Efficiencies in education spending

Introduction

Since Namibia gained independence in 1990, the government has continued to allocate the largest share of its budget to basic education. This includes pre-primary, primary and secondary education. Over the past decade, the average annual share of education spending of total government expenditure has been 23 per cent, which is slightly higher than the international standard of 20 per cent. Despite this significant budget, the quality of education outcomes in Namibia continues to be low – evident in the high repetition rates at the senior-primary and secondary levels, as well as high drop-out rates. So investments are not being reflected in the teaching and learning outcomes, which suggests that there are inefficiencies in education spending. Efficient spending in education means that the spending of funds leads to good educational outcomes. The focus of this brief is to identify areas where spending could be more efficient.

About this brief

This brief:
- Looks at education spending within the context of declining domestic and external revenue.
- Asks how efficient spending in education is, by:
  - examining the budget allocation for each of the three levels of basic education
  - looking at the budget for textbooks and other learning materials for each education level
  - looking at the ratio of current versus capital expenditure
  - assessing the achievement of education outcomes through a regional lens.
- Makes key recommendations for ways in which spending efficiencies can be improved.
Per capita income declined from N$47,605 in 2015 to N$47,216 in 2016.

**The fiscal and economic climate in Namibia is currently constrained.**

Efficiency in education spending is therefore more important than ever.

Namibia has been experiencing economic constraints since 2016, as both domestic and external sources of revenue for the government have been in decline. It is unlikely that the budget of the Ministry of Education, Arts and Culture (MoEAC) will be increased in the foreseeable future. So it is even more important for the government to maximize the efficiency of spending on education.

**Declining domestic revenue**

The domestic economy registered growth of just above 1 per cent in 2016, due to slower growth in both primary and secondary industries. The economy is estimated to have contracted by 0.4 per cent in 2017 because of declines in key sectors such as construction, manufacturing, wholesale and retail trade, utility, fishing, and hospitality and tourism. Due to the slow growth recorded in 2016, per capita income declined from N$47,605 in 2015 to N$47,216 in 2016, pointing to a contraction of 0.8 per cent. The fiscal deficit narrowed to 5 per cent in 2017/18 compared to 7 per cent in 2016/17, and this is expected to drop to 4 per cent in 2018/19. And because Namibia was classified by the World Bank as an upper middle income country in 2009, the country is receiving less international donor funding.

**Declining revenue from the Southern African Customs Union**

Namibia is a member of the Southern African Customs Union (SACU) alongside Botswana, Lesotho, South Africa and Swaziland. It benefits from revenue coming from international taxes, which is shared among member states through a predetermined formula. SACU revenue flows account for around one third of all government revenue, and are thus extremely important to the country. However, this revenue source is projected to decline by close to 10 per cent between 2016/17 and 2019/20.

The slowdown in domestic economic activity and the projected fall in SACU revenue are expected to reduce overall government revenue. This will lead to reduced budget allocations to basic education and other sectors. These fiscal challenges call for prudent spending, in line with the 2017/18 Mid-Year Budget Review, which emphasized the need for efficiency gains.
It is important to assess the efficiency of spending across the stages of the basic education system. There is currently emphasis on investing in early learning, which is intended to lead to better education outcomes and achieve savings in the long term. This policy and strategic focus are in line with the key priorities in education outlined in the MoEAC’s Strategic Plan for 2017/18–2021/22 and the Fifth National Development Plan for 2017/18–2021/22.

At present, only 38 per cent of eligible children attend pre-primary school. The ministry is thus prioritizing pre-primary education for the next five years, to reach 80 per cent enrolment in 2021/22. It is expected that pre-primary education’s share of the basic education budget will continue to increase to reflect growing enrolment numbers. As the overall education budget is not growing, spending efficiencies will have to be achieved in other areas.

Figure 1: Distribution of education funds per learner across education levels

While the allocation of funds to schools takes different forms, the most important are the distributions for textbooks, stationery and grants for universal primary education (UPE) and universal secondary education (USE). Since the introduction of UPE in 2013 and USE in 2016, the School Development Fund was abolished and replaced by UPE and USE grants. These grants are disbursed directly to schools and are mainly used for printing, photocopying and other operational activities or items.

Expenditure management within education has been reasonably good, though budget overruns are quite common. This is largely because of overruns on personnel spending. Expenditure on teacher salaries and related costs is by far the biggest spending item and crowds out other spending. (See Figure 2.)

Figure 2: Personnel and non-personnel spending, 2007/08–2014/15


It is important to note that the MoEAC does not determine salaries or the allocation of posts, so it needs to look at efficiencies in other areas of spending in education.
Because pre-primary education does not receive separate grants, as the pre-primary classrooms are attached to primary schools or combined schools, the UPE and USE grants were not used for this analysis. Instead, the textbook budget was used to assess whether it is proportionately allocated to each level of basic education.

Studies have shown that improvements in learning outcomes are associated with the availability of textbooks and other learning materials. It appears that spending on textbooks and other learning materials results in more benefits than increased spending on personnel. Further, in developing countries where there are limited resources, textbooks are relatively low-cost inputs with high returns in terms of learning outcomes. Textbooks are especially impactful where there are large classes, a high proportion of under-qualified teachers and a shortage of time on task.

The MoEAC allocates a textbook budget to each region on the basis of learner enrolment. Figure 3 compares the textbook budget and enrolment for each education level, showing the percentage share of each level in enrolment and the budget allocation for textbooks for 2016/17. The figure shows that the textbook budget for secondary schools is disproportionately high. This needs to be thoroughly examined, as efficiency gains could be made in this area.

It is clear that the textbook budget is disproportionately in favour of secondary education. Figure 3 also shows the very low enrolment rates at the pre-primary level. The lack of investment at the foundational, pre-primary level has a severe knock-on effect on later performance. The provision of books and learning materials for the early grades and primary education should be a top priority over secondary education because quality teaching materials are shown to have the most significant impact on learning in the early years. To complement the use of textbooks at the secondary level, learners in these higher grades could make use of information and communication technology to access a wider range of learning support materials.

Learners in the early grades need a variety of books for instruction and practice, especially if they are learning in a language that is not their mother tongue, or if they are learning a new language. Insufficient investment in the early years means that more investments are needed in later stages to address the foundational weaknesses, which include high failure and drop-out rates. Research shows that the rates of return from investing in quality early childhood development and pre-primary education programmes are higher than the rates of return on services provided later.
Current expenditure takes up by far the lion’s share of the education budget. This means that there is very little budget for capital expenditure, such as new school infrastructure and the maintenance of existing school infrastructure.

The three main types of expenditures of importance are personnel expenditure, purchases of goods, and services and capital expenditure.

**Current expenditure**

Personnel expenditure and spending on goods and services make up current expenditure. Personnel expenditure consists of spending on salaries, a bonus or 13th cheque, employee pensions and social security, and other employee benefits. Spending on goods and services consists of expenditure on materials and supplies, including textbooks, other learning materials and stationery. Other activities and items in this category include transport, utilities, travel and subsistence allowance, maintenance, training courses, symposiums and workshops.

**Capital expenditure**

Capital expenditure consists of spending on construction and renovation of schools, classrooms, hostels, teacher housing facilities, laboratories, and so on. Current expenditure in basic education is overwhelmingly higher than capital expenditure, taking up an average of 94 per cent of the total budget between 2007/08 and 2014/15. This severely limits capital expenditure for building schools, classrooms and other physical facilities necessary to increase access to education, improve the quality of education and meet the health and safety needs of children. There is no optimal ratio between current and capital expenditure, but if there are pressing infrastructure needs these could be partially met from efficiency gains in current expenditure.
Assessing the achievement of education outcomes

Regional budget spending

An analysis was undertaken to determine the efficiency of spending on a regional basis, by looking at the ratio of public spending on basic education to an education outcome. By calculating the costs of secondary school education and dividing this by the number of learners achieving positive education outcomes, a rough estimation of the cost of this outcome could be established. This makes it possible to see the efficiency of outcomes by region. Due to limited data, only a comparison of regional spending on Grade 10 was carried out.

When the Grade 10 pass rates were analysed, it was observed that academic outcomes differ greatly across regions. In a region where a lower percentage of learners are passing Grade 10, their cost per positive outcome (cost per learner passing Grade 10) will be higher. This points to poor efficiency.

The findings of the analysis

The analysis found that Kunene region had the highest unit cost per Grade 10 graduate, at N$6,547, compared to Oshana region, which had the lowest unit cost at N$1,660. The disparity calls for a better understanding of the origins of observed regional variance.
The quality of teaching is a key factor in positive education outcomes

While many factors affect the Grade 10 pass rate – including school governance, learners’ abilities, the availability of textbooks and teaching and learning materials, and the socioeconomic circumstances of learners – the quality of teaching is a key one.

Using the proportion of teachers who were qualified to teach at secondary school level as a proxy for the quality of teaching, the analysis found a positive link between the quality of teaching and the Grade 10 pass rate. For example, Oshana had the highest percentage of teachers who were qualified to teach at secondary school level in 2016, at 97 per cent, compared to Kunene, at 89 per cent. While Oshana had the highest proportion of learners who passed Grade 10 at 43 per cent (as percentage of enrolment), Kunene had the lowest, at 15 per cent. In addition, Oshana had the highest proportion of qualified teachers at primary school level at 89 per cent, compared to Kunene at 63 per cent (the lowest among all the regions). This suggests that the quality of teaching in early grades is related to learning outcomes in later grades.

The results of this analysis are supported by Sutherland, Price and Gonand (2009) in their seminal work on public spending and efficiency in primary and secondary education. It was found that the proportion of qualified teaching staff is positively correlated with higher levels of public spending efficiency. Put another way, improving the qualification of teaching staff reduces public spending inefficiency. As early learning influences later learning outcomes, and the quality of teaching can improve the efficiency of public spending, it becomes critical to assign qualified teachers in pre-primary and primary grades. This will significantly contribute to improving the quality of teaching and learning and, ultimately, learning outcomes.

Figure 4: Regional unit cost per Grade 10 graduate, 2016/17
Source: Author’s compilation based on data obtained from MoEAC and EMIS 2016.
Recommendations

Realign budget allocations among the three stages of the basic education system. This would ensure that allocations to pre-primary, primary and secondary education are proportional to their fair share of enrolment, with a strong focus on the most vulnerable schools.

Increase the budget share for pre-primary education. Pre-primary education could receive operational grants, which should be allocated on the basis of enrolment, just like primary and secondary education. This would help to allocate funds proportionately to pre-primary education, in line with the MoEAC’s goal of accelerated access to pre-primary education.

Realign and increase the textbook and learning materials budget to balance the allocation at pre-primary, primary and secondary education to contribute to improved learning outcomes.

Increase the share of the budget for capital expenditure. This would be to build and maintain educational facilities and infrastructure that also accommodates learners with disabilities. This reflects the ministry’s aim to improve access to education, particularly pre-primary education, and ensures access to learners with disabilities through universal accommodation.

Improve the quality of teachers. To improve spending efficiency, the quality of teachers should be enhanced through ongoing in-service training, particularly at pre-primary and primary school levels. This is important as the quality of teachers and teaching at pre-primary and primary school stages influences the quality of learning in secondary schools.

Endnotes

4 State of the Nation Address: His Excellency Dr. Hage G. Geingob, President of the Republic of Namibia, April 2018.
11 See the references in Endnote B.