



IGC

Free secondary education in Ghana: Macroeconomic impacts and adjustments going forward

Patrick Opoku Asuming, James Dzansi, David Lagakos, Isaac Otoo and Henry Telli

- Ghana's Free Senior High School (Free SHS) policy is a laudable programme that aligns with the Sustainable Development Goals (SDG 4.1). However, its long-term sustainability is at risk due to budget constraints.
- In this policy brief, we predict how this programme will affect per capita GDP, wages, and tax contributions and how its sustainability can be improved.
- Findings show that without substantial further investments to improve quality/learning outcomes, the policy will have negligible effects on GDP per capita, which is predicted to rise by just 0.1% in the long run. Meanwhile, if the quality of education were to be improved, the policy would deliver a 10% increase in GDP per capita.
- Survey results show that while there is extremely strong public support for the Free SHS policy, most people are open to adjusting it to enhance its sustainability and impact.

POLICY BRIEF GHA-22169

JUNE 2023

This project was funded
by IGC Ghana

www.theigc.org

DIRECTED BY



FUNDED BY



from the British people

Introduction

In 2017 the government of Ghana launched a programme to make secondary education (three years of senior high school for students aged 16-18) free across the country in line with the Sustainable Development Goals (SDG 4.1). As part of the programme, the government covers the cost of infrastructure, tuition, all academic materials (books, stationary, etc.) and consumables (utilities), as well as all boarding costs for those in boarding schools (meals, accommodation, and utilities). The only expenses that students' parents/guardians are expected to cover are transportation, meals for those not in boarding, clothes, and extra food provisions for those in boarding facilities. From 2017-2021 the government spent an additional GHS 5.12 billion (USD 488 million) (Konadu Agyeman, 2023), approximating an extra USD 100 million in government spending on education annually. With a total government revenue of approximately USD 6.9 billion¹ in 2021, the country spent an extra 1.5% of its total revenue on the programme or about 0.22% of the GDP.

The expectations are that the programme will (i) expand/increase educational attainments and the incidence of extreme poverty in the long run, (ii) improve the country's human capital base and economic growth/productivity, and (iii) promote social redistribution and reduce inequality. The government of Ghana should be lauded for this ambitious objective and its significant efforts to expand access to secondary education. Yet many observers question whether the large public expenditures required to maintain Free SHS are sustainable going forward, and some suggest that Free SHS should be scaled back or cut altogether. But how will the programme affect per capita GDP, wages, and tax contributions? How can the policy be made more sustainable from a government spending perspective, and what changes may be supported by the average Ghanaian?

This policy brief summarises the results from recent studies that examine the macroeconomic consequences of Free SHS and individuals' attitudes towards fiscal policy. The brief provides some potential policy options for policymakers in Ghana to help improve this public policy initiative.

Macroeconomic effects of Free SHS

A recent study by Fujimoto, Lagakos, and VanVuren (2023) uses a general-equilibrium macroeconomic model to quantify aggregate and distributional impacts of Free SHS in Ghana. Their model is populated by many households with parents and children who make decisions about whether to attend secondary school based on the associated costs and benefits. Secondary schooling helps increase human capital, which raises the future wages of the children once they

¹ All Ghana Cedi to US Dollar conversions are based on GHS10 per USD – the average exchange rate between buying and selling the US Dollar in Ghana in June 2023.

graduate. The costs of secondary education in the model are (i) an out-of-pocket cost, representing school fees, plus (ii) the opportunity cost of the secondary-age children not working (either for pay or in self-employed activities). Some households in the model have smart children but are too poor to send their children to secondary school. These children are precisely the ones who are helped by Free SHS because they get to apply their abilities in school and benefit from higher wages for the rest of their lifetimes. Other households choose not to attend secondary schooling because the returns to education are not high enough to justify paying the out-of-pocket costs and forfeiting the young person's income from wage jobs or self-employment.

Their model is estimated to match experimental data from a long-term research study by Duflo, Dupas, and Kremer (2021) which provided scholarships to a randomly selected group of impoverished but high-scoring Ghanaian schoolchildren. Five years later, scholarship recipients were 25% more likely to complete secondary school than a control group of students. Scholarship winners scored 0.2 standard deviations higher on literacy and mathematics tests, and female scholarship winners had substantially lower fertility rates. Scholarship winners had 2% higher earnings than the control group, but this difference was statistically insignificant from zero.

Fujimoto, Lagakos, and VanVuren (2023) used their estimated model to simulate the long-run impact of Free SHS in Ghana, holding fixed the test score cut-off used prior to the policy's enactment.

The model predicts a 10% increase in secondary school completion rates and a 0.1% rise in GDP per capita as a result of the Free SHS policy in the long run. The authors estimate that the long-run cost of the program will be 1.2% of GDP, meaning that the program pays for only a small portion of its costs.

TABLE 1: Predicted impact of Free SHS

	Changes under Free SHS	95% confidence interval	
GDP per capita	0.1	-0.8	0.3
Taxes per capita	1.2	0.8	1.3
Unskilled wage /Skilled wage	2.1	2.0	6.0

The rather modest aggregate changes in GDP per capita mask more substantial increases (2.5%) in the relative wages of unskilled workers, meaning those without high school. Among the less educated in Ghana, even those who don't attend secondary school see wage increases due to the policy because they become relatively more scarce in the labour market. After-tax earnings are lower since Ghana's richest households bear the largest tax burden from free schooling.

To better understand why the model predicts such modest long-run increases in GDP per capita from Free SHS, the authors conduct an alternative model experiment where they double schooling *quality* and double schooling *costs*. The authors then simulate the effects of Free SHS in this hypothetical model environment with better quality (but more expensive) schools. They find much larger impacts of Free SHS on GDP per capita of around 10%. Thus, the authors conclude that the relatively low average quality of Ghanaian secondary schools, as indicated by the students' modest returns to schooling in the Duflo, Dupas, and Kremer (2021) experiment, is the main reason why the model predicts such limited impacts on GDP per capita.

Policy options

The research by Fujimoto, Lagakos, and VanVuren (2023) suggests several possible ways that Free SHS could be amended going forward.

- Free SHS could be combined with additional expenditures devoted to increasing schooling quality, such as raising the number of teachers per student, introducing performance pay for teachers, or becoming more selective in hiring secondary school teachers. This would help raise secondary school quality and add more value to secondary education, increasing the GDP gains from Free SHS.
- The BECE cut-off to qualify for Free SHS could be increased so that only the students with the highest exam scores could qualify for Free SHS. This would make Free SHS more selective, increasing the impacts of schooling for those who attend and decreasing overall program costs. In other words, a higher BECE cut-off would help channel fewer public resources to a smaller but more selected set of young people.
- Parents could be enlisted to pay for part of the cost of secondary schooling through funding meals. Depending on the size of the funding provided by parents, this adjustment leads to a similar impact of Free SHS on GDP while lowering the central government's expenses substantially.

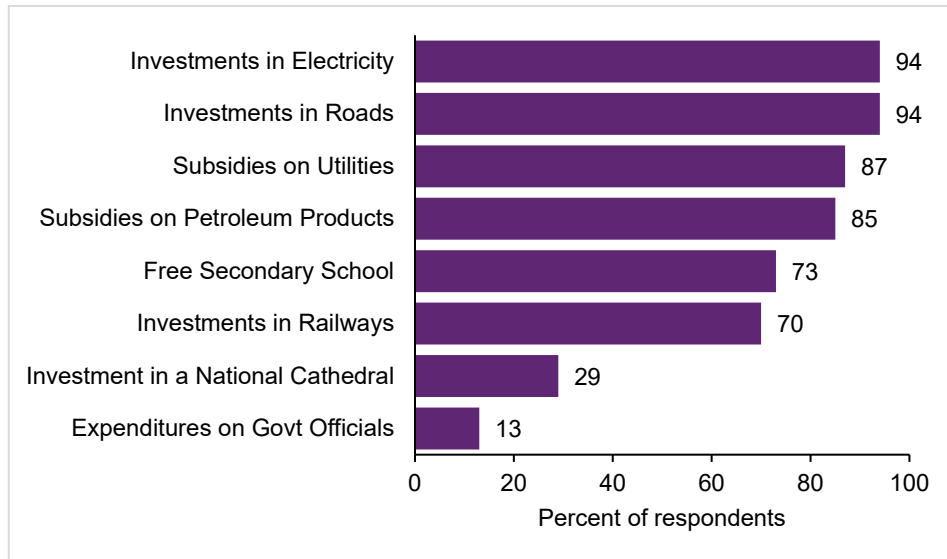
Household perspectives on Free SHS and other public expenditures

In order to better understand the views of Ghanaian households on Free SHS, we conducted a nationally representative survey of adult Ghanaians between August and September 2022. The overarching aim of this survey was to gauge support for various ways in which Free SHS may be amended going forward. We offered the respondents a list of eight general government expenditure items, including the Free SHS program. The respondents were to indicate whether each expenditure should be abolished, cut somewhat, cut substantially, maintained, or expanded. Support for a government expenditure program is defined as the percentage of respondents who want the expenditure item to be maintained or expanded. Eight other expenditure items were included to prevent a possible referendum on the current government's policies. Figure 1 summarises the responses to these questions.

Free SHS was popular overall, and 73% said it should be maintained or expanded. By comparison, investments in electricity and roads were more popular, with 94% of Ghanaians saying these should be maintained or expanded. Also more popular were subsidies on utilities and petroleum products. On the other side, Free SHS was more popular than investments in railways and much more popular than expenditures for government officials and investments in a National Cathedral. Just 13% and 29% of Ghanaians agreed that these should be maintained or expanded.

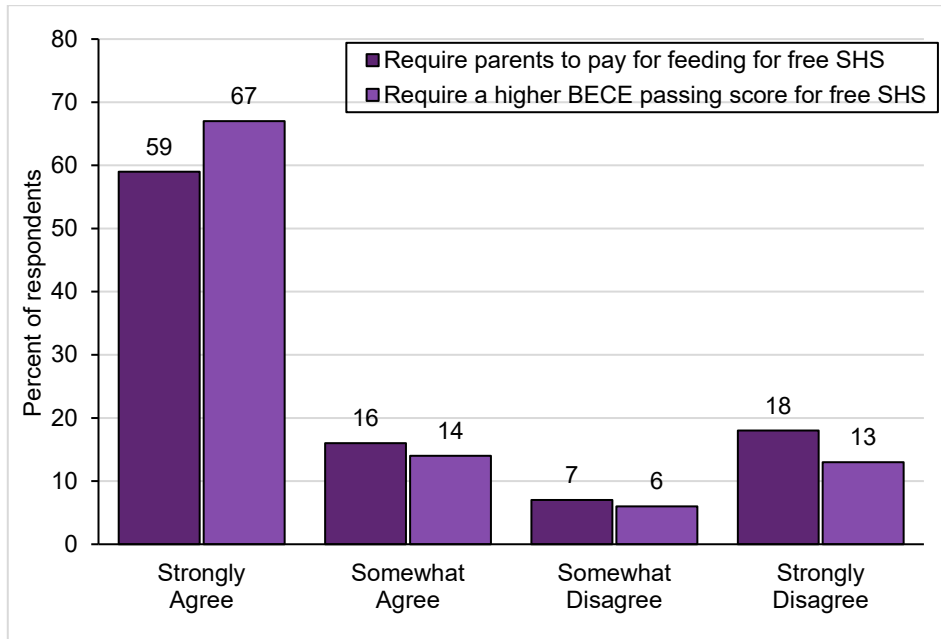
Surveyed households expressed an openness to adjusting Free SHS in some ways in the future. Specifically, we asked respondents how much they agreed with the following two statements: i) there should be a higher BECE passing mark for pupils to be eligible for Free SHS, and ii) parents should be asked to pay for meal costs in secondary school.

FIGURE 1: Citizens' support for certain government expenditures



The responses to these two questions have been summarised in Figure 2. According to Figure 2, 59% of the respondents strongly agreed that the government should ask parents to pay for the meals of their children who enrol in the Free SHS, while 16% agreed to some degree. Conversely, just 7% somewhat disagreed and 18% completely disagreed. Furthermore, 67% of the respondents strongly supported the idea that the government should tighten the admission criteria for students wishing to benefit from the Free SHS program, with an additional 14% supporting it to some extent. However, only 6% slightly opposed the tightening of the qualifying criteria for entrance into the Free SHS program, while 16% opposed it strongly. Put together, most Ghanaians are amenable to changes to the Free SHS program in which the government will require parents to cover pupils' meals while also strengthening the qualifying criteria.

FIGURE 2: Citizens' views on potential ways to reduce expenditures on Free SHS



References

- Duflo, E., Dupas, P., & Kremer, M. (2021). *The Impact of Free Secondary Education: Experimental Evidence from Ghana*. Working Paper Series No. 28937: National Bureau of Economics. Retrieved from <http://www.nber.org/papers/w28937?>
- Fujimoto, J., Lagakos, D., & VanVuren, M. (2023). *Aggregate and Distributional Effects of 'Free' Secondary Schooling in the Developing World*. (Working Paper No. 31029): National Bureau for Economic Research. Retrieved from <http://www.nber.org/papers/w31029>
- Konadu Agyeman, N. (2023, March 23). *GHS5.12bn spent on Free SHS – Minister*. Graphic Online. <https://www.graphic.com.gh/news/politics/gh-5-12bn-spent-on-free-shs-minister.html#:~:text=THE%20government%20expended%20a%20total,Osei%20Adutwum%2C%20ha>