiene for the Urban Poor (WASH-UP)</td>
<td>USAID</td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>Education Sector Plan 2018–2030</td>
<td>Government</td>
<td></td>
</tr>
</tbody>
</table>

**Key**

- **Institutions**
  - MoE: Ministry of Education
  - MoH: Ministry of Health
  - MoGACP: Ministry of Gender, Children and Social Protection
  - MoGCSP: Ministry of Gender, Children and Social Protection
  - MoH: Ministry of Health
- **Funding**
  - USAID: United States Agency for International Development
  - DFID: Department for International Development
  - WHO: World Health Organization
  - World Bank
  - CHF International
Figure 3: Ghana Has Experienced Steady Economic Growth in the Past Several Decades (Log Per Capita GDP in Real PPP Dollars, 1960–2017)

Source: World Bank’s World Development Indicators (WDI), 2018
Notes: For details on how the comparator countries were chosen, see Box 1.

Box 1: Selecting Countries to Compare with Ghana

When comparing the experience of Ghana with that of other countries, it is important to pick countries that are “similar” to Ghana in some relevant sense. The selection of comparator countries in this paper followed Table 4 in Geiger et al (2019) and the associated methodology as laid out in World Bank (2018d: Annex 1). Geiger et al (2019: 15) summarizes these countries as “… economies that are structurally similar to Ghana and stand at similar income levels.” More specifically, the selection of these seven countries was based on the following four criteria:

1) Commodity exporter (World Bank definition)
2) Primarily agrarian-based economy (above the world average)
3) Population between 3 million and 55 million
4) Income level (between US$900 and US$2,200).

These considerations led to the selection of the following seven comparator countries. Those located in Sub-Saharan Africa are Cameroon, Côte d’Ivoire, Kenya, and Mauritania, while those from other regions are the Kyrgyz Republic, Myanmar, and Nicaragua.

It is therefore possible, even likely, that at least some of the substantial improvements in Ghana’s health and education outcomes in recent years have been due to the positive performance of the overall Ghanaian economy. This can be seen when we examine the relationship between per capita GDP and the Human Capital Index for Ghana and for the selected comparator countries. Figure 4 shows that economic progress and improvements in human capital outcomes have been mutually reinforcing (Figure 4). There are some differences across countries, of course, and the evidence does not unequivocally favor Ghana in this comparison—for example, Kenya has a higher HCI rating at a lower level of income than Ghana, and the Kyrgyz Republic has a much higher HCI at a comparable income level to Ghana’s. Even though Ghana is in the bottom half of its comparator group, it has done extremely well in terms of improving its human capital outcomes in recent years, especially in two key aspects: stunting and enrollment rates.

It should be noted that a country’s overall HCI rating masks the considerable inequality between households in terms of socioeconomic status.11 In Ghana, the HCI gap between the richest 20 percent of households and the poorest 20 percent is 7 percentage points, which is considerably narrower than the average gap across all countries (15 percentage points).12

**Health System Strengthening and Remaining Challenges**

Ghana’s reduced rates of stunting in children under the age of 5 have been one of the main drivers of its HCI improvements in recent years. In this section, we examine in detail why this has happened. We first show how Ghana’s health system compares with others in the region and then compare Ghana’s improved stunting rates with those of comparator countries. Finally, we will delve into the specific programs and policies that may have caused these stunting improvements in recent years.

Ghana’s health outcomes have improved significantly since Independence compared with other countries in Sub-Saharan Africa,13 although some challenges remain such as a lack of physicians in rural areas, crowding in hospital wards and clinics, and limited time per patient visit.14 According to the World Development Indicators, Ghana’s total expenditure on health as a percentage of its GDP in 2013 was 5.4 percent compared to 3.9 percent in Nigeria, 4.5 percent in Kenya, and 4.6 percent in Benin. In that year, the percentage of the government budget allocated to health was 10.6 percent, thus getting close to the target of 15 percent set by the United Nations’ Abuja Declaration in 2001.

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11 Avitabile et al. (2020).
12 Avitabile et al. (2020).
13 Saleh (2013).
Building Human Capital

Figure 4: Ghana is Doing Well in Terms of the Human Capital Index and Log Real PPP GDP Combined (2017)

Panel A: Compared with Her Peers, 2017

Source: Author’s calculations based on World Bank HCI data for 2018 and WDI, 2018.
Notes: Regression line slope = 0.074, \( R^2 = 0.047 \).

Panel B: Compared with Sub-Saharan Countries, 2017

Source: Author’s calculations based on World Bank HCI data for 2018 and World Development Indicators 2018
Notes: Regression line slope = .0230, \( R^2 = 0.170 \).
**Stunting Rates Declining**

One of the individual indicators of the HCI that has improved the most for Ghana in recent years is stunting,\(^1\) both in absolute terms and when compared to other similar countries, including some countries in the Sub-Saharan Africa region. As can be seen in Figure 5, Ghana’s stunting rates (the dark blue line) are declining and at a faster rate than that of several other comparable countries. By 2014, the end of the time period for which data are available, at 18.7 percent, the level for Ghana was among the lowest of this group of comparable countries and certainly lower than any of the other countries from the region. Over the entire period the reduction in stunting in Ghana was almost a staggering 24 percentage points.

**Figure 5: Ghana’s Stunting Rates Have Steadily Declined Compared with Comparator Countries, 1988–2014**

![Graph showing stunting rates decline](image)

*Source: World Bank HCI Database, 2018
Notes: For details on how comparator countries were chosen, see Box 1.

However, there were substantial internal differences in stunting rates across Ghana’s regions in 2014 (Table 1).\(^2\) The Greater Accra region (which is the wealthiest and most developed of Ghana’s regions) was faring better than all of the other regions, while the Northern region (which is among the poorest and least developed) fared the worst. Therefore, to continue the

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\(^{1}\) Stunting typically refers to children under 5 years of age since the early years are the most important for establishing the future nutritional status of the child—especially the period between conception and 2 years of age, also known as the first 1,000 days (Prendergast and Humphrey, 2014: 231).

\(^{2}\) Following the referendum on the creation of six new regions, which was held on December 27, 2018 (and successfully supported the creation of all the six new regions), Ghana now has 16 regions.
Building Human Capital

decline in stunting in Ghana, policymakers should consider targeting the lagging regions to try to close this gap.

Again, the nationwide stunting improvements mask inequality between households in terms of socioeconomic status. In Ghana, the stunting gap between the richest 20 percent of households and the poorest 20 percent is 17 percentage points, slightly narrower than the average gap across all countries (19 percentage points).

Table 1: Stunting Varies Widely by Region in Ghana (Proportions of Stunted Children Under 5 Years Old in Ghana: Total and by Region, 2014, Percent)

<table>
<thead>
<tr>
<th>Region</th>
<th>Western</th>
<th>Central</th>
<th>Greater Accra</th>
<th>Volta</th>
<th>Eastern</th>
<th>Ashanti</th>
<th>Brong-Ahafo</th>
<th>Northern</th>
<th>Upper East</th>
<th>Upper West</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ghana</td>
<td>18.8</td>
<td>17.7</td>
<td>22.0</td>
<td>10.4</td>
<td>19.3</td>
<td>17.0</td>
<td>16.1</td>
<td>17.2</td>
<td>33.1</td>
<td>14.4</td>
</tr>
</tbody>
</table>

Source: Adapted from Table 1 in World Bank (2019).

Designing a More Efficient Education System

Ghana’s higher HCI scores in education in recent years have been driven by increases in its enrollment rates and the expected years of schooling. We will now describe Ghana’s education system and compare its recent trends favorably with those of carefully selected comparator countries. In the following section (Section 3), after first reviewing the programs and policies likely driving the recent improvements in health outcomes (especially stunting), we will then examine in detail the programs and policies that may have been behind these substantial improvements in Ghana’s enrollment rates.

Ghana historically has had a strong education system, though it deteriorated somewhat during the 1970s and early 1980s, especially education below the secondary level. However, since the economic breakdown in 1983, the government has adopted a series of education sector reforms that have led to substantial improvements.

The Government of Ghana finances and manages the education system through two managerial offices: the Ministry of Education (MOE) and Ghana Education Services (GES). The MOE primarily oversees budget allocation and education policies at the central level, while the GES implements the budget and policies in a decentralized manner, having branches at both the regional and the district levels.

The Education Sector Reform in 1987, which was the first major transformation of the education system, decreased the number of years in pre-tertiary education. As a result, the pre-tertiary education system in Ghana now consists of two years of kindergarten, six years

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17 Avitabile et al. (2020).
18 Avitabile et al. (2020).
20 Canagarajah and Ye (2001).
of primary school, three years of junior secondary school, and three years of senior secondary school.

**Ensuring Schooling is Learning**

Ghana’s has experienced a strong positive trend in primary school enrollment over the last 50 years, both in absolute terms and relative to its peers as can be seen in Figure 6.

**Figure 6: Primary School Gross Enrollment Rates in Ghana Have Increased Consistently Over Several Decades and Compare Favorably with Those of Several Peer Countries, 1970–2017**

The harmonized test scores of Ghana’s students have also improved considerably since 2003 as can be seen in Figure 7. While there are relatively few data points for the harmonized test scores, we can see that, even in the face of the increasing school enrollments and the increased access to education more generally, which has led to an influx of students who come from the bottom of the skills distribution, this does not appear to have led to a lowering of test score averages to the same extent as has been seen in other countries.\(^{21}\) This indicates that it is possible, at least to some extent,\(^{22}\) both to increase school enrollment (quantity) and improve test scores (quality) if there is enough political will to do so, as has been the case in Ghana in the past several decades. Sustained political commitment is a key component of any successful whole-of-government strategy.

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\(^{21}\) In the US, for example, the expansion of the high school education in the 1970s led to substantial declines in SAT scores (Maier, 1999).

\(^{22}\) Mechanically speaking there must of course always exist a tradeoff between school enrollment (quantity) and test scores (quality)—the question is how strong that trade-off is in practice.
Figure 7: Both Primary Gross School Enrollment and Harmonized Test Scores Have Improved in Ghana

Notes: The years with observations for the harmonized test scores are 2003, 2008, 2011, and 2014.

Once again, the nationwide test score improvements masks inequality across households related to socioeconomic status. In Ghana, the learning gap between the richest 20 percent of households and the poorest 20 percent is 9 points on a scale that ranges from 300 (minimal attainment) to 625 (high attainment), which is smaller than the average gap across all countries (55 points). Educational attainment (number of years of schooling) also differs widely by socioeconomic status both in Ghana and in the rest of the world. There are substantial differences across wealth quintiles in terms of grade survival, which measures the proportion of 10 to 19-year-olds who attain each grade. About 81.5 percent of children from the wealthiest quintile attain Grade 9, while this is only the case for about 57.7 percent of the children from the poorest quintile (Figure 8).

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Figure 8: Grade Survival Profiles Differs Widely Across Assets Quintiles in Ghana, 2014

Source: 2014 Demographic and Health Surveys for Ghana, using World Bank (2020) to create the grade survival profile.
Notes: Grade survival is defined as the proportion of 10 to 19 year olds who attain each grade. The quintiles are based on an index of assets and housing characteristics. See World Bank (2020) for more details.
3. A Whole of Government Approach is Crucial to Success

Several policies, programs, and processes may explain the improvements in human capital. They share some common elements, chief among them being a focus on multisectoral collaboration, continuity, and a reliance on evidence.

In this section, we discuss several different policies and programs to examine whether or not they have had a direct or indirect effect in terms of decreasing stunting rates and increasing enrollment rates.

For stunting, we first discuss how each particular policy or program affects stunting (and/or related outcomes, such as use of pre-natal and post-natal care and child diarrhea rates) internationally and specifically in Ghana, then dig a bit deeper into the Ghanaian programs and policies, asking how exactly it works, what are some experiences, and how has it been so effective in combatting stunting in Ghana? We also highlight any potential weaknesses so that other countries can learn from Ghana’s experience.

Similarly, we then examine the programs and policies behind Ghana’s recent increases in enrollment rates and explore how much various elements of a whole-of-government approach contributed to this success. This includes programs and reforms related to school feeding, Free Compulsory Universal Basic Education (FCUBE), senior secondary/senior high school, university level education, and technical and vocational education and training (TVET), as well as the promise inherent in the recent Free Senior High School (SHS) policy.

We emphasize that the effort to link individual programs and policies to outcomes (stunting and school enrollment) is purely meant to substantiate why and how these individual programs and policies affected the outcomes of interest. In particular, some of the individual programs and policies may be critical and yet may not effective by themselves alone—that is, each initiative is necessary but not sufficient for achieving these positive outcomes. Thus, we have examined the sum total of all of these programs and policies together to evaluate the effectiveness of a whole-of-government approach.

The National Health Insurance Scheme (NHIS)

The NHIS was introduced in 2003 and has been fully implemented since 2004.26 Its objective was to expand primary care coverage to more of the Ghanaian population and thereby improve their health status. The NHIS provides pre-natal and postnatal care, maternal health care, vaccinations, and health and nutrition education, all of which may have helped to reduce stunting rates.

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26 ACT 650 and Amended Act 852.
Ghana

There is evidence from across the world that providing health insurance and/or universal health care has a direct and positive impact on stunting and child malnutrition, including Argentina, Brazil, Mexico, and Rwanda. Evidence has also established that providing health insurance and/or universal health care can have a positive impact on other (intermediate) health outcomes, which are related to stunting such as the use of maternal health and prenatal care services, the number of births that take place at health facilities or are attended by medical professionals (as opposed to in the home or unattended), the use of postnatal care, and vaccination rates.

However, there is little evidence of this link for Ghana. Although Novignon et al (2015) found evidence that membership in the NHIS is associated with a decrease in stunting, Dwumoh et al (2014) found no statistically significant effect.

Nevertheless, there is a wealth of evidence documenting the positive impact of the NHIS on other health outcomes that are related to stunting, including use of prenatal care, the number of births that take place at health facilities or are attended by medical professionals (as opposed to in the home or unattended), especially among the poor, cases of anemia, and vaccination rates. Since these other health outcomes have been proven to have an indirect positive effect on stunting, it is plausible that the introduction of the NHIS is in fact one of the reasons behind the reductions in stunting in Ghana in recent years.

**Innovative Financing to Address Inequality**

One of the main reasons for introducing the NHIS in 2003 was that previous health financing mechanisms, including user fees (out-of-pocket payments), had failed to make health care accessible to many Ghanaian people. The NHIS uses an innovative financing mechanism to reduce inequity in access to health care, including through premium exemptions for the poor.

The NHIS is financed through a central National Health Insurance Fund (NHIF). This, in turn, is sourced from the National Health Insurance Levy (NHIL), which consists of a 2.5 percent value added tax (VAT) on selected goods and services, 2.5 percent from the Social Security and National Insurance Trust (SSNIT) (largely paid by formal sector workers), and the payment of premiums. Additional sources of funding to the NHIF include money

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allocated by the parliament, grants, donations, gifts/voluntary contributions, and interest accrued from investments.\textsuperscript{40}

Not everybody has to pay the NHIS premium.\textsuperscript{41} Pregnant women are exempt as are people under 18 years of age and people aged 70 and above, and individuals who are employed in the formal sector and contribute to the SSNIT. Additionally, individuals considered too poor to pay are also exempt from paying the premium. This includes beneficiaries of the Livelihood Empowerment Against Poverty (LEAP) program (so-called “indigents” \textsuperscript{42}). Estimates have found that from 60 percent\textsuperscript{43} to 68 percent\textsuperscript{44} of Ghana’s population is exempted from paying the NHIS premiums.\textsuperscript{45} Enrollment has stagnated between 32 to 40 percent of the population enrolled in the NHIS.

Every individual in either the premium-exempt group or the group that pays out-of-pocket premiums is required to renew their enrollment every year at a district insurance scheme office or via a community agent, which adds an additional cost.

All subscribers who are not in one of the exempted groups mentioned above must pay an annual registration fee equivalent to approximately US$2 per head per year for enrollment and card processing, which once again adds to the cost.\textsuperscript{46}

Even though the majority of the Ghanaian population is exempt from paying the out-of-pocket premium, enrollment in the NHIS has stagnated at about 40 percent of the population, having risen rapidly in the early years after first being introduced.\textsuperscript{47} That means that even some who are premium-exempt are not enrolling or are not renewing their original enrollment.

To specifically increase the demand for skilled maternity care services, the Ministry of Health began providing free maternal deliveries in 2003. This exemption policy appears to have been successful in terms of inducing expectant mothers to enroll, with the number of mothers registered in the NHIS rising from 421,234 in 2008 to 754,648 in 2012.\textsuperscript{48}

There is also evidence that the poor and the less educated in Ghana are less likely to have (NHIS) health insurance than the wealthy and better educated.\textsuperscript{49} Since the health care use

\textsuperscript{40} Alhassan et al (2016b).
\textsuperscript{41} Leading to higher enrollment rates, which lead to increased health care use, which ultimately improves health outcomes, including stunting, as we will discuss in much more detail below.
\textsuperscript{42} According to Ottoo et al (2014: 5) “An indigent is defined by law as follows: is unemployed and has no visible source of income; does not have a fixed place of residence according to standards determined by the scheme; does not live with a person who is employed and who has a fixed place of residence; and does not have any identifiable consistent support from another person.”
\textsuperscript{43} Agyepong et al (2016).
\textsuperscript{44} Ottoo et al (2014).
\textsuperscript{45} While this may pose a threat to the sustainability of the NHIS, it is very likely to be a key factor in Ghana’s success in reducing stunting rates, as we will discuss in more detail below.
\textsuperscript{46} Agyepong et al (2016).
\textsuperscript{47} NHIA (2012).
\textsuperscript{48} Adua et al (2017).
\textsuperscript{49} Singh et al (2015).
among the insured is much higher than that of the uninsured.\textsuperscript{50} This further increases the inequality between the poor and the non-poor and between the less educated and the more educated (which are likely to have some overlap).

On the other hand, being insured tends to have a greater financial protection effect (in other words, protection against high health care costs) on the poor and also increases the use of health care by the poor more than by the wealthy.\textsuperscript{51} Also, in general, public sector hospital inpatient care at the district level has been found to be pro-poor, and the benefits of primary-level health care services have been found to be relatively evenly distributed.\textsuperscript{52} Overall, while improvements certainly can be made, the Ghana NHIS seems to be an important vehicle for reducing inequities in health care access and use.

Lastly, there is some evidence of issues related to the quality of the services provided under the NHIS, although the evidence is not universal. A study of 64 NHIS-accredited clinics and health centers and over 1,900 households around the catchment area of these health facilities found that NHIS subscribers generally perceived that the health care they received was not of as good a quality as the care received by their uninsured counterparts who paid out of pocket.\textsuperscript{53} Among the specific issues raised by the clients were longer waiting times, poor attitude of health staff towards clients, and an absence of complaint mechanisms. On the other hand, Fenny et al (2014) found no statistically significant differences in the quality of uncomplicated malaria case management of 528 NHIS-insured and non-insured patients in Ghana.

These issues with the NHIS notwithstanding, its introduction has been associated with greater use of maternal and infant health care,\textsuperscript{54} which in turn may have improved health outcomes, including reductions in stunting, as was concluded by a 2016 meta-study of 31 relevant published studies.\textsuperscript{55} In turn, this indicates that the NHIS also has had a role to play in improving women’s empowerment in Ghana.

\textit{Combining a Progressive VAT with Targeted Exemptions}

With the introduction of the National Health Insurance Act, Act 650, in 2004, the Government of Ghana introduced a 2.5 percent VAT levy on selected goods and services to help to fund the NHIS.\textsuperscript{56} Since the VAT in Ghana has been found to be neutral in terms of cost incidence and since there is evidence that the use of public health in Ghana is progressive overall,\textsuperscript{57} the net effect of the 2.5 percent surcharge on VAT to co-finance the NHIS appears to be progressive, in other words, to benefit the poor more than the non-poor. This is in addition to the

\begin{itemize}
\item \textsuperscript{50} Agyepong et al (2016).
\item \textsuperscript{51} Scheiber et al (2012) and Nguyen et al (2011).
\item \textsuperscript{52} Akazili et al (2012).
\item \textsuperscript{53} Alhassan et al (2015a, 2015b, 2015c, 2016a, and 2016b).
\item \textsuperscript{54} Bonfrer et al (2016).
\item \textsuperscript{55} Alhassan et al (2016b).
\item \textsuperscript{56} Ghana Revenue Authority (2019).
\item \textsuperscript{57} Younger et al (2017).
\end{itemize}
progressivity caused by the increased use of health care and the resulting improvements in health outcomes among the exempt groups, including the poor.

Therefore, it would appear that a combination of the exemption policies and the overall progressivity of the VAT financing instrument has been the probable driver of the reductions in stunting since the introduction of the NHIS.

Nevertheless, some practical challenges remain, including the practical challenges of registering for the NHIS, as well as lack of knowledge about of who is eligible for free services and which services are covered.\textsuperscript{58} This suggests that policymakers should consider providing the public with more information about the NHIS in the future.

\textbf{School Feeding Programs Improve both Nutrition and Schooling Outcomes}

School feeding programs are both among the most pervasive government programs in the world and one of the most important “go-to” interventions in times of crises. Almost every country in the world—regardless of income status—has some kind of government-sponsored school feeding program, and, following the onset of the international financial crisis in 2008, the World Bank experienced an unprecedented increase in requests for support for national school feeding programs.\textsuperscript{59}

In practice, a school feeding program can be one or more of these types of intervention: (i) a nutrition (health) program; (ii) an education program; and/or (iii) a social safety net program.\textsuperscript{60} In other words, school feeding programs have the potential not only to improve children’s health and nutrition status but also to increase school enrollment and/or improve learning outcomes and to increase household incomes (through the explicit or implicit transfer to households of the value of the food distributed as part of the school feeding program).\textsuperscript{61} International evidence has shown that school feeding has positive effects in all three of these dimensions.\textsuperscript{62} This can also include indirect positive effects on the nutritional status of the younger siblings of the school children benefitting from the program.\textsuperscript{63}

School feeding programs have a long and varied history in Ghana. “Ghana’s earliest known school food activities were in the 1950s, when students in some Catholic schools received take-home food rations. The World Food Programme (WFP) has been involved in school feeding and other activities in Ghana for over 40 years, while Catholic Relief Services and numerous others also supported school feeding in the country.”\textsuperscript{64}

\textsuperscript{58} Singh et al (2019).
\textsuperscript{59} Alderman and Bundy (2012).
\textsuperscript{60} Alderman and Bundy (2012) and Bundy et al (2009).
\textsuperscript{61} The value of this transfer varies significantly between programs and can range from in-school snacks to large take-home rations (Bundy et al, 2009).
\textsuperscript{63} Alderman and Bundy (2012).
\textsuperscript{64} Global Child Nutrition Foundation (2017).
In 2005, Ghana piloted its own national public program, the Ghana School Feeding Program (GSFP), which was fully implemented in 2007. This was in direct response to the establishment of the Comprehensive African Agricultural Development Program (CAADP) in 2003, which included locally sourced school feeding programs as a key intervention within the food security pillar (Pillar III), as well as to the UN setting the first and second Millennium Development Goals (MDGs) in 2000.\textsuperscript{65}

A key component of the approach taken by CAADP, and therefore also by the GSFP, is to link school feeding programs to agriculture development, especially smallholder production. This is the approach that has been taken in countries that have been successful in the area of school feeding programs, including Ghana, and has helped to create new markets for locally grown food in low-income countries.\textsuperscript{66}

The GSFP is run by the Ghana School Feeding Program Secretariat under the direct supervision of the Ministry of Local Government and Rural Development. Other public partners directly involved include the Ministry of Education, the Ministry of Food and Agriculture, the Ministry of Health, the Ministry of Women and Children’s Affairs, the Ministry of Finance and Economic Planning, and the District Assemblies. On the funding side, the main actors include the Government of Ghana, the Royal Netherlands Embassy, the District Assemblies and Communities, and the WFP.

As of 2015, the GSFP was providing one hot meal to 1,693,698 pupils in 4,881 schools every school day and employing about 20,000 caterers and cooks nationwide.\textsuperscript{67} In addition, the program has had a positive impact on local smallholder agricultural production across Ghana.\textsuperscript{68}

While experts agree that food should be fortified with minerals and vitamins as this improves both nutritional and learning outcomes,\textsuperscript{69} many developing countries, including Ghana, do not have enough local capacity to process and fortify foods. Therefore, the food provided by the GSFP is fortified with micronutrient powder just before it is consumed by the children.\textsuperscript{70}

The Ministry of Employment and Social Welfare collaborated with the World Bank and UNICEF in 2010 for an evaluation\textsuperscript{71} of 24 national safety nets programs in Ghana, which also included the GSFP.\textsuperscript{72} One of the key results for the GSFP was that only 21 percent of the investment in the GSFP went to the poor. This was because the wealthier regions of the

\textsuperscript{66} World Bank (2012a) and Sunberg and Sabates-Wheeler (2011). The multidimensionality of school feeding programs – combining health, education and agriculture - can be both a blessing and a curse, since while they yield positive benefits on several fronts, this complexity makes it difficult to assess their effectiveness and also requires governments to think carefully about what objective(s) they wish the school feeding programs to have (Alderman and Bundy, 2012 and Bundy et al, 2009).
\textsuperscript{68} Singh and Fernandes (2018).
\textsuperscript{69} World Bank (2012a).
\textsuperscript{70} Sidaner et al (2011).
\textsuperscript{71} This was published two years later as World Bank (2012b).
\textsuperscript{72} WFP (2013) and Drake et al (2016).
country, including the Greater Accra and Ashanti regions, were receiving a larger share of the program than the poorer areas. This finding led the government to retarget the program in 2011 in on the basis of information collected by the World Food Programme and the World Bank from national poverty statistics, a food security and vulnerability analysis, and spatial data variables. The retargeting meant that some schools in the wealthier areas no longer received school feeding, and these allocations were shifted to poorer areas. Following the retargeting exercise, the Ghanaian government undertook a nationwide information campaign to explain the reasons behind the retargeting. After the retargeting exercise was completed, as of 2013 about 70 to 80 percent of the GFSP was being received by the poorest communities.

Many studies have examined the impact of the GSFP on child nutrition outcomes. The available evidence differs both in terms of the estimated effects and the rigor of the studies, as well as in the studies’ sample sizes (sometimes leading to statistically insignificant effects for what arguably are very low sample sizes).

Gelli et al (2019), a very recent study using rigorous methods with a large sample, found that the GSFP has had significant positive effects on nutrition outcomes, including stunting rates. The aim of the study was to evaluate its effects on 5 to 15-year-old schoolchildren in all of Ghana’s regions following the retargeting of the program in 2012. The evaluation was implemented as a longitudinal cluster randomized controlled trial with a particularly large sample of 2,869 children. For the sample as a whole, it found that the GSFP had no effect on stunting or weight-for-age (measured as BMI-for-age), but for children aged between 5 and 8 years of age, it led to a decrease in stunting of 0.12 standard deviations. Additionally, at 0.22 standard deviations, the decrease in stunting was almost double for children aged 5 to 8 years old from households living below the poverty line (in other words, 58.7 percent of the GSFP children in these households were below the average of the non-GSFP children in terms of stunting). In addition, the study found that the GSFP influenced the allocation and sharing of food within the children’s households, so that some of the food of the main beneficiaries went to younger siblings. It is clear from this study that the GSFP has had a substantial impact directly on stunting and, therefore, has also helped to improve Ghana’s HCI results in recent years.

However, the GSFP is not “just” about nutrition. A companion study (Aurino et al, 2018) evaluated the impact of the GSFP on the education outcomes of schoolchildren aged 5 to 15 years old following the retargeting of the GSFP in 2012. The evaluation was implemented as a longitudinal cluster randomized controlled trial and contained a sample of 3,433 children.

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74 WFP (2013).
76 In terms of “how large is large” when it comes to effect sizes (measured in terms of the number of standard deviations which roughly measures the average child’s deviation from the average nutritional status or test scores, say), Cohen (1988) suggested that effect sizes of 0.2, 0.5, and 0.8 should correspond to small, medium, and large effects respectively. Translating the notion of standard deviations into an alternative metric, an alternative way of interpreting these results is that 54.8 percent of the GSFP children were below the average of the non-GSFP children in terms of stunting.
in total (a large sample for this type of study). The authors found that the GSFP was associated with moderate increases in average test scores ranging between 0.12 and 0.16 standard deviations. An alternative way of interpreting these results is that between 54.8 and 56.4 percent of the GSFP children are above the average for non-GSFP children in terms of their test scores. Furthermore, the authors considered that these findings were likely to correspond to the lower bounds of the actual effects due to a combination of imperfect program take-up and implementation challenges that were mostly related to severe delays in paying the caterers responsible for procuring the food and for cooking and serving the meals.

The authors also found that the GSFP had resulted in learning and cognitive gains for girls, poor children, and children from the northern regions that were at least double those for the average child. The authors suggested that the specific reasons behind these improvements prompted by the GSFP were increases in enrollment rates and grade attainment and students devoting more of their time to their schooling.

The key lessons to be learned from Ghana’s history of school feeding are: (i) the importance of collaboration between different government sectors as well as between the government and its donor partners; (ii) since the day-to-day implementation of education and health policies is at the district assembly level, the importance of local governments collaborating closely with national sectoral ministries; (iii) the importance of policymakers being willing to continually monitor the programs and, if needed, change them in response to the evidence.

**Water and Sanitation and Hygiene (WASH) Efforts**

A carefully conducted review of the available evidence for 137 developing countries established that unimproved sanitation was the second most important risk factor as far as stunting is concerned followed by diarrhea. Since diarrhea is also strongly linked with WASH, this suggests that WASH is a very important underlying factor behind stunting. Similarly, another review covering a multitude of countries and types of studies found that poor WASH conditions have a detrimental effect in terms of causing stunting because of children’s sustained exposure to enteric pathogens as well as wider social and economic mechanisms, including accessibility and affordability of water supplies and sanitation facilities.

There is also some evidence supporting the relationship between WASH and stunting in Ghana, though the direct evidence is scarcer than for other countries. However, other

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77 In terms of “how large is large” when it comes to effect sizes (measured in terms of the number of standard deviations), Cohen (1988) suggested that effect sizes of 0.2, 0.5, and 0.8 should correspond to small, medium, and large respectively.
80 Cumming and Cairncross (2016).
81 Sienso and Lyford (2018).
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studies have found evidence of the relationship between WASH and outcomes such as diarrhea in Ghana.\textsuperscript{82}

WASH programs have a long history in Ghana. In 1965, the publicly operated Ghana Water and Sewerage Corporation (GWSC) was established to enable the supply of piped water in both urban and rural areas and to establish, operate, and control sewage systems. In the 1990s, several key laws were passed that decentralized the responsibility for water supply and sanitation to the 110 districts, the smallest administrative units in the country.

Since that time, Ghana has reached the Millennium Development Goal (MDG) target for expanding access to drinking water but increasing access to sanitation and hygiene facilities remains a challenge. By the end of 2015, only 15 percent of Ghanaians had access to improved sanitation facilities, while 19 percent of Ghanaians still had no alternative but to practice open defecation.\textsuperscript{83}

As a result, multiple bilateral and international agencies have stepped in to help with WASH-related efforts in Ghana, particularly with financing. In 2004, the World Bank approved a credit of US$103 million for the Urban Water Project (which was later turned into a grant).\textsuperscript{84} The Nordic Development Fund contributed an additional US$5 million, while the Government of Ghana provided the remaining US$12 million of the total project cost of US$120 million. Also, in 2006, a five-year management contract was signed between the GWSC and Aqua Vitens Rand Limited (a consortium of the Dutch public water company Vitens and the South African public company Rand Water), to operate the urban water systems in Ghana. This highlights the importance of working with multiple partners to make progress even on such seemingly traditional issues as WASH.

Ghana has also focused on integrating WASH into schools in several different ways. This started as far back as 1992 with the establishment of the School Health Education Program (SHEP) Unit of the Ghana Education Service (GES) in active collaboration with other key stakeholders including the Community Water and Sanitation Agency (CWSA), the Environmental Health and Sanitation Directorate (EHSD), the Ghana Health Service (GHS), national and international NGOs, and other development partners. The vision of the unit is to “develop well-informed health-conscious school populations who have full potential to act as change agents in their homes and communities and to contribute effectively and efficiently to national development.”\textsuperscript{85}

A major part of the work of the SHEP Unit is to implement health education programs at the pre-tertiary level including one titled Safe and Healthy School Environment, which is of particular interest in terms of reducing stunting. In more recent years, the Ministry of

\textsuperscript{83} WaterAid Ghana (2016).
\textsuperscript{84} World Bank (2005).
\textsuperscript{85} Ghana Education Service (2014).
Ghana

Education’s Education Strategic Plan (ESP) for 2010–2020 explicitly included WASH, specifically in Policy Objective Quality Education (QE) No. 12—“Expand and Improve School Health, Sanitation and Safety Systems.” This initiative involves several dimensions of WASH, including hygiene systems and sanitation and potable water and has set a goal of ensuring that 100 percent of basic education schools have hygiene and sanitation systems in place and that 75 percent of these schools have access to potable water. The SHEP Unit has been tasked with carrying out and coordinating these efforts. One challenge here is that there are currently no national standards for evaluating and monitoring WASH programs in Ghana.86

While challenges remain, the improvements in WASH—especially the increases in access to water and sanitation and, while still high, also reductions in the rates of open defecation—appear to be yet another explanation for the recent improvements in Ghana’s HCl scores, including child stunting. For example, in rural areas, access to improved sanitation facilities87 have increased from 3.8 percent in 1990 to 8.6 percent in 2015 and, in urban areas, from 12.6 percent in 1990 to 20.2 percent in 2015.88

**Adult Literacy Programs Improve Multiple Factors Related to Stunting**

As has been firmly established in research in many countries since the seminal work of Caldwell (1979), a strong relationship exists between a mother’s formal education and her children’s health. This has been established in the case of Ghana as well.89 Since this is such a well-established fact and since there seems to be something special about informal education in Ghana, especially adult literacy programs,90 from which other countries may learn, we focused on the impact on health outcomes of non-formal education only, specifically adult literacy programs.

The evidence on the effect of adult literacy programs on health outcomes, including stunting, while limited is growing. For instance, participants of adult literacy programs in Nicaragua have fewer than average children and also experience lower child mortality.91 Both of these effects could reduce stunting as these households may be able to invest more in each of their children, including in their nutrition. A study of adult literacy programs in Nepal found that women’s knowledge of family planning (as well as HIV/AIDS and sexually transmitted diseases) increased as a result of participating in an adult literacy programs more than those in a control group.92 Assuming that this increased knowledge also would lead to changed behavior in terms of lowering their fertility, this could again plausibly affect stunting, albeit indirectly.

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86 WASH in School (2019).
87 Including flush/pour flush (to piped sewer system, septic tank, or pit latrine), ventilated improved pit (VIP) latrine, pit latrine with slab, and composting toilet.
89 Asenso-Okyere et al. (1997), Benefo and Schultz (1996), Blunch (2019), and Glewwe and Desai (1999).
90 Blunch (2017).
91 Sandiford et al. (1995).
92 Burchfield et al. (2002).
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Specifically in the case of Ghana, it has been found that the children of adult literacy program participants are more likely than those of non-participants to receive pre-natal and post-natal care and vaccinations. Female adult literacy participants in Ghana are less likely than non-participants to experience a teenage pregnancy and less likely to have a child who dies. In addition, adult literacy program participants from households where no household members had received any formal education have been found to receive an income boost from participating in an adult literacy program. All of these effects, either separately or in combination, could lead to improvements in stunting as well.

While Ghana’s formal education system has many similarities with the formal education system of most other countries, non-formal education is quite distinct in Ghana, where adults have received special attention. These programs have a long history in Ghana. They go back at least to the eighteenth century and were mainly provided by religious institutions until after the Second World War. The first national literacy program was introduced in 1948 but collapsed in 1968 after the fall of the Kwame Nkrumah government in 1966. The reasons for this were two-fold. First, it had become closely politically associated with the Nkrumah government and its supporters, and second, the skills being taught were often not considered relevant by the participants.

In 1987 the Non-Formal Education Division (NFED) was established in the Ministry of Education to organize its own adult literacy program (the NFED ALP) and to co-ordinate all other non-formal education at the national level. From the outset, the main target group of the NFED ALP was poor women in rural areas or, in the words of the NFED itself, the main objective was “to make the poorest Ghanaians, especially those living in the rural communities, functionally literate with [an] emphasis on women.” Subsequently, baseline studies were undertaken to ensure that the teaching would be of immediate use and relevance to the participants. Based on these studies, the NFED identified several key issues that were of concern to the target communities including nutrition, immunization, family planning, and traditional and modern farming. The themes can be divided into three areas: (i) social and health issues; income-generation and occupational skills; and civic awareness.

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93 Blunch (2006).
94 Blunch (2018) and Blunch (2013).
95 Blunch and Porntner (2011).
96 For a more complete description of the history of adult literacy programs and their current function and curricula, see Blunch and Porntner (2005), Appendix B, on which much of the following discussion is also based.
97 NFED (1999).
98 For the overall cycle of an adult literacy program in a given community, the NFED selected 28 main themes that were deemed particularly relevant to that specific community from the entire pool of themes.
99 Topics included family planning, teenage pregnancy, environmental hygiene, immunization, HIV/AIDS, child motherhood and childcare, drug abuse, traditional medicine, and safe drinking water.
100 Topics included cocoa farming, maize cultivation, dry season farming, basket weaving, animal husbandry, beekeeping, oil palm cultivation, borrowing money for work, hygienic ways of preserving and selling fish, farm extension services, pottery, and soap making.
101 Topics included taxation, bushfires, interstate succession law, child labor, chieftaincy, community empowerment, and expensive funerals.
Ghana

It takes about 21 months to complete the NFED ALP, with classes meeting two to three times a week for a total of six hours per week. In most cases, there are 20 to 30 participants per instructor. Other organizations providing adult literacy programs in Ghana include NGOs such as World Vision (Ghana), Action Aid (Ghana), the Hunger Project (Ghana), Christian churches of various denominations, and Muslim communities. These programs are largely similar to the National ALP; indeed, these providers frequently include similar health topics in their programs, and some have even adopted the NFED primers to use in their own programs. The NFED ALP initially had two phases, 1992–1997 and 2000–2006. By the end of 2007 a total of about 2,205,709 participants had been recruited since 1992, with about 1.5 million people enrolled in the first phase, which had initially targeted only half of that, namely 840,000 participants.

These programs are relatively inexpensive on both the supply and the demand side because they typically meet for just a few hours a few times a week in the evening (thus allowing learners to work during the day) and use voluntary teachers often those who teach in the formal education system during the day). Therefore, even modest returns in terms of improved outcomes for the participants are likely to be cost-effective.

In terms of outcomes, the NFED ALP does not appear to have improved the literacy and numeracy skills of participants, which is in line with findings from other countries. This seemingly dismal track record is likely one of the reasons why these programs have been scaled down, if not abandoned, in recent years by both local governments and donor agencies.

This lack of success may be because the target group for the program is those who have little, if any, formal educational background and 21 months is not enough time for them to master reading, writing, and written arithmetical calculations.

However, as also discussed above, ALPs have been found to have a positive effect on income generation (most likely through network effects among participants) and on health outcomes (most likely by increasing the health knowledge of participants, including child mortality, pre-natal and postnatal care, vaccinations, and teenage pregnancy. Notably,

102 Blunch and Pörner (2005, Appendix B). For example, World Vision (Ghana) includes topics such as water and sanitation, family planning, HIV/AIDS, and immunization.
103 Areyete and Kwakye (2005)
104 The NFED ALP appears to have been cost-effective, not in terms of their stated program objectives (literacy and numeracy) but in terms of health outcomes, including increasing use of prenatal and postnatal care and vaccination rates and reducing teenage pregnancies and child mortality rates (Blunch, 2013, 2017, and 2018).
105 Blunch (2013) and Blunch & Pörner, (2011). One evaluation of the NFED ALP (Aoki, 2005) reported that participants had developed substantial reading skills though only moderate to weak writing and numeracy skills, but this conclusion may be flawed as the randomization in this study was done at the individual as opposed to the village level.
110 Similar to the NHIS as discussed earlier, this indicates that the NFED ALP also has had a role to play in increasing women’s empowerment in Ghana.
Building Human Capital

most if not all of these outcomes are directly associated with the reductions in stunting among Ghanaian children in recent years.

Therefore, the NFED ALP is likely to have played at least a small to moderate role in reducing stunting and child mortality rates in Ghana and therefore also in improving the country’s HCI scores. Given these substantial positive benefits specifically for participants’ offspring, this and similar adult literacy programs seem like prime candidates to be scaled up in the future—both in Ghana and elsewhere.

Other Programs and Policies Likely to Have Improved Stunting and (Possibly) Education Outcomes

The Community-based Health Planning and Services (CHPS) started out as a pilot program called Community Health and Family Planning (CHFP) in Navrongo in the Upper East region of northern Ghana in 1994. The initial program piloted four different models of delivering community services to treat malaria, acute respiratory infections, diarrheal diseases, and other childhood illness, while also providing family planning services and immunization outreach. Starting in 1999, this program became a national program covering all of Ghana administered by the district assemblies, with the aim of increasing access to health care, increasing the efficiency of its delivery, and improving its quality.

The CHPS has received substantial international recognition. A recent study substantiates this, especially in terms of geographical access, but at the same time it highlights some potential challenges with the program related to health governance and leadership, the provision of services of quality, financial risk protection strategies targeting public health, continuity of information and care, and the right mix of trained health professionals in all communities.

A second program that is likely to have helped to reduce stunting is the Livelihood Empowerment Against Poverty (LEAP) program. LEAP is considered to be the Government of Ghana’s flagship social protection program and is targeted to the poorest 20 percent of households. LEAP was originally introduced in 2008 as a cash transfer program with strong health-related components, specifically to (i) improve basic household consumption and nutrition among children younger than 2 years old, among the elderly (aged 65 years or older who lack productive capacity), and among people with severe disabilities, (ii) increase access to health care services among children younger than 5 years old, among the elderly (65 years or older who lack productive capacity), and among people with severe disabilities, (iii) increase the basic school enrollment, attendance, and retention of beneficiary children between 5 and 15 years of age, and (iv) facilitate access to complementary services (such as

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111 Ministry of Health (2016).
112 Ministry of Health (2016).
113 Ministry of Health (2016).
116 World Bank (2016).
welfare, livelihoods support, and services to increase productive capacity) among the bottom 20 percent of households. As noted above, LEAP has also been used to target the NHIS in that LEAP beneficiaries are exempted from paying the NHIS premium.

Several evaluations of LEAP, including a joint evaluation conducted by the University of Ghana-Legon and the University of North Carolina in 2012, have established that the program has had a positive impact on a range of important policy outcomes, especially those related to education, food security, health, and the productivity of beneficiaries. The studies found that food insecurity among LEAP households had been reduced by 25 percentage points and among female-headed households by 32 percentage points. Food insecurity has a clear association with stunting. Turning to education outcomes, LEAP appears to have reduced grade repetition by 11 percentage points, absenteeism from primary school by 10 percentage points, and absenteeism by girls from secondary school by 11 percentage points, while increasing school enrollment among secondary school-aged children by 7 percentage points. Additionally, 90 percent of all LEAP households were found to be enrolled in the NHIS, 7 percentage points more than in the comparison group, and morbidity was also reduced for children aged 6 to 17. Therefore, LEAP seems to have contributed to both the reduction in stunting rates and the improved education outcomes observed in Ghana in recent years.

**Free Compulsory Universal Basic Education (FCUBE)—Substantial Progress but Lingering Inequality**

Basic education has been at the core of Ghana’s education system and has received most of Ghana’s education investments since independence. As also seen from Figure 2 above, several radical education reforms and amendments have been introduced over the last 70 years aimed at making education accessible to all and at creating a solid foundation at the basic education level to set its citizens up for success in their lives. Several of these effectively acted as inflexion points, permanently changing the path of Ghana’s economic and socioeconomic developments.

This process started even before Ghana’s independence with the Accelerated Development Plan (ADP) in 1951, introduced by Kwame Nkrumah, Leader of Government Business (de facto prime minister) at that time. This plan proposed a revision and expansion of the existing structure of education, which then was implemented from 1951 to 1960, aiming mainly at primary and middle school. After independence in 1957, Nkrumah, now president, introduced the 1960 Education Act, which aimed to increase access to basic education by making it free. In the six years between 1960 and 1966, enrollment in public elementary schools is reported to have more than doubled. The Education Act also

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established an education trust to fund the creation of more schools, and as a result, between 1951 and 1966, the number of basic schools in Ghana increased from 1,083 to 8,144.\textsuperscript{122} Subsequently, several military government regimes set up committees to advise and make recommendations regarding the education sector, including the Dzobo committee (1974) and the National Education Commission (1983). Their recommendations led the government to make significant changes in the funding, structure, and curricula at all education levels as well as to create the Ghana Education Service (GES) in 1974, a supervisory organization for the education sector. An evaluation by the World Bank within two years of the 1987 round of reforms found mixed results. While the implementation of the reforms made good headway in the early years, overall progress in implementation was much slower than expected.\textsuperscript{123} Still, there is evidence that the 1987 Education Sector Reform led to a relative shift in the production of literacy and numeracy skills towards basic education (primary and middle/lower secondary education), which were also the main focus of this reform, and thus served as a particularly important inflexion point among the many programs and policies shown in Figure 1 above.\textsuperscript{124}

Ghana’s political transition to a democratic government in 1992 came with the creation of a national constitution. Article 25 of this new constitution made education “free, compulsory, and available to all.”\textsuperscript{125} This led to the implementation of the Free Compulsory Universal Basic Education (FCUBE) law in 1996 to make basic education free,\textsuperscript{126} compulsory, and accessible to all. The enshrinement of this law in the constitution not only made it a priority area for the government of the time but also for every subsequent government. The 1992 national constitution, and here especially Article 25, thus effectively became an inflexion point in the context of the timeline resented in Figure 1. The main goals of the FCUBE program on the demand side were: (i) increasing the amount of instructional time by extending school hours; (ii) subsidizing fees and levies charged to students; and (iii) improving head teachers’ ability to manage school administration and to supervise and motivate teachers. On the supply side, the goal was to increase the number of school places by means of the large-scale construction of additional classrooms and schools.\textsuperscript{127}

The Government of Ghana used a cost-sharing scheme, whereby parents were expected to carry limited expenses related to cover non-tuition fees, to cover the costs of implementing the FCUBE program and also received funding from several multilateral organizations including USAID and the World Bank (see Table 2). Other funders and stakeholders included the Government of Norway, the Canadian International Development Agency (CIDA), the Danish Development Agency (DANIDA), and the OPEC fund. Currently, the FCUBE

\textsuperscript{122} Akyeampong (2009).
\textsuperscript{123} Little (2010).
\textsuperscript{124} Blunch (2014).
\textsuperscript{126} While the 1960 Education Act already had made education free in principle, many fees and other education-related costs remained, for example the cost of school uniforms.
\textsuperscript{127} World Bank (2004).
program is funded by the Government of Ghana through the capitation grant, which will be discussed in more detail below.

Several evaluations of the FCUBE program have shown that it has steadily and consistently increased enrollment in basic education. One evaluation in 2004 concluded that enrollment had risen in all population groups and that primary enrollment in particular had grown fastest among lower-income groups. The program has also improved the quality of education as data on students’ scores in the Basic Education Certificate Examination (BECE) show that the pass rate increased from 60.4 in 1998 to 62.2 in 2008.

Therefore, of all the programs and policies listed in Figure 2 above, the FCUBE program appears to have been the main inflection point for Ghana’s improved human capital outcomes, especially in terms of the quantity and quality of education.

Table 2: Different Stakeholders, Programs, and Funding Tracks Supporting the FCUBE Program

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Total funding</th>
<th>Role</th>
</tr>
</thead>
</table>
| USAID       | US$35 million Grant | • USAID provided funding through the Primary Education Program (PREP), which provided essential inputs such as textbooks, teacher training courses, and national assessment systems  
• Established 330 model schools through this program |
| UK DFID     | GBP50 million Grant | • Whole School Development (WSD) was a program implemented by the DFID that aimed at decentralizing and resourcing school districts |
| World Bank  | US$230 million Credit | • The World Bank funded the FCUBE program through the Primary School Development Project (PSDP) and the Basic Education Sector Improvement Program (BESIP)  
• Funded policy and management changes and the construction of physical infrastructure |

Source: UNICEF (2007)

Another impact evaluation by researchers from the University of Science and Technology of China in 2016 found that enrollment increased more in those schools where universal basic education was provided than in schools where it was not provided (the control group). However, a similar evaluation by Kwame Akyeampong using Ghana Living Standard...
Survey (GLSS) data showed that poorer households fared less well in terms of primary school attendance under the FCUBE program. The same study also found evidence consistent with the FCUBE program having increased enrollment much more in southern Ghana than in the north, leaving a gap that has persisted until recently when it began to narrow, albeit slowly.

A capitation grant was piloted in the 2005/2006 academic year (more detail below) and increased gross enrollment of 10 percent, bringing the nation’s primary school enrollment to 92.4 percent, and increased net enrollment from 63 to 69 percent—thus providing one of the last inflexion points in terms of the programs and policies depicted in Figure 2 above on the education side that would have had time to affect outcomes. The northern region of Ghana experienced the highest increase in enrollment, once again indicating the regional differences in the impact of policies in Ghana over time—though this time this effectively was a pro-poor policy, with the northern region being among the poorest regions in Ghana. Enrollment also increased slightly more among girls than boys (18.1 versus 15.3 percent), which helped to narrow the gender gap. The success of the pilot led to the nationwide scale-up of the capitation grant.

In summary, the available evidence shows that the FCUBE policy increased enrollment and access to basic education overall. However, the program’s impact was not equitable as it was more skewed to the south than the north of Ghana. Other issues included overcrowding of classroom as a result of the increase in enrollment, inadequate and poor quality teachers, and the need for parents to pay for other necessary expenses such as textbooks and transportation, meaning that the education being provided was not entirely as free as it was supposed to be.

Nevertheless, the highlight of the FCUBE program was its enshrinement in the Constitution, which gave it permanence and legitimization. It also made education a priority sector for the government and ensured a sustained commitment from all subsequent governments. The government also showed a strong political will and commitment at the time when the program was launched, which helped to ensure that all stakeholders were committed to putting the program into action as soon as possible. As of 2017, the gross enrollment rate at the primary level in Ghana is over 100 percent, which shows that the FCUBE achieved its goal of increasing access. As of the same year, the primary school completion rate was 95 percent. Also, the net enrollment of female students in primary school is currently at 85 percent, while that of male students is at 84 percent, which shows that the gender gap in Ghana’s education system is gradually being closed.132

### A Practical and Skills-Oriented Curriculum for Senior High School

The 1987 reforms in the education sector decreased the duration of secondary-level education from five to three years and changed its name from “Ordinary and Advanced” levels of education (as it was called in the colonial years) to secondary education. The number

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of public secondary schools has been steadily increasing, and there are currently about 500 in Ghana.\textsuperscript{133} The West Africa Senior Secondary School Certificate Examinations (WASSCE) was introduced in 2006 as a way to enable students to graduate from secondary school and to determine their entry into tertiary education.

In the education reforms of 2017, secondary education was renamed senior high school, and its duration was increased from three to four years to give teachers enough time to fully cover the content of the curriculum. With regard to the curriculum, the reforms grouped courses into either core or elective subjects and introduced courses in local languages such as Akan, Ewe, Ga, and Hausa\textsuperscript{134} as well as vocational and technical courses to make the curriculum more practical and skills oriented. Specialized senior high schools were also created to give students a choice of different career tracks. Government scholarships were also introduced as a way to increase enrollment and access, and teachers were provided with performance incentives in the form of housing, bonuses, and salary increases to motivate them and to enhance teaching quality. At the senior high school level, enrollment of students in the 16 to 18 age group increased by almost 34 percent between the 1987–1988 and 1997–1998 academic years, and by the 2000–2001 academic year, enrollment had increased almost 40 percent, as compared to the 1987–1988 academic year.\textsuperscript{135}

Some of these reforms have been criticized as somewhat elitist and not necessarily ensuring equitable access to education. Bearing this in mind and also the gradual increase in the number of private senior high schools, policymakers decided to explicitly address the equity issue in the system. A computerized school selection and placements system (CSSPS) for senior high schools was introduced in 2005 to enhance the efficiency, transparency, and speed of the selection process. It allows students to rank their senior high school choices, and the system places them in one of their preferred schools in accordance with their grades. However, the CSSPS has been criticized for not being as fair and fast as it was purported to be.

**An Affordable and World Class Tertiary Education System**

Ghana’s affordable and world-class tertiary education sector is divided into universities (public and private), polytechnics, colleges of education, and nursing training colleges. The focus of most of the reforms in this sector has been on curriculum, funding and infrastructure.

Tuition fees in tertiary public schools are hugely subsidized by the government, leaving students with very little to pay. There is a cost-sharing scheme with parents to cover students’ non-tuition expenses such as fees for using academic facilities and residential fees. A dual-track policy exists in which some students who did not meet the competitive admission cut-off requirements can be admitted but with the responsibility for paying their full tuition fees.

\textsuperscript{133} US Embassy in Ghana (2020).

\textsuperscript{134} During the first three years, students may study in any of eleven local languages, after which English becomes the main medium of instruction (US Embassy in Ghana, 2020).

\textsuperscript{135} Republic of Ghana (2004).
Another source of education funding is the student loans scheme, which was introduced in 1971 and modified in 1989 when it was taken over by the Social Security and National Insurance Trust (SSNIT) due to the previous loan scheme facing problems in the recovery of loans. The interest rate for this scheme was heavily subsidized by government, meaning that students were only paying a 3 percent interest rate, which increased to 6 percent in 1990.\textsuperscript{136} This loan scheme has been found to have increased access to university education. Since 1990, enrollment at Ghana’s five public universities has jumped from 12,000 to 65,000 students. At the University of Ghana alone, enrollment has increased from 7,500 to (in 2009) 37,940 students.\textsuperscript{137} There is also a new student loan trust created as part of the Ghana Education Trust Fund (GETfund) to supplement the SSNIT loan scheme. The GETFund was created by the legislature in 2000 as a public education trust to complement the existing budgetary allocation for higher education and is funded through the imposition of a 2.5 percent value added tax (VAT) on goods and services.\textsuperscript{138} The GETfund has also been used to fund several infrastructure projects, scholarships, and research projects in universities and colleges across the country.

All these efforts have cumulatively increased access to education, especially for brilliant but needy students and underrepresented minorities who have been the target. The quality of tertiary education in Ghana has also been improved. However, there continue to be issues of inequitable access given a persistent gender gap in enrollment rates and the fact that the majority of the public universities are located in southern Ghana. Another concern is about the increase in private universities and colleges, which are costly to attend. The government has responded to these concerns by establishing new public universities in the Volta, Western, and Eastern regions and by creating a scholarship scheme funded by the GETfund, specifically aimed at female students.

**Skills-oriented Technical and Vocational Education and Training (TVET)**

Ghanaian youth leaving junior secondary school who do not go on to the traditional (i.e., academic) senior secondary school may alternatively pursue a secondary technical school or institute.\textsuperscript{139} In 2006, the Council for Technical and Vocational Education and Training (COTVET) was established to formulate national policies for skills development, to coordinate and supervise all technical and vocational training (TVET) provided in Ghana, and to provide funding.\textsuperscript{140} At the same time, the government’s TVET policy was revamped to include a mission to “improve the productivity and competitiveness of the skilled workforce and raise the income-earning capacities of people, especially women and low-income groups, through the provision of quality-oriented, industry-focused, and competency-based training programs and complementary services.” This also came with the creation of a Skills Development Fund (SDF), which is funded by the government and other
international donors. There are currently 200 existing public TVET institutes, including 36 technical training institutes (TTI) and 116 vocational institutes.

There has been limited evidence on the effectiveness of the TVET program, but it suggests that progress has been generally encouraging. A World Bank study found strong evidence of increased employability and earnings because of the TVET program. Specifically, it reported that having TVET made it more likely for a graduate to find wage employment than having only a senior high school education. Also, the study found that the income of wage workers with TVET was higher than those with a senior high school education. However, in recent years, enrollment in formal public and private TVET institutes has either stagnated or declined. This appears to be due to the poor quality of training programs, a lack of funding, and a public perception that TVET institutes are only for underperforming students, which has meant that many who get admitted into such institutes do not end up attending. Under the Free Senior High School Policy launched in 2017, the government will cover the fees and expenses of every student in Ghana who qualifies for and is successfully placed in a public senior high school, including all TVET institutions. This underscores the emphasis that the Ghanaian government puts on technical and vocational training.

**Free Senior High School Policy—a Window to the Future**

Continuing its efforts to make education free and accessible to all of its citizens, the Government of Ghana launched the Free Senior High School Policy in September 2017. This policy seeks to cover the fees for every student in Ghana who qualifies for and is successfully placed in a public senior high school. In addition to free tuition, the program also covers the costs of admission, textbooks, libraries, science centers, ICT, examination fees, and boarding and meals (free meals for boarding students and one free daily meal for day students). It also aims to expand school infrastructure and facilities to accommodate the expected increase in enrollment and to provide core and supplementary textbooks to increase the competitiveness of Ghanaian students with the best in the world. The problem of equitable access is addressed here by ensuring that 30 percent of places in elite schools are reserved for entrants from public junior high schools.

Before the SHS policy, enrollment in senior high schools almost doubled from 398,995 in 2007/08 to 787,861 in the 2015/16 academic year. Since the launch of this program in 2017, 358,205 more students have enrolled and been covered by this policy, which represents 92 percent of students who qualified for the program.

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141 SDF Ghana (2019).
142 Darvas and Palmer (2012).
143 World Bank (2009).
144 In Ghana, as in many other countries, public pre-tertiary education is generally of a lower quality than private tertiary institutions.
In a recent budget hearing in the parliament of Ghana, the Minister of Finance reported that the Annual Budget Funding Amount (ABFA) would fund this policy.\textsuperscript{146} The ABFA is an account set up by the government that receives proceeds from the country’s oil and gas revenues via the Petroleum Holding Fund in support of the government budgets.\textsuperscript{147} While this is yet another example of innovative funding that will likely be useful and impactful in the short to medium run, this will only work as long as there still sufficient oil reserves left in Ghana. This has therefore raised concerns about the sustainability of this program.

\textbf{A Multi-pronged Approach to Financing}

The Government of Ghana funds its education sector through the capitation grant, the Ghana Education Trust Fund (GETFund), and most recently the Annual Budget Funding Amount (ABFA) for the free SHS policy.

The capitation grant is paid to schools from a national education fund set up by the government in the 2005/2006 academic year.\textsuperscript{148} It was mainly created to support the FCUBE policy of achieving universal free basic education by covering students’ non-fee education-related expenditures. It was initially piloted in 40 deprived districts. The capitation grant is disbursed to schools by the Ministry of Finance and Economic Planning through the Ministry of Education and the Ghana Education Service. For each school, the amount of grant disbursed is dependent on the Implementation of the School Performance Improvement Plan (SPIP) prepared by the head teacher.\textsuperscript{149} The introduction of the capitation grant was associated with large increases in net enrollment rates, especially for primary school. Between 2003 (pre-capitation grant) and 2008 (post-capitation grant), net enrolment increased from 60.6 to 73.8 percent for children of primary school age (6 to 11), while it increased from 23.7 to 32.2 percent for children of lower secondary age (12 to 14).\textsuperscript{150}

The capitation grant has been plagued with some challenges including delays in the release of the grant, misuse of funds by some heads of schools, an increasingly heavy workload on implementers, and a lack of transparency.\textsuperscript{151} In light of the increase in primary and junior high school enrollment and inflation, the capitation grant was increased to GHS 4.50 per student in 2009. In 2018, the government decided to more than double the grant to GHS 10.00, which is expected to cover rising costs of living and the additional levies imposed on students by schools.\textsuperscript{152}

Another source of funding for the senior high school and tertiary levels is the Ghana Education Trust Fund (GETFund). It was approved by the legislature in 2000 as a public trust

\textsuperscript{146} GhanaWeb (2019).
\textsuperscript{147} Reporting Oil and Gas Project (2016). In 2018, 30.2 percent of funds were earmarked for education, overall (Government of Ghana, 2018).
\textsuperscript{148} Little (2010).
\textsuperscript{149} Ampratwum and Armah-Attoh (2010).
\textsuperscript{150} UNICEF Ghana (2012).
\textsuperscript{151} Dzamboe (2005).
\textsuperscript{152} Citi FM Online (2017).
Ghana

to be funded through the imposition of a 2.5 percent value added tax (VAT) on goods and services.\textsuperscript{153} The fund is also supported through government allocations and returns on investments made by the board of the fund as well as donations and contributions. The GETFund’s resources “will be allocated to all educational institutions, support needy students to pursue higher education, generate revenue to maintain the student loan schemes for nationwide accredited higher institutions, and to give grants to higher education through the National Council for Tertiary Education.”\textsuperscript{154} The president in consultation with the Council of State appoints a 17-member Board of Trustees that is responsible for the management of the Fund. These members, with the exception of the chairman and the administrator of the fund, are drawn from different government ministries and agencies.

The GETFund has made significant contributions to higher education institutions by funding the construction of new buildings and the renovation and expansion of existing facilities in universities and polytechnics to accommodate the increase in enrollment numbers. It has also created a student loan trust (as discussed above) to increase access to tertiary education.\textsuperscript{155} From 2003 through 2005, the GETFund provided €32 billion (US$36.7 billion), €30 billion (US$33.3 billion), and €60 billion (US$65.9 billion) to support students through the scheme.\textsuperscript{156} It has also contributed immensely to the improvement of TVET in the country by financing the establishment of 20 resource centers and the provision of modern equipment to enhance practical skill training. In 2004, for example, the GETFund provided about GHS 224 billion (US$248.8 billion) to finance the infrastructural transformation of several universities and polytechnics. Data from the Ministry of Finance and Economic Planning show that these developments increased enrollments at public universities from 40,673 to 53,895 between 2002 and 2003 and increased enrollments at polytechnics increased from 18,459 in 2002 to 23,717 in 2003. Also, the GETFund provides faculty members at tertiary institutions with research grants and sponsorship for further studies under its Manpower Development Scholarship Scheme.\textsuperscript{157}

Despite the successes of the GETFund, it is still fraught with challenges, including misappropriation of funds and government influence, the exclusion of private schools, and leadership and administrative challenges. The current government has reiterated its commitment to the GETFund. In 2018, it raised US$500 million in loans from an association of local banks to invest in the scheme and is currently planning to raise a further $1 billion over the next five years to expand it.\textsuperscript{158}

\textsuperscript{153} Atuhene (2009).
\textsuperscript{155} Atuhene (2009).
\textsuperscript{156} The cedi figures used here and throughout the paper in our exchange rate calculations are the “Ghana cedi” – introduced in 2007 to replace the so-called “new cedi” (which was in effect from 1967 to 2007) at a conversion rate of 10,000 “new cedis” to one Ghana cedi (from 2007).
\textsuperscript{157} Eyiah-Botwe (2015).
\textsuperscript{158} Bloomberg (2018).
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With all the education initiatives over the years, it is not surprising that government spending on education in Ghana has been on a significant upward trend over the past three decades, with the government increasing the budgetary allocation for education each year. As at 2017, expenditure on education was 20.2 percent of government’s total expenditure, which is higher than the world average of 14.1 percent.\textsuperscript{150} Ghana budgeted GHS 9.3 billion (US$1.9 billion) for all levels of education in 2018, an increase of more than two-fifths since 2016.\textsuperscript{160} Expenditure on primary education used to constitute the majority of government spending on the education sector with an all-time high of 45.5 percent in 2011 but currently, spending at the senior high level seems to be on the increase according to data from the World Development Indicators for 2018.

In summary, primary school enrollment in Ghana has increased over time, and Ghana currently has one of the highest enrollment rates among its comparator countries, certainly among its Sub-Saharan African peers. These developments can be at least partially attributed to FCUBE, the Education for All policy, GETFund, and related policies.

4. Conclusion

Ghana has come a long way in terms of increasing incomes and economic growth and improving human capital outcomes in recent years and is an example for other countries to follow in several different ways. This progress has been made partly because of the whole-of-government approach that policymakers have taken to building the country’s human capital. This approach has been epitomized by the involvement of multiple sectors in the design and implementation of policy interventions such as the NHIS, WASH, school feeding programs, FCUBE, the capitation grant, and adult literacy programs. Several of these programs also include various forms of social protection, which is also crucial for promoting human capital.

A key aspect of the whole-of-government approach that Ghana has adopted and from which other countries can learn is the political will to learn from possible mistakes and to make improvements based on the lessons learned. In particular, the Government of Ghana retargeted the school-feeding efforts under the GSFP following the realization that the targeted population (the poor) was not being reached. This willingness to make adjustments to policies or programs in order to sustain them over time and over successive governments is a key element of a successful whole-of-government approach and has clearly been effective in building human capital in Ghana—both in terms of health and education.

Ghana’s success in applying this approach could serve as an example for other countries, particularly those that aspire to the middle-income status that Ghana finally achieved in

\textsuperscript{150} Index Mundi (2019).
\textsuperscript{160} Bloomberg (2018).
2010. Particularly in terms of innovative financing, the design of programs, and long-term and sustained health and education initiatives, the Ghanaian example for building human capital seems to be worth following.

Ghana’s use of innovative financing deserves special mention. In particular, the government has successfully developed special, earmarked value-added taxes and funds originating from the oil extraction industry to finance both the health (especially the NHIS) and education sector. The key lesson from Ghana’s experience is that these taxes and funds are a viable alternative to income taxes, which are often the main revenue source used in developed countries to fund human capital development. They have the potential to be a particularly helpful revenue tool for developing countries whose income tax base is generally low because of the limited size of their formal sectors.

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161 Balwanz and Darvas (2013).
References


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World Bank (2020) “Educational Attainment and Enrollment around the World.” Website examining education outcomes across population groups, including household asset quintiles, using a compilation of a variety of household-based data sets: Demographic and Health Surveys (DHS); Multiple Indicator Cluster Surveys (MICS); Living Standards Measurement Study Surveys (LSMS); as well as country-specific Integrated Household Surveys (IHS) such as Socio-Economic Surveys.

