Williams College – Center for Development Economics

Policy Brief

Michael Kiwanuka-Okot
Supervised by: Professor David K. Evans

Financing Teacher Improvement Incentives for Better Learning Outcomes

Summary

The slow growth in financing available to fund initiatives for education improvement in the developing world underwent a sharp reversal during the pandemic. The implication is that there is a risk of significant learning losses experienced during Covid- becoming permanent in an environment of diminishing resources allocated to the education sector. In order to combat this challenge, the government of Uganda must undertake careful evaluation of spending choices to channel scarce resources toward high-impact interventions that will avert a learning crisis in basic education. Moreover, a heroic effort is required in creating efficiency in expenditure, nurturing accountability, and securing value for money at the project or program level. Similarly, pursuing financing that is affordable and generates institutional technical capacity is a crucial prerequisite.

1. Background

1.1. Global trends in education financing

The idea that Education is a driving force for the realization of long-term sustainable growth requires little gainsaying. There is consensus among national governments, academics, and development institutions in regard to the foundational role of education in unlocking growth prospects. However, the translation of this sentiment into effective prioritization of the sector as reflected in the relative allocation of public financing - is less straightforward. In developing countries, the per capita allocation to education expenditure trails that of rich countries by a multiple of almost 150 whereby LICs spend on average 53 USD per child in comparison to close to 7800 USD in high-income countries[1]. Resultantly, households, already poor and

[1] (Lal & Poulsen, 2022)

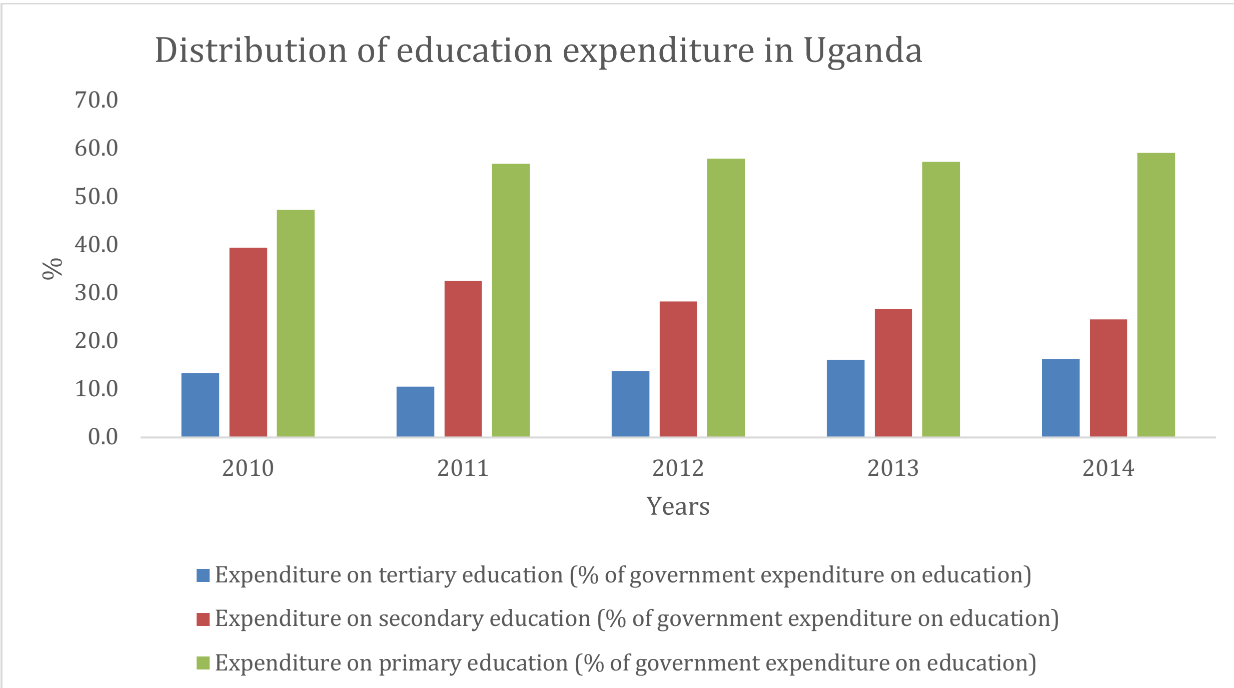
liquidity constrained, are having to spend inordinately large proportions of household incomes, averaging 40%, to try and make the difference[2]. External funding in the form of Overseas Development Assistance (ODA) to meet expenditure needs has declined significantly in the last decade, by an estimated USD 400 million. Although there is emerging evidence of renewed commitment to reorient assistance towards education, led by large multi-lateral institutions such as the World Bank, we are still far from far below earlier set benchmarks[3]. In order to meet the SDG required level of education spending, a drastic 117% increment is necessary[4]. The underinvestment in education has been compounded by the pandemic which forced many Governments to divert funds from education, during extended school closures - maintaining only recurrent funding for teacher salaries - and sending the rest to myriad funding pressures precipitated by the mitigation responses to the pandemic. Restoring these funds to education spending is proving to be sticky.

1.2. Education Spending in Uganda

Whereas over the past decade, the portion expenditure on basic education is comparatively higher than both secondary education and only marginally higher than tertiary education ***(Figure 1)***, the quantum of resources is patently inadequate ***(Figure 2)***. Uganda currently spends 8% of its overall Budget on education, which is the equivalent of a paltry 2.7% of GDP. This inadequate public provision has necessitated an increased relative private household share of education spending, at 55%[5]. Furthermore, the regressive reallocation of resources away from education during the pandemic imply Uganda has drifted even further away from the possibility of meeting internationally agreed thresholds for education spending. According to the Education, Finance Watch, for Uganda to attain the 4% of GDP on education benchmark, it would need to double current education spending[6].

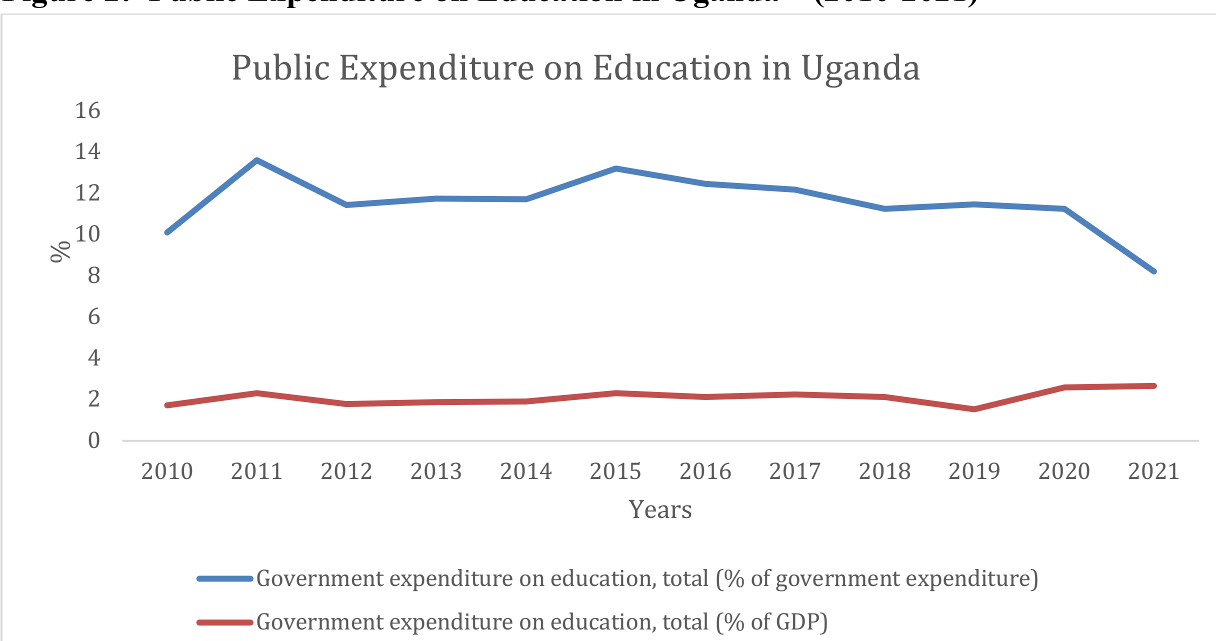
[2] (Lal & Poulsen, 2022)
[3] (The World Bank and UNESCO, 2022)
[4] (World Bank, 2018)
[5] (The World Bank and UNESCO, 2022)
[6] (The World Bank and UNESCO, 2022)

Figure 1: Distribution of Education Expenditure by School Category (2010-2014)



Source: World Development Indicators

Figure 2: Public Expenditure on Education in Uganda – (2010-2021)



Source: World Development Indicators

Against this background which denotes stagnant if not diminishing availability of resources to finance education, in the subsequent sections of the brief, I start by providing a framework for estimating the proposed intervention's monetary costs, followed by an evaluation of the financing options available to meet identified costs, a discussion on the means to improve eligibility to access these finances and finally draw a conclusion containing the recommendations.

2. Counting the Cost

Earlier briefs made the case for the attainment of basic education learning outcomes being mediated through bold actions to improve teaching quality by mixing attendance and school performance-based incentives, teacher training, and support. Therefore, the next exercise is to estimate the cost of the proposed intervention. A comprehensive costing exercise is a more detailed undertaking but for purposes of the brief, an overview of the cost drivers is provided in ***Table 1*** below. The approach to these determinations was through building on the necessary ingredients for the implementation of elements of the program[7] and the additional costs they will impose on the Government Budget constraint[8]. The model does not include social costs and or benefits even though these certainly arise. It however includes compensating costs that can be defined as costs to ensure those who lose out in this intervention do not work to frustrate the reform[9].

[7] (Abdul Latif Jameel Poverty Action Lab, 2022)
[8] (McEwan, 2012)
[9] (World Bank, 2018)

Table 1: Cost Framework for Proposed Teacher Incentive Intervention

A	Costs	Drivers	Type	Size	Note
1	*Implementation Costs*				
	Increased pay for attendance	No. of Teachers opting-in	Recurrent	Medium	This may increase geometrically or arithmetically depending on the initial performance of the initiative and the uptake
	Biometric - Tracking equipment	No. of Schools opting-in	One-Off	Large	
	Training on Biometric operations	No. of Schools opting-in	One-Off	Medium	
	Maintenance of equipment	No. of machines in use	Recurrent	Small	
2	*Monitoring Costs*				
	Inspection	No. of Inspection Trips	Recurrent	Small	Govt already conduct visits to schools for periodic inspection. Electronic approach reduces need for on-field supervision
	Reporting	Frequency of Review Meetings	Recurrent	Small	
3	*Administrative Costs*				
	Database Management	Size and efficiency	Recurrent	Small	
4	*Accompanying Costs*				
	Teacher Training	No. of underperforming Teachers	Recurrent	Medium	
		Frequency of Training	Recurrent	Medium	
	Funding National Teachers Union	Frequency of Training	Recurrent	Small	capacity building for UNATU to support reform objectives
	School grant awards	No. of best performing schools	Recurrent	Small	
		Frequency of awards	Recurrent	Small	

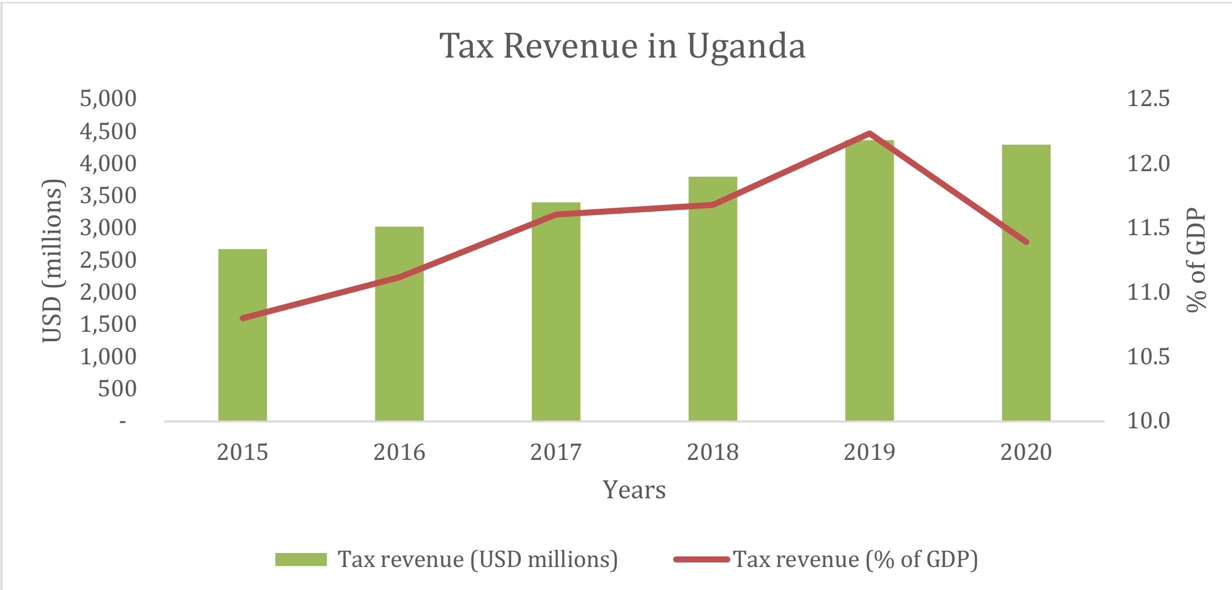
3. Mobilizing Revenue

3.1. Tax Revenue:

The tax revenue collected within the country is still the primary source of discretionary spending for education, in Uganda as is the case in many parts of the world[10]. However, Uganda has a very low capacity for enhancing tax revenue due to a high degree of informality coupled with other fundamental tax policy and administrative weaknesses. At 11.4%, the tax-to-GDP ratio in Uganda has barely shifted in the recent past and remains far below the Sub-Saharan average of 16.5%. (***Figure 3).***

[10] (The World Bank and UNESCO, 2022)

Figure 3: Tax Revenue in Uganda (2015 – 2020)



Source: World Development Indicators

The conclusion that may be drawn from the above is that the propensity for Uganda to realize rapid additionality in education expenditure through higher tax revenues remains muted in the near term.

3.2. Remittances:

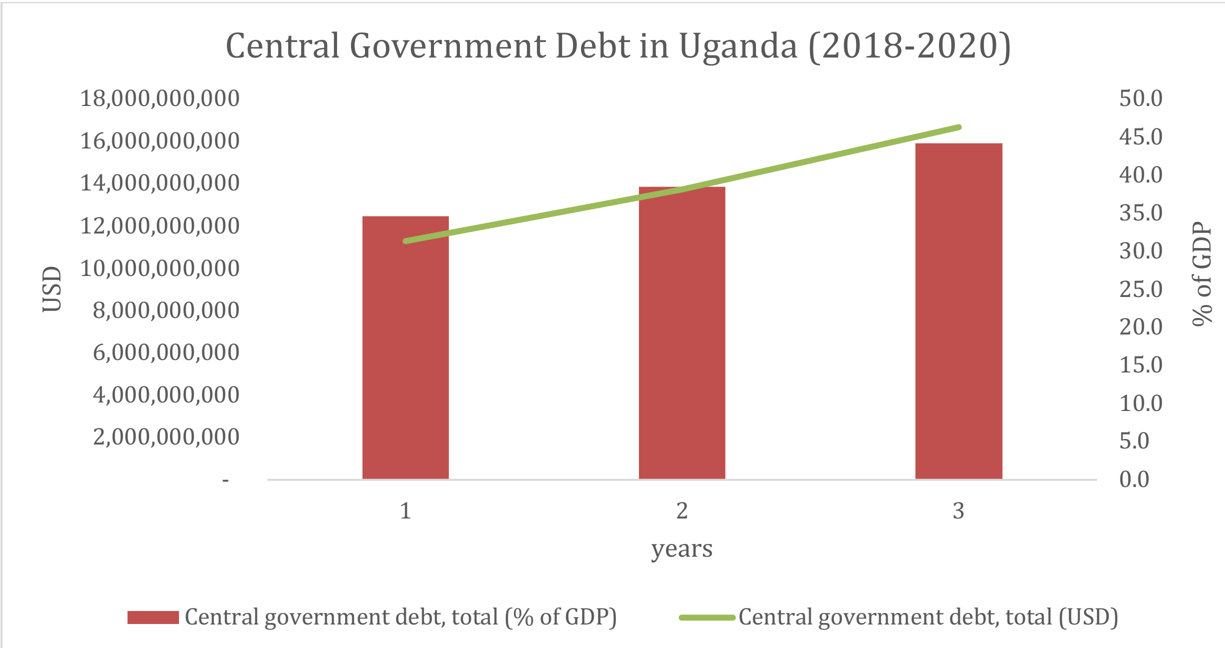
Although remittances can help Households fund education spending across the Board[11], they cannot singlehandedly solve the adequacy gap in education funding. They may however be a useful complementary source of financing.

3.3. Debt

Decisions on debt financing for social spending are subject to a multiplicity of criteria, both at the level of the project or program intervention as well as at the level of the aggregate economy. Currently, the debt outlook for Uganda at the macro level remains stable, below the recommended threshold of 50% debt to GDP ratio. ***(Figure 4)*** Arguably, this is a good enough basis to determine whether debt financing should be explored. Such an evaluation should however be supported by convincing evidence that economic returns to the intervention are substantial[12], over and above mere program-level financials.

[11] (Askarov, Z., & Doucouliagos, H. (2020).
[12] (Ahmed, 2019)

Figure 4: Public Debt in Uganda (2018-2020)



Source: World Development Indicators

Opportunities for borrowing to finance education have been reinstated after the pandemic. For example, the International Finance Facility for Education (IFFEd) aims to unlock up to US $10 billion of new funding by 2030, mobilized through capital markets[13]. Furthermore, additional cheap financing is available through the Global Partnership for Education (GPE) spearheaded by the World Bank, which offers both financing and technical expertise[14].

3.3.1. FAQs

However, beyond being able to establish whether borrowing is necessary or feasible to finance education sector reforms, it is essential to ensure that the eligibility criteria for accessing these finances has been met. Below is a fictitious FAQs section that can be both relevant to the government as well as funding agencies to assess the level of Uganda's preparedness to access debt finance for the proposed intervention, as well as the capacity to use it effectively and repay.

[13] (The Education Commission, 2023)
[14] (Lal & Poulsen, 2022)

(i) Is this the right spending priority and approach?

Enhancing teacher attendance is necessary given the empirically verified links between teacher attendance and learning outcomes[15] This approach that creates incentives for teachers and their respective schools to participate voluntarily towards enhancing their earnings and grant allocations respectively through clear performance improvements has worked in Brazil where funds were attached to student performance improvement led to improved outcomes.[16]

(ii) How do we guarantee the Efficiency of spending?

Enhancing the Productivity of government spending to minimize waste and corruption is critical for the resources to be spent prudently[17]. To maximize the utilization of these resources, first of all, it is necessary that the spending is coherent as opposed to diffuse. Indeed, the cases of Argentina and Kenya demonstrate that increased spending may not lead to improvement in learning outcomes[18] . In this particular intervention, spending will be applied to incremental teacher attendance incentives, increasing grants to schools with high teacher attendance, and providing ongoing training support to teachers - all of which are geared towards boosting teacher productivity.

(iii) Do we have the ability to pay back the borrowed funds?

Some funding opportunities like the IFFED are premised on the availability of a Debt Sustainability Analysis. Whereas Uganda still has the fiscal headroom to borrow to fund education, it is critical that interventions are delivered in a cost-effective manner to avoid violating the assumptions underpinning the capacity to repay. Furthermore, the large costs for the intervention are fixed one-off purchases of equipment for installation in participating schools. However, recurrent costs of training and maintenance of equipment as well as the performance incentives are hardly prohibitive. This implies the quantum of borrowing necessary for the intervention are likely to be rather low.

Put together therefore, the capacity to meet recurrent costs for implementation favors the effective delivery of reform and future repayment prospects[19].

(iv) Is this expenditure going to follow a Results-based approach?

The electronic approach to tracking teacher attendance and the annual student performance data provides a clean mechanism for assessing the impact of the funds being spent on learning

[15] (Uwezo, 2021)
[16] (Sondergaard, 2020)
[17] (Ahmed, 2019)
[18] (World Bank, 2018)
[19] (Ahmed, 2019)

outcomes. Results evaluation can inform the need for additional funding to areas of the reform that are required to boost efficiency through either reallocation or additional funding.

4. Conclusion

The tradeoffs facing public and private spending decisions concerning education are remarkably similar.[20] The existence of competing priorities, biting budget constraints, and uncertainty over the capacity to use and pay back credit are all very weighty considerations.

In the context of the Covid-induced repatriation of resources out of education, the necessity for mobilizing revenue to fund education interventions is even more urgent. However, this must consider the fact that as countries emerge from the pandemic where schools were closed, the huge losses in learning attainment will generate high demand, especially for ODA which is only re-entering the sector.

Resultantly, increased focus on education spending has to be less on the amounts involved than on careful selection of priorities, ensuring that projects funded along those priorities fulfill at least some form of cost-benefit criteria, and are monitored relentlessly to restrict wastage.

The existence and effectiveness of teacher-student interaction in the classroom is an inescapable feature of delivering successful learning outcome. In the case of Uganda, a demonstrably cost-efficient way to get teachers into classrooms, is to make it more attractive than other alternative time uses – by adding incentives among other auxiliary interventions. Debt financing under well thought out conditions can fund such an intervention and potentially facilitate the end of the learning crisis in Uganda.

[20] (World Bank, 2018)

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