EDUCATION GLOBAL PRACTICE

Education Public Expenditure Review in Zambia

WORLD BANK GROUP

UKaid
from the British people

REPUBLIC OF ZAMBIA

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Foreword

Zambia has seen remarkable improvement in almost all economic sectors as a result of sustained favorable economic policy in the past decade or so. This economic growth has been observed in many socioeconomic indicators, and one such indicator is the poverty rate, which decreased from 64 percent to around 60 percent in 2010, a situation that led to the country's attaining the lower middle-income status, with a gross national income per capita of US$1,350 in 2012.

The education sector is one of the sectors that has benefited from the economic boom. For example, public education expenditure grew steadily in both nominal and real terms, from 15.3 percent in 2006 to around 20 percent of total Government expenditure in 2014 and 2015, in line with global trends in education financing.

This sustained financing to education has brought about tremendous improvement in the sector. For more than a decade, Zambia's education system has been continuously expanding. In particular, enrollment at higher education and high school levels substantially increased by 48 percent between 2009 and 2013 due mainly to successful expansion of education at the lower levels. Further, the Ministry of General Education has undergone some systemic and administrative restructuring, which include the transformation from the 1996 proposed basic (grade 1–9) and high (grade 10–12) to primary (grade 1–7) and secondary (grade 8–12) education system.

Lately, the Ministry introduced the output-based budgeting system aimed at tying resources to outputs as opposed to activities; and public education financing has gradually shifted toward the upper levels of education (secondary and higher education) to match the earlier focus of education expenditure on primary education, with greater emphasis on infrastructure development. However, the Technical Education, Vocational and Entrepreneurship Training subsector has however remained relatively underdeveloped, despite its potential in employment creation.

Nevertheless, despite the stable funding to the education sector and its sustained growth, the system continues to face challenges in a number of areas. The Zambia Public Expenditure Review report documents these challenges as lack of efficiency and effectiveness in resource use, high teacher absenteeism, low education quality, insufficient teaching and learning materials, high internal inefficiency, and low time-on-task, among others.

It is therefore my sincere hope that as the Ministry prepares its new National Implementation Framework to align it to the incoming Seventh National Development Plan, the Public Expenditure Review report findings and recommendations will form a basis for better resource targeting and provide an opportunity to re-look at the Ministry's priorities.

Hon. Dr. John J. N. Phiri, MP.
Minister of General Education

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Abbreviations

ASC	Annual School Census
BESSIP	Basic Education Sub-Sector Investment Program
CBU	Copperbelt University
CP	cooperating partner
DEBS	District Education Board Secretaries
ECE	early childhood education
ECZ	Examination Council of Zambia
EFA	Education for All
EMIS	Education Management and Information System
ESB	Education Statistical Bulletin
FDI	foreign direct investment
GDP	gross domestic product
GER	gross enrollment rate
GNI	gross national income
GRZ	Government of the Republic of Zambia
ICT	information and communication technologies
LCMS	Living Conditions Monitoring Survey
MDG	Millennium Development Goal
MESVTEE	Ministry of Education, Science, Vocational Training and Early Education
MFNP	Ministry of Finance and National Planning
MIS	Management and Information System
MoE	Ministry of Education
MoF	Ministry of Finance
MoH	Ministry of Health
NER	net enrollment rate
NIF	National Implementation Framework
NQF	National Qualifications Framework
OBB	Output-Based Budgeting
OJT	on-the-job training
PAF	Performance Assessment Framework
PE	personal emolument
PEO	Provincial Education Office
PER	Public Expenditure Review
PETS	Public Expenditure Tracking Survey
QSDS	Quantitative Service Delivery Survey
SACMEQ	Southern and Eastern Africa Consortium for Monitoring Educational Quality
SNDP	Sixth National Development Plan
ST	service teacher
TEVET	Technical Education, Vocational and Entrepreneurship Training

TEVETA	Technical Education, Vocational and Entrepreneurship Training Authority
TVET	Technical and Vocational Education and Training
UNZA	University of Zambia
UPE	universal primary education
ZDHS	Zambia Demographic Health Survey

Executive Summary

Overview

Historically, the Zambian education system has been well endowed with public resources and enjoyed a strong commitment from the government. This has enabled the education system to make good progress. Between 2006 and 2013, public education expenditure grew steadily in both nominal and real terms. Government expenditure on education grew from ZMW1.5 billion in 2006 to ZMW5.2 billion in 2013 in nominal terms. The education expenditure ranged between 15.3 percent and 20.5 percent of the total government expenditure during this period, and is translated as the ratio of government expenditure in education to GDP, which ranged between 3.7 percent and 4.4 percent. The budgets for 2014 and 2015 indicates that expected public education expenditure exceeds 5 percent of GDP and 20 percent of total government expenditure.

Economic development has brought Zambia lower-middle-income status, but a high prevalence of poverty still remains. Zambia is considered a lower-middle-income country with a gross national income (GNI) per capita of US$1,350 in 2012. Through the development of various economic sectors, poverty rates have been declining since the mid-1990s, falling to just over 60 percent in 2010. Important improvements have been observed in social indicators. However, poverty continues to prevail especially in rural areas. In 2010, the moderate poverty rate in rural areas was 74 percent, more than double the urban poverty rate of 35 percent. In absolute terms, 5.1 million Zambians were living in extreme poverty and 7.9 million in moderate poverty in 2010, indicating that a significant size of the population is still under poverty. Zambia's population is expected to almost double by 2030, and approximately 15.5 million Zambians will be entering the youth population (ages 15–35) between 2011 and 2030, more than the current population of the country (World Bank 2013). Depending on the quality of education that these young Zambians receive, they could be either an asset or a liability.

Education in Zambia has steadily developed and has undergone several systemic restructurings. For more than a decade, Zambia's education system has been continuously expanding. In particular, enrollment at higher education and high school levels substantially increased by 48 percent between 2009 and 2013 and by 20 percent between 2008 and 2013, respectively, due mainly to the successful expansion of education at the lower levels. To better serve the increasing educational demand, the Ministry of Education, Science, Vocational Training and Early Education (MESVTEE) has undergone some systemic and administrative restructuring. The education reform of 1996 proposed that schools be transformed from primary (grades 1–7) into basic (grades 1–9) and secondary (grades 8–12) into high (grades 10–12), but due to the constraints related to infrastructure and teacher deployment, the old primary (grades 1–7) and secondary (grades 8–12) education system was reintroduced in 2011. Administratively, the education policy reform of 2011 also merged two former education ministries into one.[1] The Ministry of Education (MoE) and the Ministry of Science, Technology and Vocational Training (MSTVT), which operated as two separate ministries until 2010, were merged into one ministry: MESVTEE. In the public financing system, the Output-Based Budgeting (OBB) system was introduced to the education sector for the first time as a pilot in 2015.

Maintaining the high level of government commitment to the education sector, public education financing has gradually shifted toward the upper levels of education. The Government of the Republic of Zambia (GRZ) has developed an education strategy that is

overall relevant to the current country context. The earlier focus of education expenditure was primary education as part of the Education for All (EFA) commitment; now focus has shifted to secondary and postsecondary education. An increasing allocation to capital budget for secondary education and higher education in 2014 and 2015 indicates that the country is making a steady step toward expansion of secondary and higher education in the post-EFA era. The only exception is the relative underdevelopment of the skills development sector, such as Technical Education, Vocational and Entrepreneurship Training (TEVET) in comparison to other subsectors. While the country is experiencing steady economic growth, unemployment and underemployment are persistent problems. By improving the TEVET sector to be more labor market relevant and accommodating the skills needs of the labor market needs, the subsector could support skills development of not only postsecondary students but also primary and secondary school dropouts who need breadwinning skills.

Despite stable funding to the education sector, the system continues to face challenges to improve the efficiency and effectiveness of resource use. The GRZ's relatively large allocation to the education sector gives ample opportunities for improving educational development. However, the wealth of public education resources is not efficiently and effectively translated to educational outcomes. Two causes can be observed: weakness in targeting the right beneficiaries and ineffectiveness of implementation. In terms of targeting, the study has found that public expenditure does not necessarily follow the pro-poor allocation. School grants do not effectively reach out to poor students. Instruments to identify the poor are in place, such as poverty targeting of university bursaries; however, almost everybody receives the bursary so in this instance public expenditure is not well targeted after all. An analysis of benefit incidence using the Living Conditions Monitoring Survey (LCMS) 2010 shows that the overall public expenditure on education is still skewed toward being pro-rich, and it is important that the GRZ improves the pro-poor allocation of educational resources.

Weak implementation of policies undermines the effectiveness of the education policies. Despite the presence of policies to ensure the quality of learning, such as school grants for primary and secondary education, weak implementation of programs undermines the effectiveness of education policies. For example, primary schools are supposed to receive school grants from the government to support the free primary education policy, but 30 percent of schools do not receive any government grants and therefore end up collecting fees from students despite the free primary education policy. Schools are often unaware of how much they are supposed to receive, and the weak transparency of the scheme adds to the implementation challenge. In an example of higher education financing, the bursary scheme is a loan scheme by law. However, none of the bursary beneficiary has ever been repaid due to a lack of mechanisms to collect the loans. While the government has been successful in mobilizing public resources for the education sector, efficiency of use and effectiveness of implementation are the key remaining challenges.

General Education

Zambia's top priority is to achieve efficient and quality universal primary education (UPE).[2] Zambia signed the Incheon Declaration in May 2015, which requires nine years of compulsory education. However, the primary education system in Zambia still suffers from internal inefficiencies as is evidenced by the continually high repetition and dropout rates. While a discussion of the causes of repetition and dropout requires another set of studies, the causes of high internal inefficiencies can be classified broadly into (a) supply-side reasons and (b) demand-side reasons. For the supply-side reasons, low quality of education is one of

the culprits. Insufficient number of teachers, despite relatively high salaries; low time-on-task rates due to relatively large absenteeism (as well as relatively low attendance) of teachers; and insufficient numbers of textbooks and teaching and learning materials are supply-side issues that the GRZ must handle. For the demand-side issues, the malfunctioning of free primary education policy is a concern. While tuition is officially abolished, schools continue to collect various fees from students, which could hamper poor students from accessing schools. To remedy this, GRZ should immediately review implementation and disbursement of school grants. The study shows that school grants do not reach 30 percent of the schools in the country, so the ineffective school grant system seems to result in the revival of student fees.

School and district grants need to be more transparent, pro-poor allocated, and properly executed to make free primary education policy functional. The budget execution of District Education Board Secretaries (DEBS) grants varies across provinces. Provinces with larger expenditure and enrollment tend to show lower budget execution, and capacity development of budget execution is needed for such provinces. Most primary schools do not receive the intended amount of school grants, and nearly 30 percent of primary schools do not receive school grants at all. One reason could be that actual disbursement of primary school grants does not fully follow the budget allocation rule. The critical problem seems to be the lack of information about the allocation formula and the amount of school grants at the district and school levels. It seems that most primary schools, if not all, do not know the amount of grants they are supposed to receive. The lack of understanding on grant amounts at the school level was one of the findings of the previous 2008 Public Expenditure Tracking Survey (PETS), too. Therefore, to improve the efficiency of grant disbursement, transparent and clear guidelines on grant distribution should be disseminated to DEBS officers and schools through head teachers with training. Furthermore, at the beginning of the academic year, an official document of the school grant formula in each province along with the expected timing of school grant disbursement should be publicly available. At the end of the academic year, the actual disbursement of school grants at the DEBS level and actual grant disbursement dates should be also publicly available. All this information can be distributed preferably via official notice through the MESVTEE website as well as formal notice to Provincial Education Office (PEO), DEBS, and schools via mail. In addition, it is strongly recommended that the government expedite the current planning of financial decentralization that enables the Ministry of Finance (MoF) to directly distribute school grants to school accounts. This will reduce any potential leakages and increase accountability of school grants at DEBS. Currently, secondary school grants are distributed directly from MoF to secondary schools, while the implementation of direct installment of primary school grants faces difficulty due to the remoteness of primary schools and additional charges by commercial banks for maintaining bank accounts.

While the GRZ's promotion of free secondary education is a commendable initiative for furthering students' educational opportunities, it poses a daunting challenge from a perspective of public financing.[3] The GRZ's strategic orientation toward expansion of post-primary education is wise since more students are completing primary education and demanding secondary education opportunities. However, the promotion of free secondary education faces two pressing issues: (a) supply shortage and (b) regressiveness (pro-rich). The current capacity of the secondary education system can accommodate only 30 percent of the students currently enrolled in grades 1–5. While the government is investing in school construction, a rapid expansion without strategic preparations could risk the quality of education. This is especially true for

the expansion of secondary education that must incorporate quality teacher development and improvement of curriculum relevance to the labor market.

Maintaining education access for grades 8–9 is an imminent issue with the new education system (the system shift from basic education [grades 1–9] to primary education [grades 1–7]). According to the new education system, the current basic education schools offering grades 8–9 schools should be converted to either primary or secondary schools. Given the limited number of secondary schools available in the country, transferring students at grades 8–9 needs careful consideration especially for schools in the adjacent areas. To maintain education access in grades 8–9, the government should plan the school upgrading and construction (expanding existing high schools offering grades 10–12 to secondary schools offering grades 8–12; and expanding basic schools offering grades 1–9 to primary and secondary schools offering grades 1–12). This should be carefully planned and implemented using geographical mapping of all schools and analyzing the demand (catchment areas) and the supply of each grade.

Pro-poor targeted support is needed for secondary education. Secondary schools rely heavily on out-of-pocket spending of students and households; 98 percent of schools charge fees to students (60 percent of students actually pay). This has led to inequality in school resources between relatively rich and relatively poor school areas. In the absence of pro-poor targeted school grants or scholarships, the current situation has resulted in fewer resources to the poorer schools and better quality of education in relatively rich schools. Students' access to secondary schools also differs by rich and poor. The promotion of the free secondary education could help to improve equity in access, but considering the financial constraints, alternative options could be considered from the angle of public expenditures. To maximize the impact of limited public resources, the GRZ should still be open to cost sharing and expect tuitions from students who can afford. The government's priority is to identify both the neediest students who cannot access their respective levels of education without public support and the neediest schools that cannot afford to provide quality education. The targeting can be done by geographical location (to target poor regions, districts, or schools) or by targeting poor individuals (where poor and rich students coexist). Poverty-targeted stipends and interventions for the neediest and cost sharing with those who can afford could be an alternative and sustainable option.

Management of teacher performance needs to be improved. Teacher performance, discussed extensively by past public expenditure reviews (PERs), has been a serious issue for over a decade. Teacher absenteeism remains high at almost 20 percent. Random visits to schools show that less than half of teachers are teaching in classrooms. Teacher attrition rate is also high at 11 percent. Without a proper incentive system and monitoring of teacher performance, this issue will persist. Empirical literature shows the mixed effect of teacher characteristics (such as education qualification and years of experience) on student performance. However, teacher subject knowledge, teacher attitudes and behavior (e.g., motivation), and better management of teachers (e.g., supervision and autonomy) have consistent positive effects on student learning outcomes. It is recommended that the MESVTEE study how to improve teacher subject knowledge, identify an effective incentive system (e.g., recruitment of motivated teachers), and develop school management for proper supervision and autonomy of teachers. This issue is discussed in more detail in the PETS-QSDS report (World Bank 2015).

The shortage of textbooks continues to be a challenge. The previous PER in 2006 showed some improvement of the textbook-pupil ratio, from 1:5 in English and 1:5 in mathematics (core subjects) to 1:2 in English and 1:3 in mathematics partly because of financial support from cooperating partners (CPs). However, the recent

data show that the ratios deteriorated back to 1:5 each in English and mathematics. Science, not in previous survey, also had a ratio of 1:5. Further, rural secondary schools tend to show more shortages in textbooks, especially English textbooks. The reason for the shortage in textbooks is likely to be mainly threefold, among other issues. One is the fund deficit for textbooks. As the number of students increase, so does the demand for textbooks.[4] The current textbook budget cannot fully cover procurement of all the textbooks needed. Second, there is misalignment of textbook policy, especially between the timing of curriculum development and procurement policy. In 2013, the textbook delivery was significantly delayed due to new curriculum development and the lack of procurement capacity in DEBS, which led to procuring the textbooks centrally and delivering them only after the new textbook was published in the middle of the 2013/14 academic year. The third reason is the lack of textbook delivery funds at the DEBS level. Since there is no secured budget for textbook delivery, DEBS tends to deduct the cost of textbook delivery from the school grant amount.

TEVET

The country will benefit from an expansion of the skills development sector, Technical Education, Vocational and Entrepreneurship Training (TEVET). As a middle-income country, Zambia will need to diversify skill sets to continue its steady economic growth. Today, the number of TEVET graduates is relatively small in the labor market, but the majority performs well in the labor market as professional workers and enjoy wage premiums for the training they received. In this regard, improvement of access to TEVET is a rational policy choice, and it needs more efforts. The Sixth National Development Plan's (SNDP) target of 50,000 TEVET enrollment by 2015 is unlikely to be achieved. Given the increasing number of graduates from secondary education and the growing demand for TEVET, it is recommended that the government continue to enhance access to TEVET at a faster pace. It makes sense to expand the TEVET system from both economic and equity points of views.

From the perspective of public education expenditure, the allocation to TEVET is relatively small and the students who come to TEVET institutions are expected to self-finance for the most part. While the system of cost sharing is effective and is encouraged to continue its balanced performance, it is also important that financial cost is not a constraint for motivated students who want to attend TEVET institutions. The current model of TEVET financing seems efficient, especially among large institutions. Large, reputed institutions attract a larger number of students nationwide, effectively collect fees, take advantage of the economies of scale to provide quality training, run industry partnership projects that improve the relevance of training, and support financial management. In contrast, small TEVET institutions are more financially dependent on the government, have relatively little attraction for students, and provide relatively weak training possibly due to out-of-date curricula and course offerings. Given the current context, it would probably make sense to develop the capacity of existing institutions rather than establishing new ones unless they are large enough to run efficiently. Government funding to TEVET institutions could be performance-based with clear criteria of funding formulas (e.g., job placement, among other things) so that small institutions can increase the quality and relevance of their training. Targeted bursary programs for the neediest students are also sensible.

The current information system could further strengthen monitoring and evaluation of the TEVET system. One critical weakness of the TEVET system is the lack of quality information. To maximize the efficient use of the limited government funding to the TEVET system, it is

critical for MESVTEE and the Technical Education, Vocational and Entrepreneurship Training Authority (TEVETA) to accumulate quality data in the system to make strategic decisions based on evidence. Collection, usage, and analysis of information related to the number of students by institution, training programs and levels, quality of training and instructors, graduates' employment outcomes, and administrative information related to fund and human resource management are critical components for better planning of this subsector.

Higher Education

The higher education subsector in Zambia seems to receive a relatively large allocation of public expenditure. In 2015, the share of higher education budget is 12.6 percent of total education. An international comparison shows that higher education students in Zambia enjoy relatively large public funding in comparison with countries among the same level of GDP per capita. The GRZ's large allocation to higher education is highly supportive to expanding university education opportunities, which is necessary because of the growing number of secondary graduates and high labor market demand for degree holders.

The GRZ's higher education financing provides enabling and conducive conditions to universities, but the higher education system as a whole suffers from weak resource management and ineffectiveness in promoting the equity. Today's large public expenditure on higher education appears to be neither effectively nor efficiently utilized. Giving public universities academic and financial autonomy is the right approach for improving the quality of university education; however, universities' chronically large debts and continuously negative financial flow—due partly to the excessive number of nonacademic staff and generous remuneration packages—hint there is a possible moral hazard in the financial management of public universities. A possible option for improving the university management is to gradually introduce performance-based funding, such as competitive funding. Although competitive funding may not directly address the universitywide HR issues, competitive funding by academic faculties could ensure that limited government resources are put into a motivated faculty delivering outputs and outcomes.

The bursary scheme needs to function for the sustainability of the system and to improve the impact on the poor. Today, 77 percent of the university enrollment is from the richest 10 percent of the population. While the bursary scheme has a built-in mechanism to identify relatively poor students, it should be acknowledged that the majority of the students who come to universities are from better-off households since most of the poor students drop out before reaching higher education. The bursary scheme is a loan scheme, which none of the beneficiaries have repaid in its history. The combined result is a huge economic benefit to the recipient students, who are likely to be relatively wealthy (i.e., mostly from the richest 30 percent of households). This only furthers inequitable distribution of public expenditure on education. Moreover, even if fully functional, the current bursary scheme cannot fully recover the cost due to high inflation. One of the options to improve the sustainability of the bursary scheme is allocating a larger proportion of students who receive 25 percent or 50 percent of tuition support (the total of which is currently only 4 percent of all university bursary beneficiaries). In other words, the majority of the bursary beneficiaries receive either 75 percent or 100 percent of financial supports. The appropriate proportion of the beneficiaries will allow keeping the total budget for the bursaries smaller while providing support to those who are most needy.

Subsector	Short-term (1–2 years)	Medium-term (3–5 years)
Primary and secondary education	*Improve the efficiency of public funding in the education sector* • Assess needed budget for textbook procurement and distrubtion to all schools • Plan school mapping and confirm and implement the selection criteria for school conversion plans • Develop a secondary school grant formula that takes into account equity issues • Conduct regular monitoring and reporting on primary school grants distribution • Harmonize the education sector data (Education Management and Information System [EMIS], Examination Council of Zambia [ECZ], projects, etc.) including cleaning up the data discrepancies in the *Education Statistical Bulletin* (*ESB*) (e.g., net enrollment rate [NER], repetition, and dropout rates) • Provide training on data analysis (programming) on household surveys (e.g., LCMS, Demographic and Health Survey [DHS]) to technical staff in MoE	• Implement the school conversion plan nationwide, using the selection criteria • Procure textbooks in a harmonized manner (centralization or decentralization), and increase the textbook budget to ensure distribution is to school level • Analyze education-related areas of LCMS and other household survey data to review possible policy and strategic responses to results
TEVET	*Increase the allocation of the public expenditures in TEVET as a share of total government education expenditure because the (private) rate of returns is high and the supply of the TEVET graduates is welcomed by the market but remains limited* • Identify well-performing institutions that show healthy financial statements as well as high employment rates, and prioritize in investing the limited government funding to such institutions (rather than establishing new institutions) • Identify institutions that show poor performance in financial and academic management (they are likely to be small institutions in rural areas) • Diversify funding sources through public private partnership • Develop the financial capacity of bursary scheme to target more poor but capable students to provide financial support • Identify strategic sectors to strengthen specific skills in those sectors (e.g., science, engineering, and technology) • Develop the EMIS capacity	
Higher education	*Improve the efficiency of the public spending on higher education since arrears of public universities are compensated by the ministry* • Establish a better targeting mechanism to identify poor students who cannot enroll in university without bursary • Study a new sustainable loan scheme with a strong mechanism in which the ministry tracks down students for repayment • Conduct a thorough assessment of resource management at public universities and mutually agree between public universities and the ministry on a new funding meachanism (i.e., performance-based funding); and science, technology, and engineering • Identify three to four national priority fields in higher education, especially science, technology, and engineering	• Overhaul the current bursary scheme and establish a new loan scheme with more effective targeting mechanism (possibly linking with the national pension scheme) • Gradually introduce performance-based funding not only to public but also to private universities • Strategically provide public funding to increase support to science, technology, and engineering fields

Notes

1. The Education Ministry was split again into two ministries in September 2015. This report, however, continues to consider the MESVTEE as one ministry.
2. While the MESVTEE states that early childhood education (ECE) is also one of the priorities in the ministry, this report focuses on only primary, secondary, TVET, and higher education.
3. While the government promulgated the policy of free education from grades 1–12, education is currently free at the primary level (grades 1–7). The government aims to extend the current free primary education to secondary gradually, but this intention has not been actualized.
4. Other issues include the cost of the curriculum rollout, delays because of court cases, and a high distribution cost of textbooks.

Chapter 1

Context of Educational Development in Zambia

This chapter gives an overview of the recent development of the education sector in the country, followed by discussions on the administrative systems and sector issues at different education levels. Over the past decade, the government has accelerated education reforms at all subeducation sectors. At the general education level (grades 1–12), a new policy brought back the primary and secondary education system as opposed to the basic and high school systems, and the government introduced a free education policy at the primary level and promotes a free education at the secondary level. However, many schools face serious issues in the implementation of both policies on the ground. At the Technical Education, Vocational and Entrepreneurship Training (TEVET) level, the system was decentralized to the institutional level to a large extent. Public TEVET institutions became semiautonomous with administrative and financial autonomy. While the number of graduates from secondary education has grown significantly, many public TEVET institutions find it difficult to accommodate more students due to the limited public funding available. Similarly, the higher education level has experienced a rapid increase in enrollment over the past decade. The government has established the Higher Education Authority to manage more efficiently the system and to ensure the quality of education at the university level.

Country Context for Educational Development

The Government of the Republic of Zambia (GRZ) enjoyed stable economic growth during the 2000s, with an annual average of 5.6 percent growth over the decade, and has shown accelerated growth recently. Zambia's economy was expected to grow by 6.5 percent in 2014. This would exceed the growth rate of 4.6 percent for the whole of Sub-Saharan Africa and the rate (excluding South Africa) of 5.6 percent (World Bank 2015). Fast growth has been the result of increases in productivity in the key leading sectors, sustained by an improved macroeconomic environment and structural reforms. Sound economic policies in the context of a favorable external environment have contributed to increased investment and rising incomes. Notably, Zambia's steadily rising gross domestic product (GDP) has been led by growth in the copper mining industry, which has benefited not only from higher global prices but also from substantial increases in foreign direct investment (FDI). In addition to mining, significant expansions have been observed in the construction and service sectors, and to a lesser degree in manufacturing. In terms of value added, the mining sector grew by an average of 10 percent from 2001–11; the construction sector grew by 15 percent; transport and communications, by an average of 11 percent, and tourism-related activities, by 8 percent (World Bank 2012).

In 2014, the robust economic growth of Zambia was based largely on the strength of rising copper production, a bumper maize harvest, and public infrastructure investments. The rebased national accounts reveal that the services sector now accounts for the majority of economic activity in Zambia.[1] In 2014, the sector was projected to account for 40 percent of total economic growth, largely due to growth in the wholesale and retail trade and the transport, storage, and communications industries. Construction

continues to be the foundation of Zambia's growth. The industry was projected to grow at 11 percent in 2014 and to account for one-fifth of total GDP growth. A bumper maize harvest was fueling a rebound in agriculture, which was projected to grow by 8.3 percent in 2014. Copper production was expected to grow by 17 percent in 2014, and to continue increasing in the medium term as new mines open (World Bank 2015). The Global Competitiveness Index, produced by the World Economic Forum, shows that Zambia, through steady development of the economic sectors, is ranked 96th out of 144 countries for 2014–15, up from 113th out of 142 countries in 2011–12.

Zambia is considered a low-middle-income country with a gross national income (GNI) per capita of US$1,350 in 2012. Through development of various economic sectors, Zambia has seen its poverty rates decline since the mid-1990s, falling to just over 60 percent in 2010, and important improvements have been observed in social indicators. Zambia ranked 141st among 187 countries on the Human Development Index for 2014 and is considered to be a medium human development country. Life expectancy at birth was 58.1 years in 2013 and the mean years of schooling was 6.5 years. Between the mid-1990s and mid-2000s, Zambia achieved substantial progress in reducing poverty nationwide, with the national moderate poverty rate[2] falling from 68.1 percent to 59.3 percent between 1996 and 2006.

Despite an overall improvement in social indicators, poverty continues to prevail, especially in rural areas. As in many countries throughout Sub-Saharan Africa and around the developing world, poverty in Zambia is overwhelmingly a rural phenomenon. In 2010, the moderate poverty rate in rural areas was 74 percent, more than double the urban poverty rate of 35 percent. Because roughly two-thirds of the population live in rural areas, the countryside is home to 80 percent of Zambia's poor. Rural poverty is also far more severe: almost 90 percent of Zambians living below the extreme poverty line are concentrated in rural areas. This is largely an effect of uneven income growth in the urban and rural economies. Rising incomes have been densely concentrated among a relatively small segment of the urban workforce, while high urban unemployment rates effectively block the rural labor force from participating in the country's more dynamic economic sectors (World Bank 2012). In absolute terms, 5.1 million Zambians were living in extreme poverty, with 7.9 million in moderate poverty in 2010, indicating still a significant size of population under poverty. In addition, Zambia's population is expected to almost double by 2030, and approximately 15.5 million Zambians will be entering the youth population (ages 15–35) between 2011 and 2030, more than the current population of the country (World Bank 2013). Depending on the quality of education these youth receive, they could be an asset or liability.

Overview of Education Sector Planning and Administration

The education system was restructured in 1996 and in 2011. The education reforms of 1996 proposed that schools be transformed from primary (grades 1–7) into basic (grades 1–9), and secondary (grades 8–12) into high (grades 10–12).[3] However, out of the 8,493 primary schools only 3,176 have been transformed to full basic schools, while of the 644 secondary schools only 232 have been transformed into high schools. This means that only a small number of schools have conformed to this directive while a large number of schools did not.

The policy modification introduced in 2011 placed the old primary (grades 1–7) and secondary (grades 8–12) education system back in place and aimed to address some key issues associated with basic and high school education systems. The first issue was the infrastructure. Basic schools, which cover grades 1–9, require laboratories, workshops, and other specialized rooms and facilities; many schools were unable to upgrade accordingly. The second issue was teacher management and deployment. Some

primary schools converted to basic schools but did not have suitably qualified teachers to teach grades 8–9; some schools had extra teachers who were not teaching the minimum standard number of periods, hence resulting in an underutilized teaching force. The teacher training system was also complicated. The teacher education system was meant to train teachers for grades 1–7, 8–9, and 10–12, not grades 1–9 and 10–12. With the recent system reform, the current Zambian formal education now covers early child education (ECE) for preprimary school children; primary education (grades 1–7) for children ages 7–14; and secondary education (grades 8–12) for children ages 15 to 19 (table 1.1). However, the terminologies referring to the education system in the current policy (Educating Our Future) and the legal system (the Education Act of 2011) do not align. The legal system does not recognize primary and secondary schools and keeps the previous system of basic and high school.

The current education sector development plan is guided by the Education Sector National Implementation Framework III (NIF III), for the period of 2011–2015, under the Sixth National Development Plan (SNDP). Vision 2030 sets clear education targets by 2030 based on which the SNDP and NIF III were developed.[4] The plan covers sectors including ECE, primary, secondary, TEVET and higher education, youth and adult literacy, and some thematic development issues such as information and communication technologies (ICT) in education and infrastructure development. The framework is closely aligned with the international educational development agenda, namely the Education for All (EFA) initiative and the Millennium Development Goals (MDGs). Having made successful progress in primary education, the strategic focus of the education sector during the NIF III period has shifted to an expansion of access to high school and tertiary education. It also emphasizes the need for improving the quality of education at all levels so that appropriate skills, knowledge, attitudes, and values required for social and economic development are imparted to the learners. It gives special attention to curriculum review, development, and delivery as well as teacher availability, especially in the rural areas (MESVTEE 2011).

The education policy reform of 2011 also introduced a merger of two education ministries. The Ministry of Education (MoE) and the Ministry of Science, Technology and Vocational Training (MSTVT), operated as two separate ministries until 2010; they were merged into one Ministry of Education, Science, Vocational Training and Early Education (MESVTEE) under the new education policy introduced by the new government. The merger aimed to achieve the following: (a) harmonizing the planning of education delivery from the lowest to the highest levels since previously the levels were not "speaking" to each other because they were under different portfolios and ministries; (b) easy targeting and improved budgeting of educational activities, thereby removing duplications; and (c) easy monitoring, evaluation, and reporting under one umbrella. A tangible outcome after the merger has been the establishment of a two-tier system at the secondary education level: one tier for students who follow an academic path and the other tier for those who pursue a technical path. On the latter path, students at grades 8–10 can undertake technical subjects, besides academic classes, to acquire labor market-oriented skills at an early age. The ministry is currently undertaking this

TABLE 1.1 Zambian Education System Changes

Pre-1996	—	Primary (grades 1–7)	Secondary (grades 8–12)	Higher education
1996–2011	—	Basic (grades 1–9)	High (grades 10–12)	Higher education, TEVET[a]
2012–current	ECE	Primary (grades 1–7)	Secondary (grades 8–12)	Higher education, TEVET[a]

Note: ECE = early child education. TEVET = Technical Education, Vocational and Entrepreneurship Training. — = not offered.
a. The TEVET sector underwent a major policy reform in 1998.

initiative as a pilot with 47 secondary schools and TEVET institutions (World Bank 2015).[5]

The Government of the Republic of Zambia (GRZ) has embarked on a pilot Output-Based Budgeting (OBB) for the education sector in 2015. The medium-term expenditure framework has been used to provide a three-year rolling expenditure, and annual budgets have been set according to the MTEF, which is consulted with regard to strategic priorities, economic situations, and the resource envelope. To further enhance the potential efficiency of public financing, GRZ identified the MESVTEE as the pilot ministry to be migrated to the OBB system in 2015. Under this system, the educational output or targets are identified and the expenditures are aligned to each of the targets. While it was difficult to identify which education level some of the activities belonged to, especially those included under the expenditure head of the MESVTEE directorates, this transition to OBB enables the planners to better allocate resources to different subsectors of education and see the linkages between the budgets and the outcomes.[6] The Public Expenditure Review (PER) does benefit from the shift to OBB, but since it is newly begun for FY2015, the bulk of this analysis focuses on the past expenditure, in the old regime of the expenditure structure.

The contribution of borrowings to the GRZ's revenue gradually increased between 2009 and 2012, crowding out external assistance. The trend of the central government's receipts shows that the GRZ is less dependent on external assistance. The tax receipt has shown a robust growth from US$1,871 million to US$4,036 million during the same period, supporting GRZ's stable fiscal operation (table 1.2). The amount of external grants fluctuates between US$278 million to US$842 million between these years, but its proportion in the total government revenue is on a diminishing trend. In contrast, the role of external and domestic borrowing has increased. The actual amounts of external borrowing increased from US$106 million to US$1,394 million while those of domestic borrowings increased from US$237 million to US$2,184 million between 2009 and 2012. The combined share of these borrowings increased from 11 percent in 2009 to 43 percent in 2012.

TABLE 1.2 Breakdown of Actual Total Government Revenue, 2009–12

US$, millions[a]

	2009	2010	2011	2012
Receipts	**2,024**	**2,875**	**4,102**	**4,257**
Taxation	1,871	2,656	3,788	4,036
Nontax Revenue	154	219	314	221
External assistance	**656**	**278**	**842**	**430**
Multilateral grants	310	9	258	178
Bilateral grants	154	55	444	136
Other grants and aid	191	213	140	117
External borrowing	**106**	**204**	**237**	**1,394**
Domestic borrowing	**237**	**406**	**565**	**2,184**
Total receipts	**3,023**	**3,763**	**5,746**	**8,265**
% receipts	67	76	71	52
% external assistance	22	7	15	5
% external borrowing	3	5	4	17
% domestic borrowing	8	11	10	26

Sources: MoF Financial Statement C 2009–12; World Bank World Development Indicators Database.
Note: Between 2010 and 2012, direct support to projects was recorded separately from the central account and documented separately in the MoF *Financial Statement C*. This table includes and reflects the direct support in the total receipts.
a. The US$ value is calculated by using World Bank World Development Indicators data.

Overview of the Education System and Recent Subsector Issues

Student enrollment has been increasing at all levels of education since 2008. The 2006 education sector PER shows that student enrollment has been growing since 2000. It indicates that the education system has been expanding continuously for more than a decade in Zambia. In particular, given the data from the *Education Statistical Bulletin* in 2013, the enrollment at higher education and secondary school levels substantially increased by 48 percent between 2009 and 2013 and 20 percent between 2008 and 2013, respectively (table 1.3). The increase of enrollment in secondary education reflects the growing number of graduates at the primary education level. Similarly, the recent rapid growth of higher education enrollment is mainly due to the increasing number of graduates from secondary education and probably due to more students aspiring to higher education. The public expenditure tracking survey and quantitative service delivery survey (PETS-QSDS) conducted in 2014 showed that almost 90 percent of primary and secondary students want to pursue at least a bachelor's degree in higher education.

The education sector as a whole has experienced significant system changes at all education levels over the past decade. To name a few, the basic and high school education system was introduced in 1996, but after 15 years, the system went back to the primary and secondary education system. There was a policy reform in TEVET in 1996, and subsequently the Technical Education, Vocational and Entrepreneurship Training Authority (TEVETA) was established in 1998 to ensure that TEVET institutions adhered to the newly established quality assurance system. At the higher education level, the Higher Education Authority was recently established in 2014. The subsections that follow discuss major system changes at each education level in the past and address major challenges facing the respective education levels.

Primary and Secondary Education System and Major Issues, Grades 1–12

The NIF III (2012–15) states that the main objectives of general education are to increase access, efficiency, and equity and ensure quality in ECE, primary, and secondary education. This entails the following policy priorities: (a) increase access through reducing the cost of education by introducing free and compulsory primary and secondary education (grades 1–12); (b) expand school supply by upgrading primary schools with grades 1–4 to full-fledged primary schools with grades 1–7 and community schools to secondary schools; (c) increase the relevance of education through emphasis on life skills and introduce a two-tier system (academic and technical paths) for secondary education; (d) promote inclusive education for children with learning

TABLE 1.3 Trend of Enrollment, by Level of Education

	2008	2009	2010	2011	2012	2013
Primary (G1–7)	2,909,436	2,943,975	2,821,018	3,030,120	3,135,442	3,075,161
Secondary (G8–12)	617,394	665,490	562,682	617,394	743,995	743,175
TEVET	33,399	31,173	32,303	33,234	34,910	35,599
Higher Education	—	19,843	21,482	24,623	27,943	29,460
Total	3,560,229	3,660,481	3,437,485	3,705,371	3,942,290	3,883,395

Sources: Reports prepared by CBU and UNZA for the World Bank team (not publicly available); MESVTEE Education Statistical Bulletin 2013; TEVETA Annual Report (various years).
Note: Higher education includes only UNZA and CBU. There are three public universities in Zambia, and these two universities account for most of the higher education enrollment in the country. While the organized enrollment statistics are not yet available for the sector, MESVTEE estimates that the enrollment of higher education, including private universities, was roughly between 60,000 and 70,000 in 2013.
— = not available; TEVET = Technical Education, Vocational and Entrepreneurship Training.

disabilities and special education; and (e) ensure quality education by upgrading teacher qualifications through in-service training.

Since the education system is still transitioning from basic to primary and from high school to secondary, there are many types of schools offering education for different grades (table 1.4). The government budget and expenditure reports, for instance, also show primary, basic, secondary, and high school education, depending on budget items. It is not possible to divide basic education between primary and secondary in the budget and expenditure reports. Therefore, this report follows the education categories used by respective official government documents. Primary education refers to grades 1–7, secondary refers to grades 8–12, basic refers to grades 1–9, and high school refers to grades 10–12, if not otherwise specified.

The performance of general education (grades 1–12) in the past decade can be summarized as an expansion of the supply of schools along with an increase in enrollment, especially at the secondary level. In 2013, basic schools increased by approximately 600—up from 8,195 in 2008 to 8,801 in 2013 (9,548 in 2014[7]). This was mostly due to an increase in government schools. In 2013, 62 percent of basic schools were government schools and 33 percent were community schools. This captures the enrollment increase in basic school students: 236,000 more students at grades 1–9, compared to 2008 (figure 1.1). In the early 2000s, an increase in access to education was partially credited for the increase in enrollment rates—from 68 percent to 75 percent in net enrollment rate (NER) between 1998 and 2003. During this period, new schools were built, basic schools were upgraded, and primary education was made free for grades 1–7. Similarly, there has been a steady expansion in secondary or high school education. There were 84 more secondary schools (grades 8–12) in 2013, compared to 2008, and both government and private secondary schools expanded in a similar trend. The government is a major service provider in secondary education and accounts for 76 percent of secondary school supply. With an increase in school supply, there were 119,000 more secondary students in 2013 as compared to 2008.

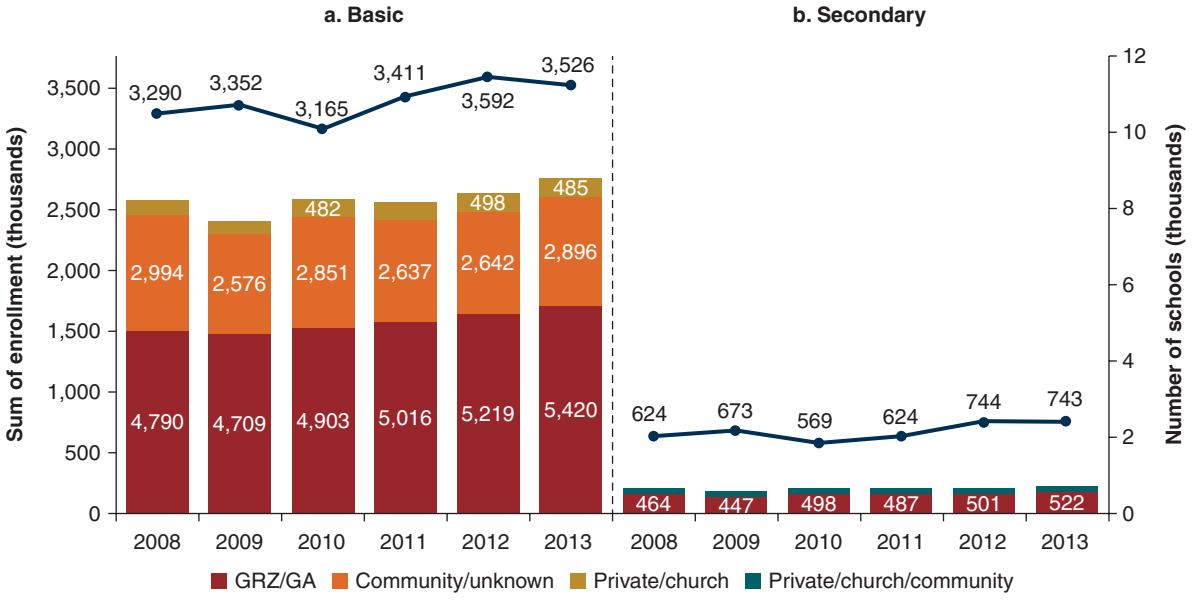
TABLE 1.4 Number and Share of Schools, by Grades

Grades	Number	%
1–4	745	8
1–7	4,272	45
1–9	3,330	35
1–12	89	1
8–9	8	0.1
8–12	337	4
10–12	86	1
Unknown	617	7
Total	**9,484**	**100**

Source: MESVTEE Education Statistical Bulletin 2013.

Zambia has made good progress toward achieving the MDGs, but universal primary education (MDG 2) is still midprogress (box 1.1). Since the late 1990s, the GRZ has shown conviction in achieving universal primary education by establishing the basic school system (grades 1–9) and the free primary education policy. By the mid-2000s, the NER in primary education rose from 68 percent to 75 percent and grade 7 completion rate increased from 64 percent to 72 percent, according to the government. However, in 2010, the enrollment and completion rate did not improve as simulated in mid-2000. Although GER shows almost a full enrollment capacity of primary school age children (99 percent) in 2010, only 73 percent of primary school age children are enrolled in primary schools and 74 percent of children ages 16–19 have completed primary education in 2010 (figure 1.2). Preliminary findings from LCMS 2015 show slight increases in access (the 105 percent GER and 78 percent NER) in 2015; however, the universal primary education has not yet been achieved. According to the ZDHS 2013–14, GER is 102 percent, NER is 80 percent, and completion rate is 79 percent for primary education. GER and NER are slightly higher than those in LCMS 2010.[8] The education system reform reverting back to primary school system in 2011 (grade 7) may change the dynamics of

FIGURE 1.1 Number of Basic (Grades 1–9) and Secondary (Grades 8–12) Schools and Enrollment



Source: MESVTEE Education Statistical Bulletin 2013.
Note: GA = government aided; GRZ= Government of the Republic of Zambia.

BOX 1.1 Zambia's Progress on MDGs

By 2013, Zambia had made important strides toward the 2015 MDG targets, especially in primary school enrollment, child malnutrition, and the fight against malaria. Improvements in other areas, however, remained slow with challenges holding back key policy and institutional reforms. Some targets, such as improved sanitation, environmental sustainability, and gender equality in political representation, actually saw a reversal in progress.

MDG 1: Eradicate Extreme Poverty and Hunger
Despite reductions in poverty from 58 percent in 1991 to 42.3 percent in 2010, Zambia is still far from reaching its goal of 29 percent extreme poverty by 2015. Urban areas have been most successful at reaching their targets while rural areas lag behind.

MDG 2: Achieve Universal Primary Education
Improvements in primary education infrastructure and free primary education have pushed primary enrollment and completion steadily upward, with both higher than 90 percent by 2010. Despite universal primary education on track, the quality of education, secondary enrollment, and completion are areas still in need of reform.[a]

MDG 3: Promote Gender Equity
Educational reforms improved primary enrollment and completion significantly for girls, helping to tighten the gender gap in primary enrollment and literacy. Yet this gap still remains at the secondary and tertiary levels, and widens even further for female participation in government.

box continues next page

BOX 1.1 Zambia's Progress on MDGs *(continued)*

MDG 4: Reduce Child Mortality
Child mortality declined by almost 30 percent since 1992 with immunization coverage, exclusive breast-feeding, vitamin and mineral supplementation, and malaria prevention and treatment, but still remained more than double the 2015 target for children under five.

MDG 5: Improve Maternal Health
The decline in maternal mortality is insufficient to reach the 2015 target. The 2013 progress report recommended scaling up successful interventions and investing more in mothers' education and nutritional status.

MDG 6: Combat HIV/AIDS, Malaria, and Other Diseases
Zambia has achieved and surpassed the MDG target for HIV prevalence although some provinces still have higher rates than the national average and HIV incidence remains high throughout the country. A drop in health sector resources after 2009 led to a reversal of previous gains in malaria control and prevention.

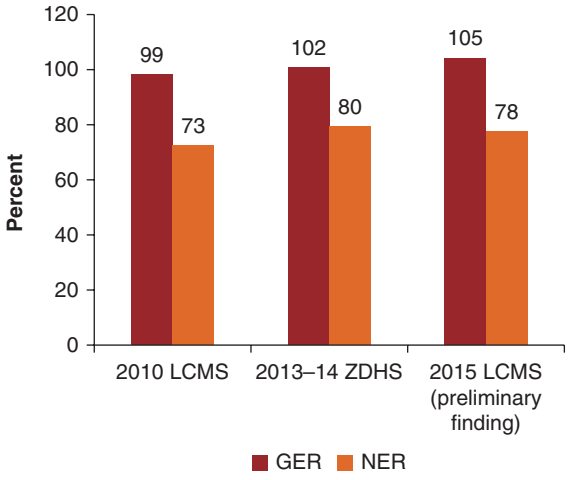
MDG 7: Ensure Environmental Sustainability
Forest coverage reductions due to overexploitation were only just starting to be addressed, with a tree planting campaign and a timber export ban. More Zambians have greater access to clean water, but their access to improved sanitation has actually declined, especially in rural areas and informal settlements.

MDG 8: Develop a Global Partnership for Development
Zambia has transitioned from a low-income to lower-middle-income country with a series of financial reforms since the 1990s, debt relief, and the rise in copper prices. Its decreased access to concessional lending and overseas development assistance has also led it to invest more in foreign direct investment.

Source: UNDP Millennium Development Goals Report for Zambia 2013.

a. The figure is based on the student enrollment given in the Education Statistical Bulletin (MoE) and population projection from the census. The ESB discusses the quality of data. Based on our analysis using LCMS in 2010, the NER is likely to be much lower.

FIGURE 1.2 MDG Universal Primary Education in Zambia



Sources: LCMS 2010, 2015 (preliminary finding).
Note: GER = gross enrollment rate; LCMS = Living Conditions Monitoring Survey; MDG = Millennium Development Goals; NER = net enrollment rate; ZDHS = Zambia Demographic Health Survey.

primary education service and provide more concentrated and efficient management of primary schools.

Gender parity in primary and secondary education (MDG 3) shows good progress in primary education; however, challenges remain in secondary education. Eliminating gender disparity in primary and secondary education has been partially achieved. According to the *ESB*, there is an almost equal number of boys and girls in basic schools (gender parity index ranges between 0.98 and 1.00 in early 2010s) while for the upper secondary grades (10–12), there is a substantial gender gap of 84 female to 100 male students. In terms of enrollment rates by gender, girls tend to be in school at a more appropriate age when compared to boys. According to the LCMS 2010 and 2015 (preliminary), the NER shows almost the same rates for

BOX 1.2 Calculation of GER and NER Using ESB, LCMS, and ZDHS

There are three data sources that this study refers for reporting of GER and NER.

Education Statistical Bulletin (ESB) 2013
MESVTEE published its annual *ESB,* which primarily provides quantity (e.g., size of enrollment and schools) and quality (e.g., efficiency and school inputs) measures in education through the Annual School Census (ASC) exercise. The information represents the official statistics for MESVTEE.

Living Conditions Monitoring Survey (LCMS) 2010 and 2015 (preliminary findings)
Every five years, the Central Statistical Office (CSO) conducts the household survey representative at national, provincial, and urban and rural levels. This survey provides the information for various government and donor policies and programs such as poverty rates and other socioeconomic indicators (e.g., health and education indicators). The survey covers a range of topics from economic activities at the household level to the health and education status at the individual level. In November 2015, the CSO released the preliminary findings of LCMS 2015.

Zambia Demographics and Health Survey (ZDHS), 2013–14
The 2013–14 ZDHS is a national sample survey designed to provide up-to-date information on background characteristics of the respondents' demographics, including education and health. The 2013–14 ZDHS was implemented by the CSO in partnership with the Ministry of Health (MoH).

Calculation of Enrollment Rates
The calculation of both GER and NER requires the population estimate of relevant age groups (e.g., population estimates of children ages 7–13 for primary GER and NER and that of children ages 14–18 for secondary GER and NER). The *ESB* utilizes the population projected by the CSO based on the census in 2000. However, the estimates do not reflect such changing trends as birth and death rates, migration, and other demographic changes over the past decade. This causes the problem of overestimates of NER and GER because only the denominator is based on population projection and the numerator is based on enrollment figures for the year that MESVTEE conducted the school census. This results in over 100 percent NER. (NER can never go beyond 100 percent.) In *ESB*, it states, "*The MESVTEE is aware that enrollment for some age groups may exceed the current population estimates, and has been working with the CSO to adjust the population projections.*" Hence, for the consistency and reliability of the report, this study uses the LCMS and DHS for the calculation of major education indicators such as GER and NER.

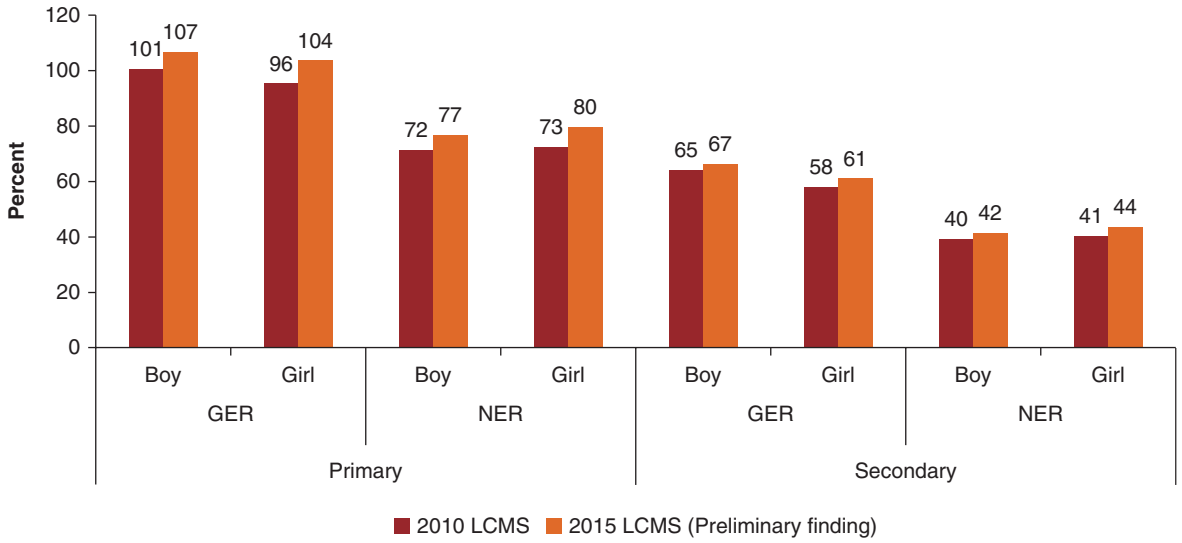
However, using LCMS or ZDHS, which are representative samples of households in the country, the GER and NER seem to be consistent since both denominators and numerators are based on the same source in the respective survey data. This report utilizes LCMS 2010, ZDHS 2013–14, and LCMS 2015 (preliminary findings).[a]

a. It should be noted that this report refers to LCMS 2015 preliminary findings that are published by Central Statistical Office in November 2015. If the information is not available in the preliminary findings for 2015, this report uses LCMS 2010 for analysis.

both boys and girls in primary and secondary (figure 1.3). However, GER for boys is higher than that for girls. This may be because there are more schooling age (7–18) girls than boys in Zambia.[9] According to preliminary findings in LCMS 2015, there is a slight improvement in GER and NER in 2015 since 2010, and the primary NER for girls has improved more than that for boys while the main trend in secondary for boys and girls remain same as 2010.

Despite the progress made by Zambia's education system, the nation currently faces several serious issues including stagnating NER, continuously low student learning levels, low transition rates from primary schools to secondary schools, and no improvement

FIGURE 1.3 Gender Parity at Primary and Secondary, 2010 and 2015



Sources: LCMS 2010, 2015 (preliminary findings).
Note: GER = gross enrollment rate; LCMS = Living Conditions Monitoring Survey; NER = net enrollment rate.

of some service delivery indicators (teacher absenteeism and low student-teacher contact time).

- *Access*: The NER for primary education has been stagnant after rapid improvement in the late 1990s and early 2000s. The PER 2006 showed that the NER for primary education ages 7–13 had reached 75 percent in 2001–2 rising from 68 percent in 1998. Yet in 2010, according to LCMS, the NER for primary education (ages 7–13) was 73 percent (78 percent in 2015 LCMS preliminary findings) and NER for secondary education (ages 14–18) was 41 percent (LCMS and EMIS, PER 2006; 43 percent in 2015 LMCS preliminary findings). However, the secondary GER has improved dramatically between 2004 and 2010 and improved marginally between 2010 and 2015 (figure 1.3). GER for lower secondary (grades 8–9) increased from 46 percent to 96 percent in 2010, and GER for upper secondary (grades 10–12) increased from 22 percent to 59 percent in 2010.
- *Internal efficiency:* Only 37 percent of grade 1 students reach grade 9 and most dropouts happen during the transition from primary education to secondary education (grades 7–8) with a 62 percent transition rate (*ESB* 2013).
- *Learning achievements*: Student performance has been low—below the 40 percent mark—in all subjects (English, math, local language), and performance of life skills and local language skills deteriorated between 2008 and 2012 (Examination Council of Zambia 2015).
- *Teacher management*: There has been no improvement in teacher absenteeism of 20 percent since 2002 (World Bank 2015). Teacher attendance and teacher absence rates are consistent. While teacher attendance is almost 80 percent, teacher absence rate is about 20 percent.

TEVET System and Major Issues

National Strategies in TEVET. **Job and employment creation, especially for the youth, is at the center of the government policy.** Youth unemployment and skills shortages have been longstanding issues in Zambia. Vision 2030, Zambia's first written long-term plan, addresses these issues with the aspiration to become a middle-income country by 2030. Subsequently, Vision 2030 paved the way for developing both the Fifth National Development Plan 2006–10 (FNDP) and the Sixth National Development

Plan 2011–15 (SNDP). Job and employment creation define the core of both plans. In particular, the SNDP puts strong emphasis on promoting the creation of decent jobs and skills development for youth. The main objective of the SNDP with regard to skills development is to increase efficiency and equitable access to quality basic skills and TEVET. The government aims to achieve this objective by promoting participation of women and more collaboration with the private sector. The SNDP further sets specific indicators to monitor the progress of the objective. For instance, by 2015: TEVET enrollment is to increase from 33,000 in 2009 to 50,000; the completion rate of TEVET institutions is to increase from 91.8 percent in 2009 to 94.3 percent; and the PTR is to reduce from 40 in 2009 to 20. Further, the government aims to invest more in TEVET infrastructure (i.e., 10 new TEVET institutions between 2011 and 2015, rehabilitation, and equipment).

Legal and Policy Framework of TEVET. In 1996, the government issued a policy document, "Technical Education, Vocational and Entrepreneurship Training (TEVET) Policy" (see box 1.3). This document identified the problems facing the economy and the need for training institutions to provide the right mix of skills to support Zambia's development and students' employment prospects. In particular, the TEVET Act of 1998 became an important milestone for Zambia's TEVET sector. The central government made a bold step and decentralized decision-making processes and functions to the institutional level. As a result, financial and management autonomies were granted, to a large extent, to the management boards within TEVET institutions. (Hamweete 2008). Management boards were expected be more demand-driven, effective, and efficient in terms of provision of skills development opportunities to the increasing number of youth graduating from the school system. Subsequently, Zambia's National Qualification Framework (NQF) was also newly developed under the TEVETA initiatives. It consists of ten levels, starting from level 1 for primary education to level 10 for doctorate (figure 1.4).[10] The TEVET stream is placed at NQF 3–6. MESVTEE provides certificates mainly at levels 4–6.

FIGURE 1.4 National Qualification Framework Levels

10	Doctorate	**Higher education**
9	Master's Degree	
8	Postgraduate qualifications	
7	First degree	
6	Diploma	**TVET**
5	Advanced certificate/technician	
4	Crafts certificate	
3	Trade certificate	
2	Secondary education	**Schooling**
1	Primary education	

Source: MESVTEE.
Note: TVET = Technical and Vocational Education and Training.

Registered Institutions and Enrollment. **Public/government TEVET institutions are growing.** The number of TEVET institutions, of which 63 percent are located in either Lusaka or Copperbelt, slightly increased from 276 in 2008 to 303 in 2009 (table 1.5). Since 2009, the number has been constant at the same level of approximately 300 from 2009–11. In 2012, however, TEVET institutions decreased across all ownerships, and this resulted in the lowest total of 230. In particular, private and church TEVET institutions decreased by 50 percent and 17 percent, respectively, between 2008 and 2012. The number of institutions increased slightly to 275 in 2013.[11]

The share of private institutions gradually decreased from 39 percent in 2008 to 23 percent in 2012 (table 1.5). While it slightly recovered to 28 percent in 2013, it decreased by almost 10 percentage points from 2008. In contrast, the share of public/government TEVET institutions increased from 21 percent to 32 percent between 2008 and 2013. Eventually, the actual number and share of public/government institutions exceeded private institutions in 2013. It is not known why private institutions have significantly decreased since 2011. A potential reason could be the global financial crisis that began to affect the country around 2010. This may have contributed to the significant decline in the number of private institutions.

BOX 1.3 TEVET Policy Reform 1996

Goals

1. To balance the supply of skilled labour at all levels with the demands of the economy
2. To act as a vehicle for improved productivity and income generation
3. To be an instrument for the minimization of inequalities among the people

Enablers

a) Enhancing the capacities of the education and training systems to develop and deliver relevant curriculum for skills development and employability
b) Facilitating the acquisition of technical skills and strengthening of extension and outreach programs
c) Enhancing the development and dissemination of technologies which can be used by small scale enterprises to stimulate productivity and and employment
d) Enhancing the development of TEVET opportunities to increase the supply of human resources to the economy.

Source: Ministry of Science, Technology and Vocational Training, TEVET Policy 1996.

TABLE 1.5 Registered Institutions, by Ownership, 2008–13

	2008	2009	2010	2011	2012	2013
Public/government[a]	58	78	80	87	79	88
Private	107	107	107	96	54	77
Church	59	66	66	65	49	58
Community	8	6	10	9	7	8
Trust	14	14	16	14	11	13
Company	10	14	14	15	13	16
NGO	20	18	15	18	17	15
Total	276	303	308	304	230	275

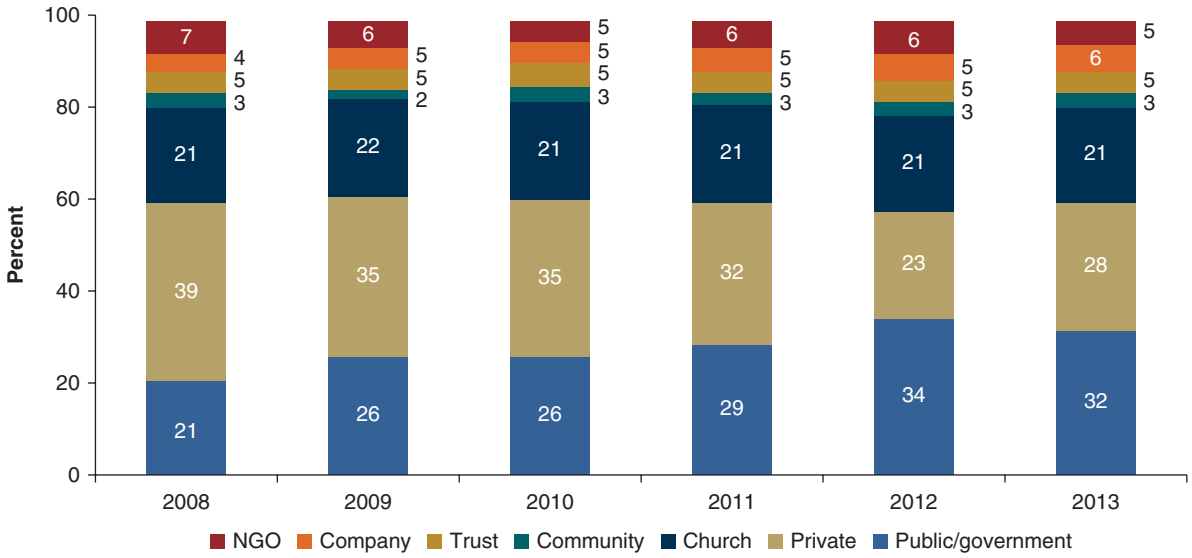
Source: TEVETA Annual Report 2012.
Note: NGO = nongovernmental organization.
a. While official government documents label those institutions as "public/government," they should be, in principle, categorized as "semiautonomous." As part of the decentralization process, decision-making power was transferred to management boards at institutions from the central government. In addition, most of the "public/government" institutions receive very few funds or grants from the public entities. Even for those receiving public funds or grants, the government financial contributions are almost always less than 50 percent. While they should be probably labeled as semiautonomous, this report follows the labels used by government reports to avoid confusion.

The church continues to play an important role in providing TEVET services in the country. The church's share was constantly high at approximately 22 percent between 2008 and 2013. Other TEVET providers, including communities, trusts, companies, and nongovernmental organizations (NGOs), maintain relatively similar shares, ranging from 3 percent to 7 percent (see figure 1.5).

Enrollment has shown an increasing trend since 2009. One thousand additional students entered TEVET institutions annually from 2009 to 2013 (table 1.6). The proportion of student enrollment by program did not change between 2008 and 2013. Business studies account for the largest share at 45 percent and craft programs constitute the second largest share at 24 percent. In terms of gender, 55 percent of the TEVET students are male, and the share of female students is slightly lower at 45 percent. Some programs are well balanced in regard to gender. For instance, gender ratio for business studies is almost 1 to 1. Unbalanced gender ratios, however, can be observed in other programs. For instance, almost all students under secretarial studies are female while the majority of students taking craft programs are male.

MESVTEE provides training at mainly level 4 of the NQF and above, and 94 percent of the

FIGURE 1.5 Share of the Registered Institutions, by Ownership, 2008–13



Source: TEVETA Annual Report 2013.

TABLE 1.6 Student Enrollment, by Program, 2008–13

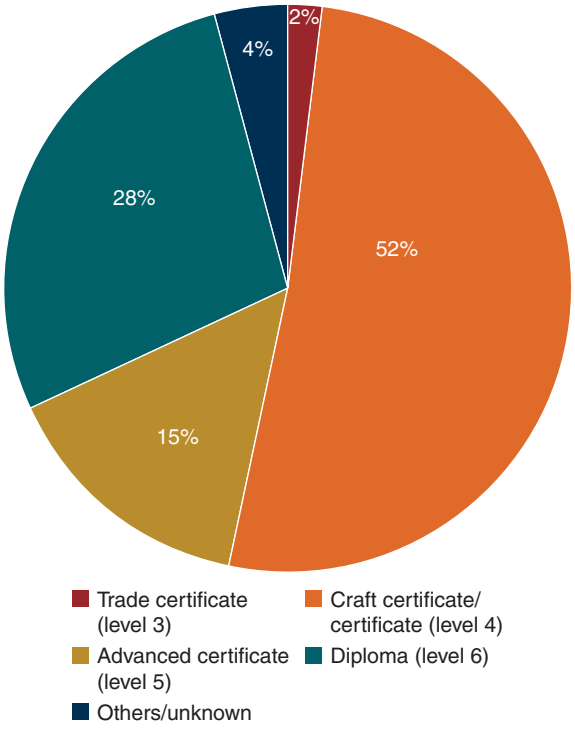
	2008	2009	2010	2011	2012	2013
Business studies	12,218	13,439	14,328	14,828	15,866	**16,025**
Secretarial studies	1,431	1,499	1,574	1,621	1,785	**1,787**
Hotel and tourism	3,662	3,845	3,428	3,553	3,695	**3,945**
Media and applied arts	3,000	3,150	3,307	3,406	3,508	**3,520**
Paramedical	340	357	375	386	394	**400**
Aviation	102	120	147	151	154	**154**
Craft programs	7,602	7,853	8,140	8,251	8,416	**8,659**
Advanced certificate/technical programs	4,567	409	494	511	527	**536**
Diploma/technologist programs	477	501	510	526	566	**572**
Total	33,399	31,173	32,303	33,233	34,911	**35,598**

Sources: TEVETA Annual Reports 2012, 2013.

student intake at TEVET institutions under MESVTEE is trained at level 4 and above. Craft certificate/certificate (level 4) dominate more than half of the total intake in public/government TEVET institutions (figure 1.6). Craft certificate offers a variety of training focusing on trades related to engineering. Twenty-nine percent of students take automotive electrical/mechanics programs while 31 percent study electrical engineering. About 20 percent of students take programs in mechanical fitting, metal fabrication, and plumbing and sheet metal. Certificate, too, provides a wide range of training trades. However, unlike craft certificate, it offers training in areas such as agriculture (29 percent of students in certificate programs), secretarial and office management (27 percent), and computer studies (14 percent).

Diploma level (level 6) has the second largest intake at public/government TEVET institutions. Program characteristics are similar to the craft certificate: electrical engineering (14 percent), science laboratory (12 percent), and automotive technology (7 percent). Some noteworthy programs at the diploma level are journalism (8 percent), physiotherapy (6 percent), and

FIGURE 1.6 Share of Intake at Public/ Government TEVET Institutions, by NQF Level, 2013



Source: TEVETA, 2014 (not publicly available).
Note: NQF = National Qualifications Framework.

radiography (6 percent). Advanced certificate (level 5) accounts for 15 percent of the intake at the public/government institutions and provides relatively homogeneous programs. Almost 80 percent of the intake is engineering-related: heavy equipment repair (35 percent), electrical engineering (25 percent), and mechanical engineering (15 percent). Secretarial and office management constitute a large share at 15 percent.

While public institutions try to accommodate more students, their limited physical capacity hinders the improvement of access to TEVET. Over the past years, public institutions have played an important role in absorbing the increasing number of students in the TEVET sector. While the government tries to accommodate more students, accessibility to TEVET institutions is not as high as students would hope. In 2011, for instance, 7,440 candidates took TEVET examinations and assessments, out of which only 4,077 candidates, or 55 percent, passed their examinations (TEVETA 2011). According to officials at TEVETA, low passing rates are not because the remaining 45 percent did not meet the qualifications, but due to the limited physical capacity of TEVET institutions.

Disparity in pupil-teacher ratio (PTR) ratio among MESVTEE institutions exacerbates the inefficiency of the TEVET system. The PTR in MESVTEE institutions is 22:1, which is almost on par with the TEVETA standard of 20:1 (MESVTEE 2013).[12] However, the ratio substantially varies, depending upon location and size of the institutions, and possibly the type of training provided. When excluding part-time and distance students, the PTR goes down to 14:1. Some institutions, including NORTEC and Evelyn Hone College, show a high PTR. However, there are several institutions whose ratios are significantly lower than the average ratio, and as a result, they pull down the overall average ratio. On one hand, there are many students who are qualified to take TEVET courses but rejected due to physical capacity of some institutions. On the other hand, other institutions are not attractive enough for students and show very low PTRs.

The TEVET sector faces serious financial constraints that prevent the sector from expanding further. As the number of graduates from primary education grows, the demand for TEVET, as well as secondary education, is also increasing. However, government funding to TEVET institutions is not expected to substantially increase, at least not in the short term. The severe financial constraint in the TEVET sector poses a serious concern with regard to access to TEVET, especially for those from relatively less wealthy families. As discussed in chapter 2, private expenditure on TEVET plays an important role. The limited public funding to TEVET raises an equity issue as well. The MESVTEE seeks ways for more efficient use of public funding in the TEVET sector as well as its diversification. At the institutional level, some institutions proactively started easing the financial constraints and limited physical capacity. For instance, the

Northern Technical College (NORTEC) introduced distance learning as an innovative response to such constraints. Students can take online courses and those who pass online courses can take practical courses instructed by trainers on campus. This approach seems to help improve accessibility to training at NORTEC, and at the same time it diversifies the institution's income generation.

Higher Education System and Major Issues

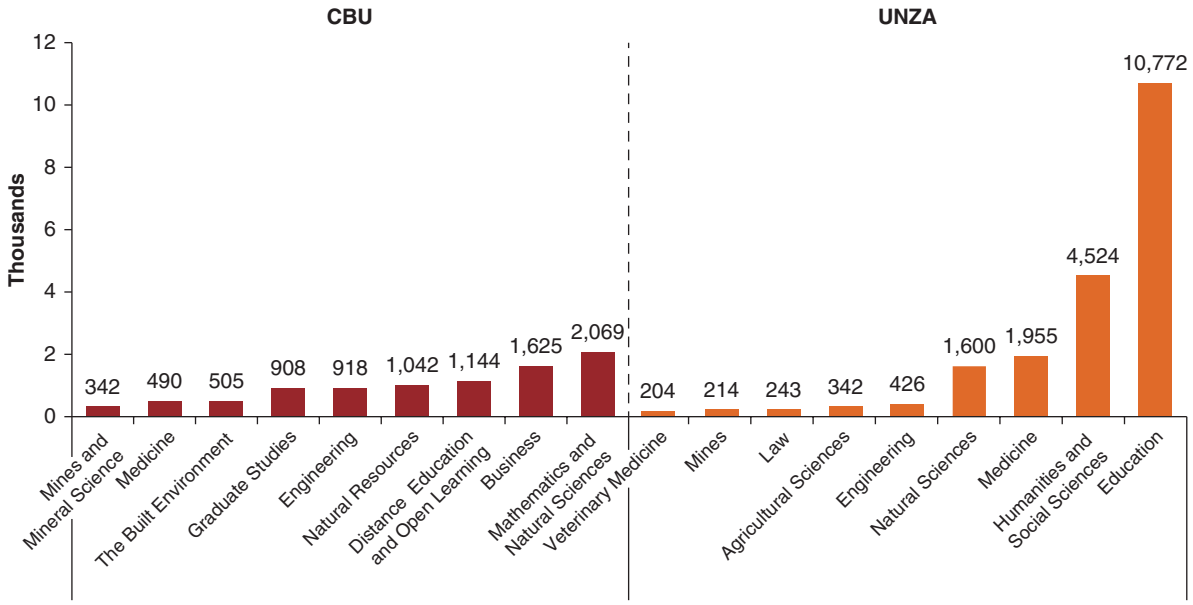
Tertiary education in Zambia consists of universities, colleges, and teacher training colleges. In 2014, there were three public universities and 32 private universities. The three public universities include University of Zambia (UNZA), Copperbelt University (CBU), and Mulungushi University, which was established in 2008. The list of 32 private institutions is shown in appendix B.[13] The government has begun the process of transforming four colleges into universities, including Nkrumah College of Education, Copperbelt Secondary Teachers College, Palabana Dairy Training Institute, and National In-Service Teachers College (MESVTEE 2011).[14] The ministry established the Higher Education Authority in 2013 under the Higher Education Act of 2013 to coordinate all higher education. It has advisory, planning, quality assurance, financial, and administrative functions.

Academic and managerial autonomy is guaranteed to public universities in Zambia. The GRZ considers higher education of central importance to the economic and social development of the country. The legislation guarantees public universities academic freedom and managerial autonomy. Academically, each university is responsible for determining its own programs of instruction at all levels, determining and regulating the requirements for admission, regulating and conducting examinations, conferring degrees and other awards, and promoting, coordinating, and controlling the direction of research. Each university engages its own staff, manages its own affairs, charges fees, and carries out any business as appropriate. Public universities have set tuition fees in consultation with the ministry; where the proposed fees are seen to be too high, the ministry intervened so as to allow more access by citizens (MESVTEE 2011).

The higher education system in Zambia has experienced rapid growth lately. At independence in 1964, Zambia had just over 100 university graduates and no public university. The University of Zambia, the first public university, was established in 1966 and opened its doors to 310 students in its first year. By 1994, UNZA and CBU had a total enrollment of almost 6,000 students (SARUA 2012), and enrollment for both reached around 30,000 in 2013.[15] Annually, more than 180,000 students graduate from secondary schools, and the demand for higher education is expected to be on the rise especially with the government's policy to increase access to secondary education. Due to the increasing number of secondary graduates, entrance to universities is becoming ever competitive. Public universities are among the most popular and competitive of higher education destinations. In addition to universities and colleges in Zambia, some students pursue higher education abroad, with or without financial support from the government or scholarship programs. In 2012, about 5,000 students studied abroad, and the most popular destination was South Africa (about 37 percent), followed by the United Kingdom (11 percent) and the United States (10 percent).[16]

The two largest public universities offer different sets of academic courses. Both CBU and UNZA offer courses through nine different academic schools, but interestingly, only two schools overlap—engineering and medicine. Mines and natural sciences are also offered in both universities, but they are under different school names. UNZA tends to offer more humanities and social science-related courses while CBU tends to offer more science-related courses. The largest number of students is found in School of Education in UNZA, which hosts 10,772 students in 2013, followed by Humanities and Social Sciences, which accommodates 4,524 students (figure 1.7). Due to

FIGURE 1.7 Number of Students, by School at CBU and UNZA, circa 2014



Sources: CBU and UNZA.
Note: Data for CBU are for 2014 while UNZA data are for 2013. CBU = Copperbelt University; UNZA = University of Zambia.

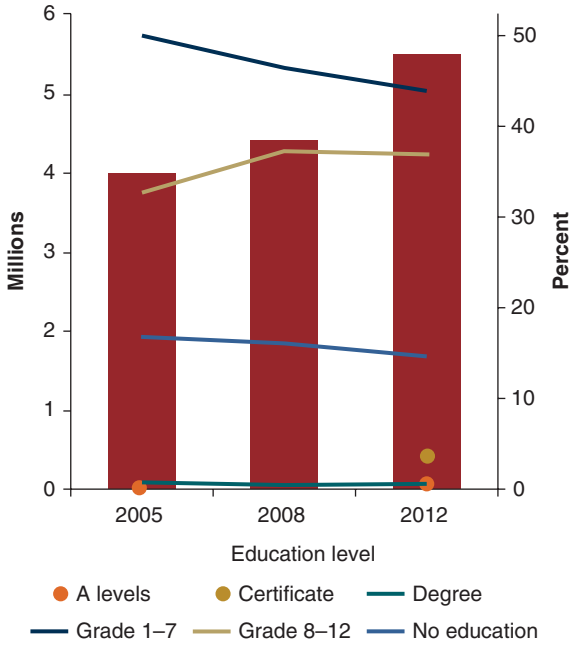
this difference in the availability of courses, it is likely that the academic competition between these two universities is not very intense. Prospective students can be self-sorted according to their interest rather than by which university offers a better course of the same academic discipline.

External Efficiencies and Labor Market Outcomes

Characteristics of Labor Force and Skills

The size of the workforce grew at an annual average rate of 4.9 percent between 2005 and 2012, with an increasing share of more educated workers. Zambia's labor force is growing fast. The total number of workers grew from 4.1 million in 2005 to 4.6 million in 2008 and to 5.5 million in 2012, with an average growth of 195,000 workers per annum (figure 1.8). This employment rate growth was accompanied by an increasing share of more educated workers. The share of workers with no education decreased

FIGURE 1.8 Number of Workers and the Proportion of Workers, by Education Level, 2005–12



Sources: World Bank staff analysis using Labour Force Survey Report 2005, 2008, and 2012.
Note: Lines represent the share of workers (right axis) and the bars represent the number of workers (left axis).

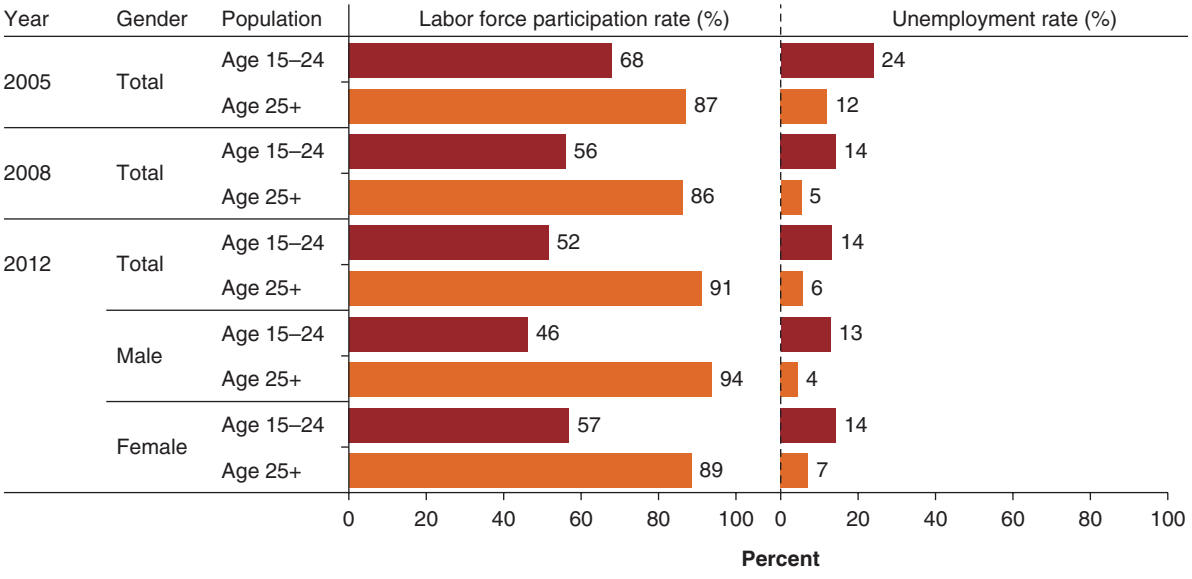
from 16.7 percent in 2005 to 14.7 percent, and the share of workers with grades 1–7 level of education decreased from 49.8 percent to 43.7 percent. In contrast, the share of grades 8–12 graduates increased from 32.7 percent to 36.8 percent.[17] This trend confirms a positive labor market outcome of increasing education opportunities. This trend is also correlated with a significant shift of workers from the agriculture to the service sector. The share of agricultural workers decreased from 70 percent in 2005 to 52 percent in 2012. On the contrary, service sector employment grew very rapidly over a seven-year period, absorbing the workers shifting from agriculture as well as new entrants to the labor force.[18]

The growing size of the labor force has been effectively absorbed by the labor market while the youth unemployment rate remains twice as high as that of the rest of the population. The size of the labor force or the economically active population (including both employed and unemployed populations) increased from 4.9 million to 6 million between 2005 and 2008. Between these two years, the labor force participation rate decreased slightly from 80 percent to 76 percent, as a result of youth labor force participation rate decreasing from 68 percent to 56 percent due to increased opportunities of post basic education (figure 1.9). In contrast, there was a remarkable improvement in the unemployment rate. The unemployment rate halved from 16 percent in 2005 to 7.9 percent in 2008, and remained stable, at 7.8 percent, in 2012. The absolute number of unemployed population also dropped from 787,000 to 466,000 between 2005 and 2012. However, the youth population (ages 15–24) still seems to suffer from high unemployment. The unemployment rate for ages 15–24 was still 14 percent in 2012 indicating a relative disadvantage for youth in finding employment. Women seem to suffer from higher unemployment rates for all age groups.

Contribution of Education to the Labor Market

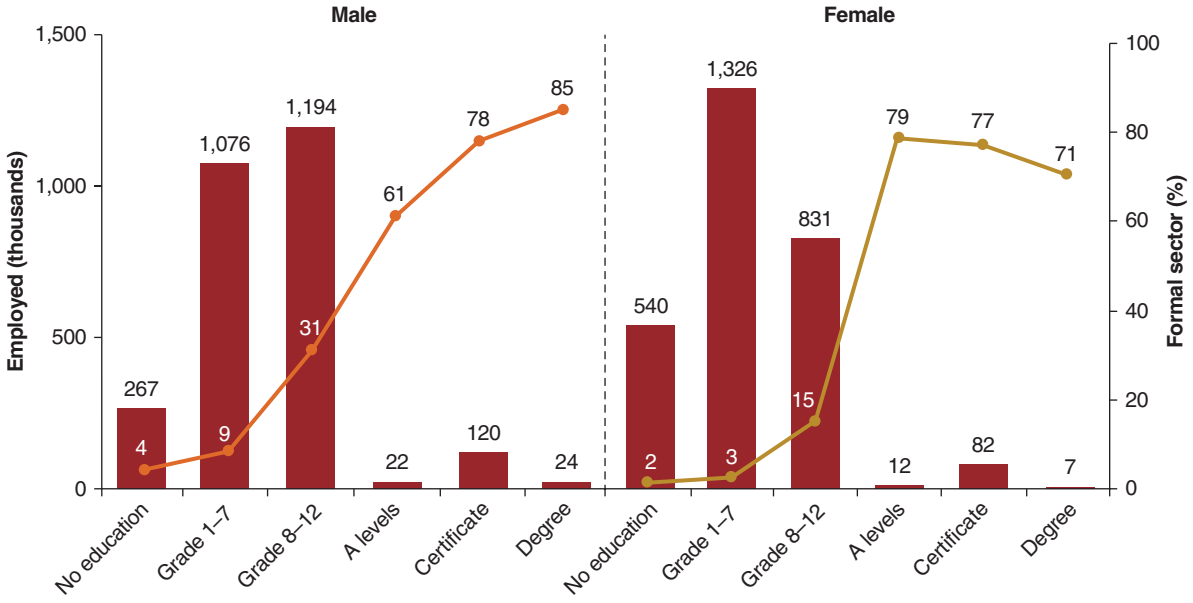
Education is important for obtaining formal sector jobs. The Zambian labor market is mostly informal. According to the Labour Force Surveys (LFS) 2005, 2008, and 2012, however, the share of formal sector employment gradually increased from 9 percent in 2005 and 11 percent in 2008 to 15 percent in 2012. This means

FIGURE 1.9 Labor Force Participation Rate and Unemployment Rate, by Age Groups, 2005–12



Sources: World Bank staff analysis using Labour Force Survey Report 2005, 2008, and 2012.

FIGURE 1.10 Number of Workers and Share of Formal Sector Employment, by Gender



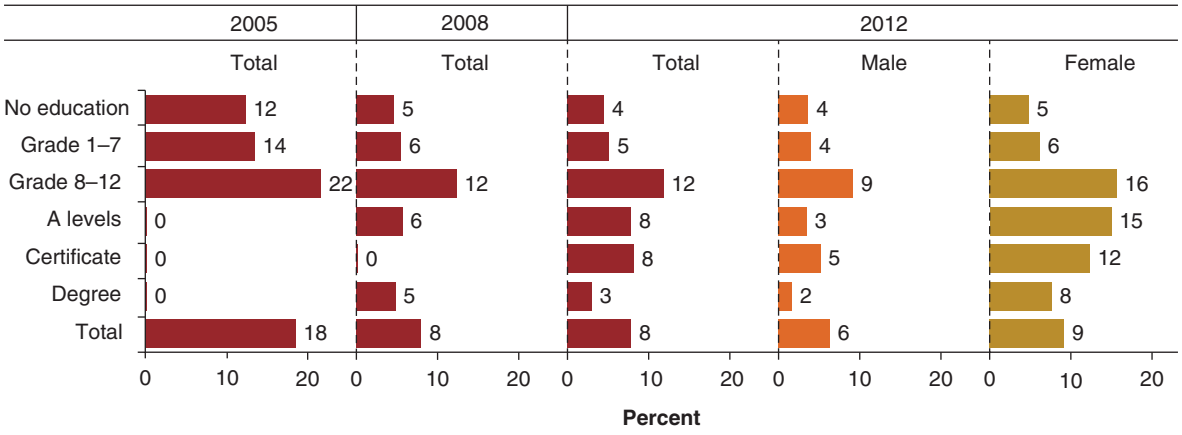
Source: World Bank staff analysis using 2012 Labour Force Survey Report.

85 percent of workers were still in the informal sector in 2012. By gender, male workers are more likely to be in the formal sector. For both male and female workers, the share of formal sector workers increases as the level of education increases. Among male workers, 85 percent of degree holders were working in the formal sector in 2012 (figure 1.10). Among female workers, the highest share of formal sector employment was observed among A-level holders, at 79 percent. There is a clear gap between secondary education and postsecondary education, which divides the probability of being employed in the formal sector.

Low unemployment rates among university graduates indicate that there is a high labor market demand for university graduates. The LFS 2012 shows that the unemployment rate among university graduates was only 3 percent while the unemployment for the whole population was 8 percent (figure 1.11). On the one hand, despite an increasing number of university graduates in the past decade, this low unemployment rate among university graduates implies that the labor market is in great need of such higher skills. On the other hand, the unemployment rate remains relatively high among workers with a secondary level education, at around 9 percent for men and 16 percent for women in 2012.

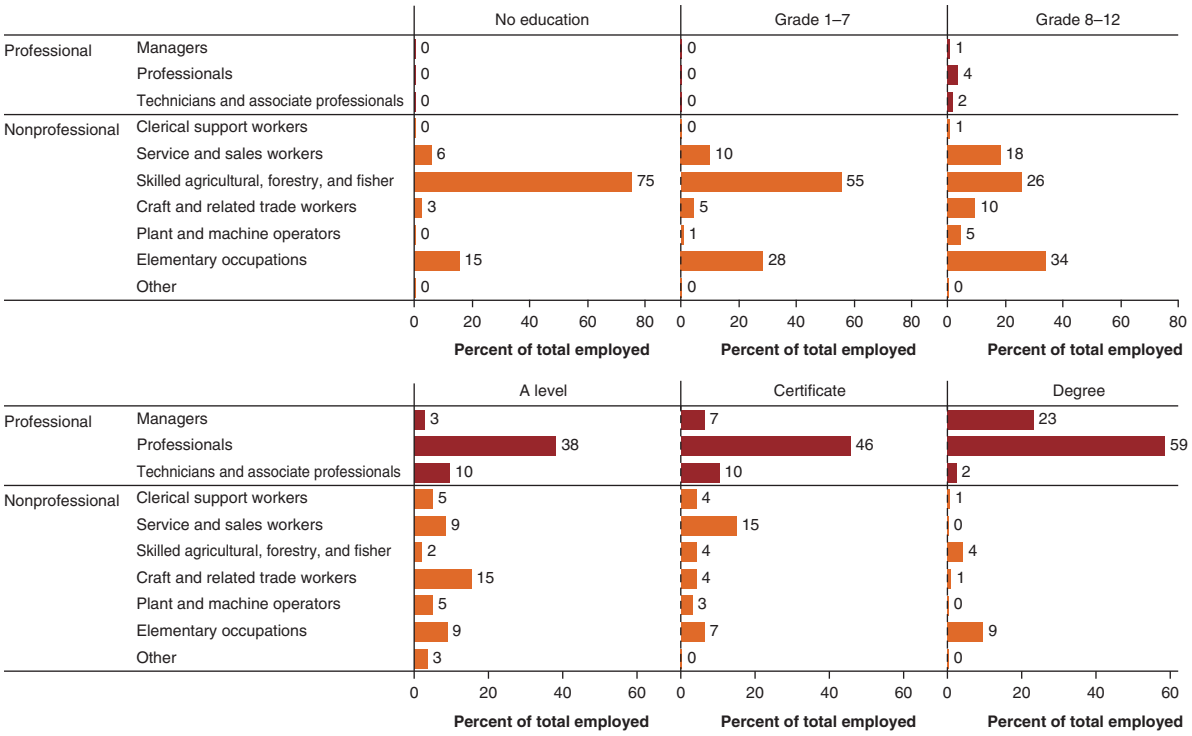
Education is the key determinant of occupational differences. Postsecondary or tertiary education is the key to unlocking opportunities for a professional occupation. In the Zambian labor market of 2012, only 4.8 percent of the labor force had postsecondary or tertiary level education (including A levels, certificates, and degrees (see figure 1.8); however, 84 percent of degree holders had professional level occupations, including managers, professionals, or technicians, and 63 percent of certificate holders and 51 percent of A-level holders also had professional level occupations. In contrast, only 7 percent of workers with secondary level education (grades 8–12) and almost none with less than grade 7 education had professional level occupations. The high unemployment rate among grades 8–12 may be partly due to their aspirations for professional level occupations (figure 1.12). However, the low unemployment rate among postsecondary and tertiary degree holders indicates that the labor market is absorbing high skills well and probably needs more.

FIGURE 1.11 Unemployment, by Worker's Level of Education, 2005–12



Sources: World Bank staff analysis using LFS 2005, 2008, and 2012 reports.
Note: Due to difference in definition of educational categories, certificate level of 2005 and 2008, as well as A level and degree of 2005 are excluded from the analysis.

FIGURE 1.12 Proportion of Workers, by Occupation for Each Educational Level



Source: World Bank staff analysis using 2012 Labour Force Survey Report.
Note: Sum of all numbers adds up to 100 percent for each education level.

The current labor market pays very high wage premiums to higher skills. An analysis of the rate of returns to education shows that higher levels of education are rewarded by high wages. Compared to workers with no education, workers with grades 1–7 gain 16 percent higher salaries if they are male and 6 percent higher salaries if they are female. (figure 1.13). The wage premium increases to 80 percent and 107 percent for men and women in the case

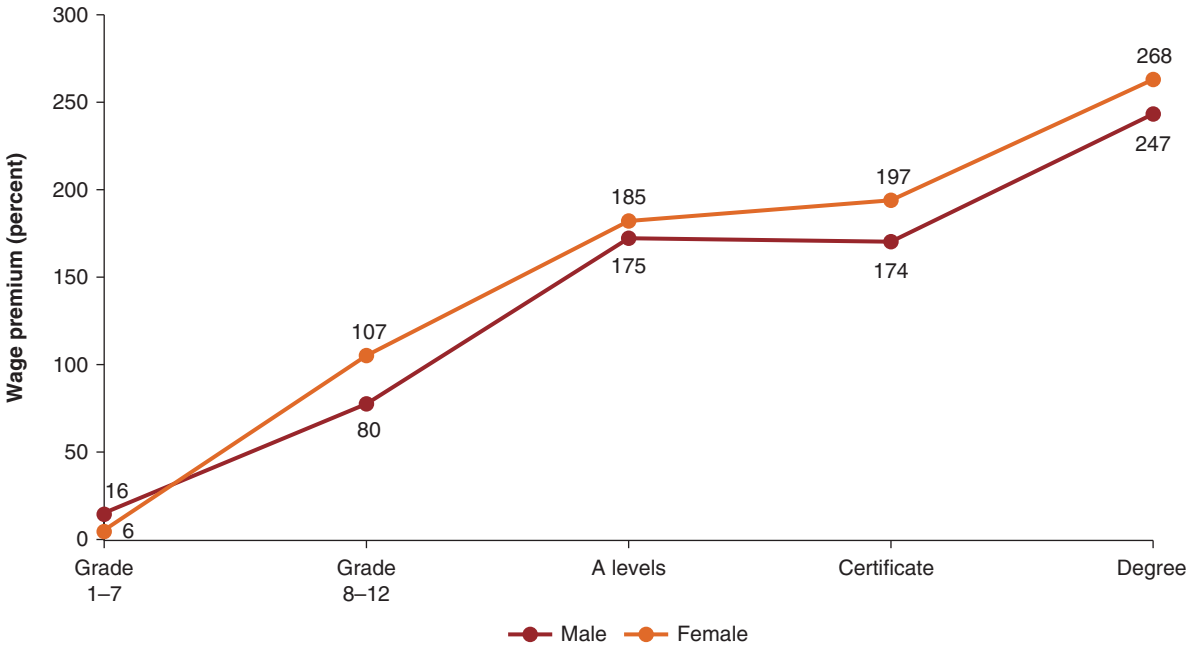
of grades 8–12. The premium among degree holders reaches 268 percent and 247 percent for women and men, respectively. As already discussed, educational levels are closely linked to occupation levels and categories, and thus are also related to wages premiums. High wage premiums imply that there is still a scarcity of high skills and that the market is willing to pay high salaries to attract skilled workers. It should also be noted that the wage premium of education, in comparison to no education, is higher in general for women.

Education seems to increase the productivity of agricultural and nonagricultural self-employed workers, thus generating higher earnings. The LFS 2012 collected information about the net earnings of self-employed workers from their businesses. The rate of returns to education is also calculated for self-employed agricultural and nonagricultural workers using their self-reported earnings data (figure 1.14). The result that figure 1.13 shows is a very clear relationship between education and higher earnings. Among the agricultural workers, A-level holders enjoy more than twice the earnings of noneducated agricultural self-employed workers. Among the nonagricultural self-employed, A-level holders enjoy 145 percent higher incomes, and degree holders enjoy a bit more than three times higher salaries than the noneducated, nonagricultural self-employed. This trend shows that education is important for increasing the productivity of self-employed workers.

Skills Training

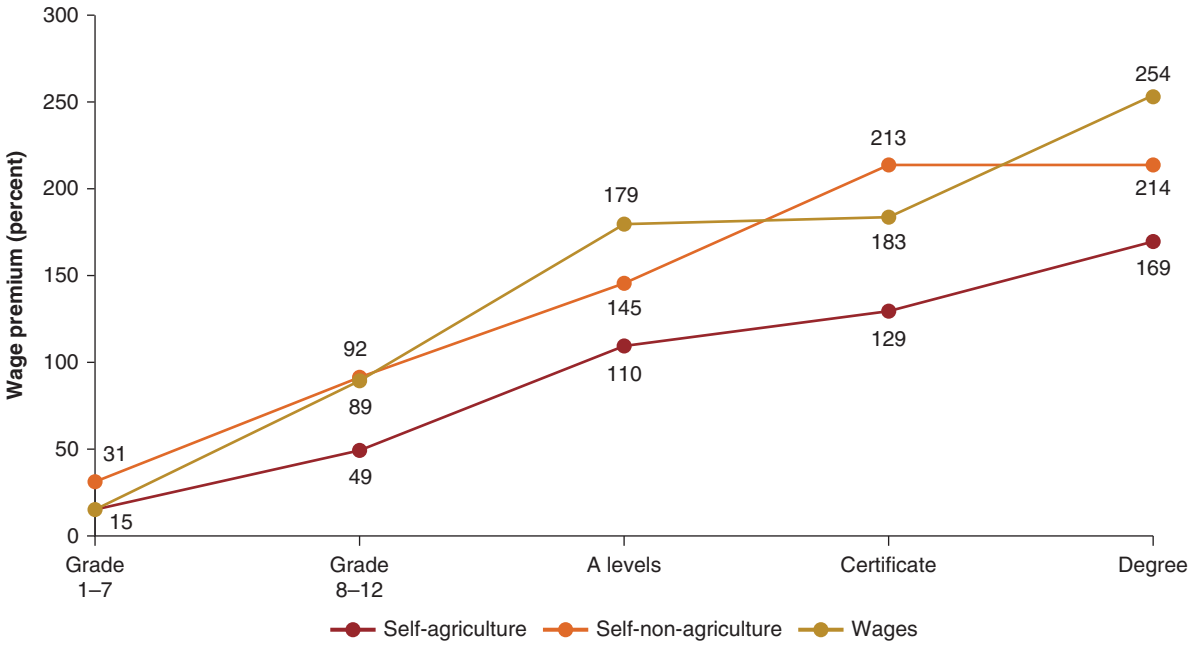
Skills training is more commonly accessed by the educated than by the uneducated. Beyond regular education programs, 7 percent of labor force participants actually gain some kind of skills training. Skills training is more commonly accessed by postsecondary education degree holders than less educated workers—32 percent of A-level holders, 21 percent of certificate holders, and 15 percent of grade 12 O-level holders receive skills training, whereas only 1.5 percent of noneducated workers get any skills training (figure 1.15).

FIGURE 1.13 Rate of Returns to Education Among Wage-Employed Workers, by Gender



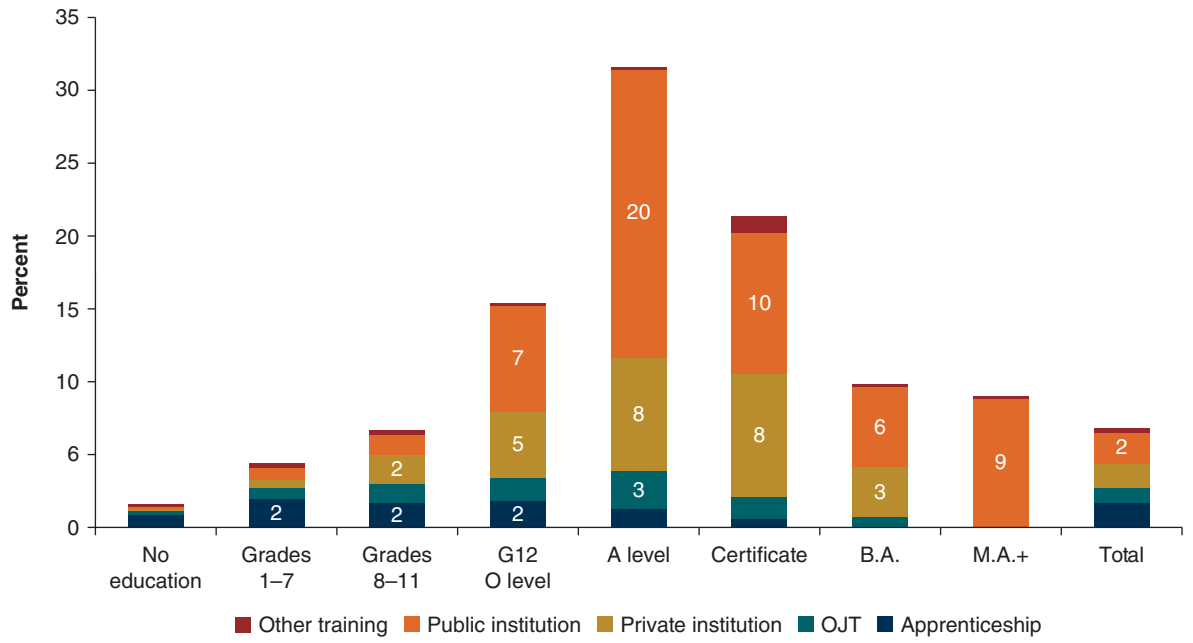
Source: World Bank staff analysis using 2012 Labour Force Survey Report.
Note: Analysis includes only wage-employed workers.

FIGURE 1.14 Rate of Returns to Education, by Type of Employment



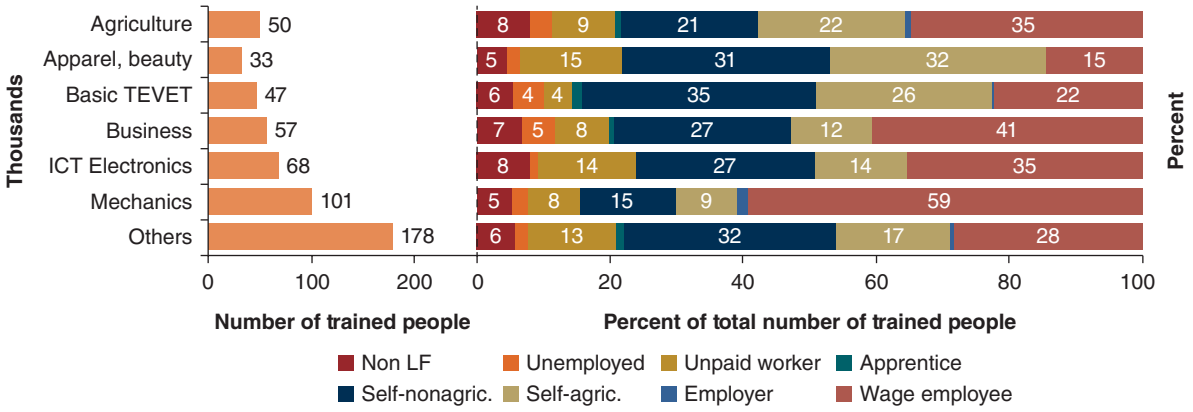
Source: World Bank staff analysis using 2012 Labour Force Survey Report.
Note: The number of workers includes only those whose wages or imputed wages are observed. Imputed wages for self-employed workers are self-reported net profits from the main business.

FIGURE 1.15 Proportion of Workers Having Received Skill Training, by Educational Level



Source: World Bank staff analysis using 2012 Labour Force Survey Report.
Note: OJT = on-the-job training.

FIGURE 1.16 Number of Trained People, by Trade of Training, and Share, by Employment Status



Source: World Bank staff analysis using 2012 Labour Force Survey Report.
Note: Categorization was made by World Bank staff. Basic TEVET trades include, *inter alia*, carpentry, welding, general repair, plumbing, bricklaying, and construction. ICT = information and communication technology; Non LF = non-labor force; TEVET = Technical Education, Vocational and Entrepreneurship Training.

Mechanics-related trades are the most common, and they are more closely linked to wage employment. figure 1.16 shows the number of trained people by trade and their status after employment by proportion. Among the population that received some type of skills training, mechanics-related trade was the most common, and about 101,000 people got training in this field.[19] Some other popular trades are information and communication technology- (ICT) and electronics-related trades (68,000), and business-related trades (57,000). Agriculture is an almost common trade, in which 50,000 workers had training. About 47,000 people had training in basic TEVET trades, including carpentry, welding, general repair, plumbing, construction, etc. Employment rates across these different types of trades are more or less similar. However, mechanics is related to a relatively high proportion of wage employment (59 percent), while basic TEVET trades are more likely to be associated with nonagricultural self-employment (35 percent). Among the trainees of apparel and beauty trades, many of whom are women, agricultural self-employment is relatively large at 32 percent implying a possible skills mismatch or an inability of these trainees to find relevant wage earning work. Across the board, 5 percent to 8 percent of trainees are not in the labor force (not working and not looking for jobs), and approximately 1 percent to 5 percent of the labor force is looking for jobs.

Previous Education PERs

Zambia continuously builds upon important findings through periodic education sector PERs, but many of the past challenges remain current despite the substantial effort made by the government. The education PERs were conducted in 2001 and 2006. Some issues identified by the past PERs were gradually improved. However, many issues found in the past reviews remain the current issues. The major issues can be distilled into four aspects: student learning outcomes, quality of teachers, textbooks, and funding mechanisms. These issues were continuously discussed in the past PERs, and this report also sheds light on these issues (box 1.4). Another report on PETS-QSDS (World Bank 2015) also extensively discusses these four issues.

One of the main issues found in the PER 2001 was that while education expenditures had gradually increased in the 1990s, it did not

BOX 1.4 Major Findings and Recommendations of PERs in 2001 and 2006

PER (2001): Zambia's *Public Expenditure Review* of 2001 covered the effects of public expenditure on growth and poverty across all sectors from 1995–2000. In 2001, Zambia was in the middle of a long period of economic contraction due to the decline of its copper resource base, with high incidences in poverty and half the per capita income than what it was in 1964. Public expenditures reduced over the years and poor allocation and execution—despite reforms in the 1990s—hindered their ability to address poverty and growth. The report focused on three main areas of suggested reform: (a) stabilization of the public sector deficit due to leakages, (b) pro-poor allocation especially for rural infrastructure, and (c) more effective execution by replacing the cash budgeting or rationing system.

Public expenditure on education had increased since the mid-1990s, but the real value of government expenditure on education was low by international standards. Learning achievement in primary education, according to the national assessments, was also low, especially in rural areas. To address the issues in primary education, the government and donors launched the comprehensive Basic Education Sub-Sector Investment Program (BESSIP) in 1998. The impacts of this program by 2001 varied. School infrastructure improved, while efforts in education materials, teacher deployment, decentralization, monitoring, and coordination moved much more slowly. The report recommended putting more focus on increasing the quality of primary education in rural schools with more trained teachers, integrated materials, improved living conditions for teachers, the development of community schools, decentralized management of rural teachers, and other alternative experiments.

At the higher education level, subsidies and grants were not pro-poor. The government supported public university education mainly through grants to the universities and student bursaries, all of which contributed to expenditures per university student that were more than 100 times greater than those per primary student. The report claims that tuition subsidies are indirect and inefficient, and should thus be gradually eliminated. The National Policy on Education in 1996 tried to do this by replacing state funding with private sector and more self-sponsored students, but faced political challenges. The report suggested replacing these subsidies with a gradual phasing in of the full cost charges with flexible payment plans and loan programs. Privatization of university management and budget resources tied more to funding could also improve the quality and competitive innovations in these institutions. For all reforms, the report stressed planning, management, and monitoring impacts through attendance, retention, and test scores.

PER (2006): Building upon the findings from the cross-sectoral PER in 2001, a PER solely for education sector was conducted in 2006 as a series of sectoral PERs. The education system in the country at that time was rapidly growing with a 39 percent increase of enrollment in grades 1–9 from 2000–04. While access to education improved, learning achievement at the basic school level (grades 1–9) stagnated at very low both in regional and domestic learning assessments. Indeed, Zambia ranked close to the bottom out of 14 African countries according to the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SAQMEC).

The ministry's expenditure was only 3.2 percent of GDP while three comparator countries (Kenya, Uganda, and Malawi) spent 5.3 percent of GDP on education and training (including TEVET). Zambia's expenditure represented about 20 percent of the domestic discretionary budget. The education budget in 2005 was distributed mainly focusing on basic education: 62 percent to basic schools; 11 percent to high schools; 3 percent to teacher colleges; and 15 percent to universities. The share of donor funds in the total public education expenditure was on an increasing trend and reached from 20 percent in 2002 (actual) to 38 percent in 2005 (budget). However, an audit report in 2004 found that only 9 percent of the funds from the sector pool were traceable. The Annual Work Program Budget was too complex to comprehend funding flows of various resources (government, the sector pool, and other donor sources). Hence, it was recommended that the NIF for the ministry's strategic plan, the financial guidelines, and the financial

box continues next page

BOX 1.4 Major Findings and Recommendations of PERs in 2001 and 2006 *(continued)*

reporting system be revised. Overall, it was recommended to adopt a simpler and more programmatic budget structure, consistent with subsectors set out in the national strategic plans.

Looking at public education expenditures by education level, 90 percent of the education expenditures on basic education were devoted to personal emoluments. One of the key issues at the basic education level was compensation, number, and deployment of teachers. The starting pay of the basic school teacher was below GRZ's poverty line for a household before 2003. In 2004, it was increased to 4.9 times Zambia's GDP per capita. The number of teachers was scarce, which led the PTR to 55:1. This was even worse in rural schools, at 87:1, indicating inefficiency of teacher deployment. At the high school level (grades 10–12), inefficiency of teacher utilization was a major issue. The PTR was 22:1 in 2004, based on which it was recommended that more teachers with more than one subject matter competency be hired in addition to the extension of preservice training from two to three years. Further, traditional boarding schools were found to be very costly. Hence, a "local high school" model was recommended. At the university level, there were only two public universities: UNZA and CBU. Financial statements at UNZA and CBU were not audited until 1997 and 2002, respectively, so actual financial conditions at public universities were not clear. The major issues with regard to financing were twofold. One comprised imbalances between academic and nonacademic staff. The other was the bursary scheme to which 70 percent of students were entitled. It was recommended to introduce a student loan scheme for those who were not disadvantaged.

reflect the improvement in the education quality. Student learning outcomes at the primary level, especially in rural areas, were very low. It was recommended that more trained teachers be deployed in rural areas with more efficient use of textbooks and instructional materials in teaching practice. The review also touched upon issues on higher education. Subsidies and grants were not pro-poor. Hence, it recommended a gradual increase of tuition fees, protecting poor students by applying means testing to student aid. It also suggested expanding student loan schemes with, for instance, income contingent loan systems. Given the poor financial management at the university level, it was recommended that performance-based funding be introduced as opposed to the traditional approach of "negotiated" budget.

Five years after the PER 2001, the government undertook another PER on the education sector to assess the progress made. The 2006 PER showed that while access to education continued to improve, the government was facing the same challenge of stagnation of student learning outcomes. In fact, Zambia ranked close to the bottom out of 14 African countries at that time (UNESCO 2010). Poor student learning outcomes were considered to be partly due to low teacher attendance as well as poor quality teaching. Teacher deployment in rural areas remained a critical issue with limited improvement since the previous PER. That said, the government had made an effort to improve the quality of teachers. To attract more capable teachers, the government had increased teacher salaries. The government had also increased the number of teachers to improve the pupil-teacher ratio (PTR). However, these efforts had only limited effect on student learning outcomes.

The PER 2006 found that distribution of textbooks had improved through cooperating partners' (CPs') assistance since the PER 2001. The procurement of the textbooks was centralized, and the book-pupil ratio improved to 1:2 in English and 1:3 in mathematics. However, the ratio varied widely, both between schools, and between subjects and grades. It was recommended to introduce a book tracking system. Another serious issue was the complexity of fund flows of both public funding as well as CPs'

financial contributions. Responding to the government effort to improve the education quality, CP gradually increased its financial contributions. The share of CP funds in the total public education expenditure grew from 20 percent in 2002 (actual) to 38 percent in 2005 (budget). However, an audit report in 2004 found that only 9 percent of the funds from the sector pool were traceable. Hence, it was recommended that a simpler and more programmatic budget structure be adopted, consistent with the subsectors set out in the national strategic plans such as the NIF.

Another highlight from the PER 2006 is about higher education. The budgets to UNZA and CBU continued to be made on a historical basis, and the financial flow was unclear because of the lack of a financial audit. It was clear that deficits in the higher education system were mainly imbalances between academic and nonacademic staff. For instance, for a student loan scheme recommended by the previous PER, the government failed to collect any payments from students. A bursary scheme was in place and should, in principle, have been a student loan scheme. Now that financial audits at the university level have significantly improved, public universities are transparent and make detailed financial statements available. However, the issues of the imbalances between academic and nonacademic staff and the bursary scheme remain the same as of today.

Notes

1. Zambian currency, kwacha, was rebased on January 1, 2013, introducing 1 new kwacha at a rate of 1,000 old kwacha. Accordingly, the ISO code was changed from ZMK to ZMW. To be consistent in currency unit throughout this report, we recalculated past figures before devaluation to the new currency (ZMW).
2. People living in moderate poverty are those whose total expenditures are below the national poverty line. People living in extreme poverty have total expenditures that are below the food-poverty line.
3. This transformation has not yet been fully completed both on the ground and in official documents including the *Blue Book* (the government's budget report) and the *Yellow Book* (the government's expenditure report). Hence, this report discusses primary, secondary, basic, and high schools according to the data available in official documents.
4. Targets include (a) net enrollment rate (NER) to 99 percent by 2030 at basic education (grades 1–9), (b) textbook ratio at basic school to 1:1 and 1:3 at high school in all subjects, and (c) pupil teacher ratio to 40:1 and 25:1 at basic and high schools, respectively. Obviously, as the school system is changing from primary to basic and high school to secondary, final achievements will be evaluated accordingly.
5. As of 2014, 2,428 students in grade 8 and 1,048 students in grade 9 enrolled for the TEVET programs.
6. Subsectors comprise (a) Early Childhood Education, (b) Primary Education, (c) Secondary Education, (d) Tertiary/Higher Education, (e) Youth and Adult Literary, (f) Skills Development, (g) Science, Technology and Innovation, and (h) Management and Support Services. Each subsector has clear outcome indicators with annual targets that are quantitatively measurable.
7. In 2014, there is a significant increase (192 percent) in "unknown" category, meaning the grade category of the schools are unknown.
8. This report uses multiple data sources to calculate the GER and NER (see box 1.2).
9. In contrast, the *Education Statistical Bulletin* (*ESB*) data from the MESVTEE in 2013 show that the NERs of grades 1–9 and grades 10–12 are 103.9 percent and 28.0 percent, respectively. The NER exceeding 100 percent indicates that "the data is flawed" (MoE 2013). Hence, when LCMS data is available, this report uses data from LCMS. The issue of the *ESB* is discussed in a later section. Detailed comparison across the data source is described in PETS-QSDS 2015.
10. More details are available in appendix A.
11. As with other countries, it is difficult to get an accurate number of TEVET institutions and enrollment as there are many informal providers. Hence, in this report, the figures of TEVET institutions and enrollment are those registered by TEVETA.
12. The ratio goes down to 14:1 once part-time and distance learners are excluded.
13. SARUA (2012) states that the higher education system in Zambia also includes 48 public technical universities and colleges, including 14 teacher training colleges that fall under the Ministry of Education. This PER, however, discusses

technical colleges under the section of TEVET. Teacher training colleges are under the scope of higher education, but due to the lack of detailed information, this PER doesn't go into the details. In addition to universities and colleges affiliated to the MESVTEE, there are also higher education institutions managed by other ministries and government agencies. Among such institutions are the Natural Resources Development College (Ministry of Agriculture), the National Institute of Public Administration (Cabinet Office), the Military Training Establishment of Zambia (Defense), the Mwekera Forestry College (Environment), and colleges of nursing, medical and dental training (Health) (SARUA 2012).

14. In the 2015 budget, the names of three new public universities appear in the budget line, including Chalimbana University, Kwame Nkrumah University, and Mukuba University.
15. The Higher Education Authority, established in 2013, is still in the process of collecting the enrollment statistics from all private institutions. For the moment, the available and reliable enrollment statistics are only for UNZA and CBU.
16. UNESCO Institute for Statistics.
17. The share of postsecondary education degrees and certificates increased from 0.8 percent to 4.4 percent according to the LFS, but the statistics may not be consistent as LFS 2005 doesn't have categories for workers with A levels and certificate levels.
18. This assessment is based on the official LFS report of the Zambia Central Statistical Office. The LFS 2012 adopted a new definition of the economic sector (based on the International Standard Industrial Classification [ISIC] 2008), so some of the changes may be related to the change in the classification category.
19. Categorization was made by authors by aggregating similar types of trades.

Chapter 2

Overall Trend of Education Financing in Zambia

The Government of the Republic of Zambia (GRZ) has shown a historically strong commitment to educational development by allocating a relatively large share of public budget to education. Between 2006 and 2013, the proportion of public expenditure on education in the total government expenditure was between 15.3 percent and 20.5 percent, which is translated to between 3.7 percent and 4.4 percent of GDP. The focus of education expenditure gradually shifted from basic education to fulfill the Education for All (EFA) commitment to secondary and postsecondary education. An increasing allocation to capital budget for secondary education and higher education in 2014 and 2015 indicates that the country is making a steady step toward expansion of secondary and higher education in the post-EFA era. While the government's expenditure patterns are closely linked with the national education policies, there are some imbalances of allocation. Per-student public expenditure is very small among Technical Education, Vocational and Entrepreneurship Training (TEVET) institutions. The pattern of public expenditure allocation is largely biased toward the richer group of students as a result of high per-student expenditures on higher education. While the public education expenditure of Zambia is overall conducive to effective educational development, there are some areas of improvement including the equitable allocation and sustainability of public expenditure.

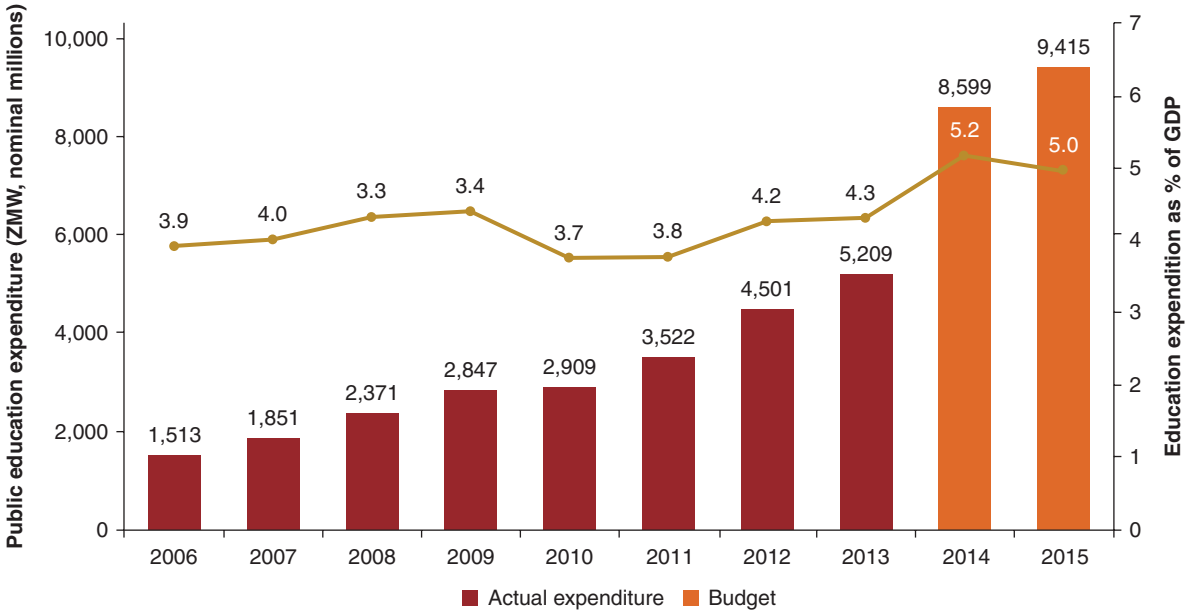
Overall Public Expenditure on Education

The GRZ has historically shown a strong commitment to educational development by allocating a relatively large proportion of its budget to the education sector. The trend of public education expenditure between 2006 and 2013 shows steady growth of education expenditure in both nominal and real terms. Government expenditure on education grew from ZMW1.5 billion in 2006 to ZMW5.2 billion in 2013 in nominal terms (figure 2.1).[1] The budget allocations for 2014 and 2015 increased even higher to ZMW8.6 billion and ZMW9.4 billion. Using the constant price of 2013, the public education expenditure also grew from ZMW3.0 billion to ZMW5.2 billion between 2006 and 2013 (table 2.1). The ratio of government expenditure in education to GDP stays strong, by ranging between 3.7 percent and 4.4 percent during the period of 2006 through 2013, and it is projected to be higher in 2014 and 2015, exceeding 5 percent of GDP. This is at a relatively high side in the region and comparable with other emerging economies (figure 2.2).

The proportion of the education budget in the total government budget continues to be one of the largest. In 2015, the budget allocation to the education sector was nominal ZMW9.4 billion, which is 20.2 percent of the total government budget for 2015. This is an 80 percent larger amount in nominal value than ZMW5.2 billion in 2013, and it is the single largest share of the proposed budget, reflecting the government's strong commitment to the education sector. The share of education budget in the total government budget is 5 percent in 2015, which is higher than the historical trend of 3.7 percent to 4.4 percent of expenditure between 2006 and 2013.[2]

There is a considerable gap between authorized provision and funded budget, but little gap between funded budget and expenditure (table 2.2). While the budget execution rates (the actual expenditures as a share of the funded budget) are very high overall, the funding rates

FIGURE 2.1 Trend of Public Education Expenditure, 2006–15



Sources: GDP data from World Development Indicators; MoF Financial Statements C 2006–13; MoF Activity Based Annual Budget 2014 and 2015.

TABLE 2.1 Trend of Public Education Expenditure, 2006–15

ZMW, nominal millions

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Budget	Budget
GDP	38,561	46,195	54,839	64,616	77,667	93,333	106,015	120,780	166,078	189,783
TGE	7,729	9,799	12,349	13,873	17,252	22,996	26,179	33,790	42,682	46,667
EE	1,513	1,851	2,371	2,847	2,909	3,522	4,501	5,209	8,599	9,415
TGE as % of GDP	20.0	21.2	22.5	21.5	22.2	24.6	24.7	28.0	25.7	24.6
EE as % of GDP	3.9	4.0	4.3	4.4	3.7	3.8	4.2	4.3	5.2	5.0
EE as % of TGE	19.6	18.9	19.2	20.5	16.9	15.3	17.2	15.4	20.1	20.2

Sources: MoF Financial Statement C 2006–13; MoF Activity Based Annual Budget 2014 and 2015.
Note: EE = education expenditure; GDP = gross domestic product; TGE = total government expenditure.

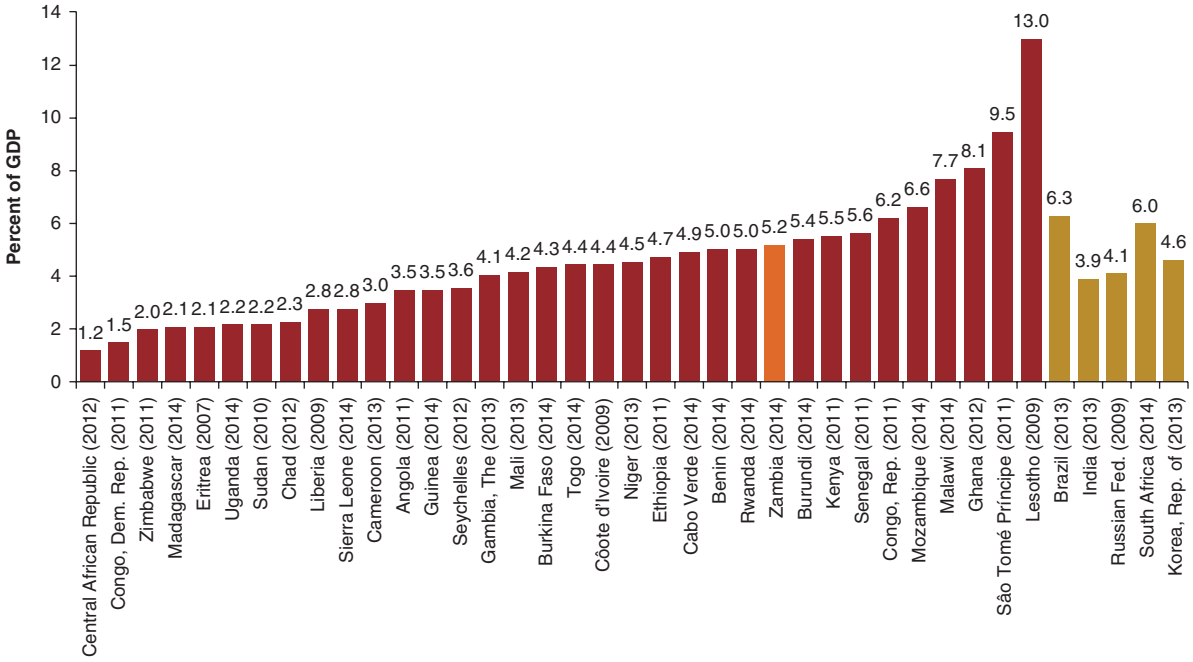
(the funded budget as a share of the authorized provision) are considerably low except for basic and high school education.

Allocation of Public Expenditure on Education

By level of education

Basic education expenditure, which historically accounts for about half of public education expenditure, has been gradually on the rise in recent years (table 2.3). The public education expenditure trend shows that expenditure on basic education gradually increased over the past nine years. In 2006, basic education expenditure accounted for 43 percent of the allocation. The actual expenditure gradually increased to reach 58 percent in 2013, and the latest budget allocation shows 56 percent and 57 percent of education budget in 2014 and 2015, respectively. This trend confirms the GRZ's effort to prioritize basic education expenditure to achieve the education Millennium Development Goals (MDGs). The secondary education expenditure ranges from 8 percent to

FIGURE 2.2 Comparison of Government Expenditure on Education as Percentage of GDP within African Countries and Emerging Economies



Source: World Bank Education Statistics (EdStats), latest year available.

TABLE 2.2 Funding Allocation and Execution Rates, 2013

ZMW, millions

	Authorized provision	Funded budget	Actual expenditure	Funding rates (%)	Execution rates (%)
	a	b	c	d = b/a*100	e = c/b*100
Basic	3,054	2,973	2,994	97	101
High school	691	661	661	96	100
Teacher education	122	104	102	85	98
TVET	49	34	33	69	98
Higher education	473	409	413	86	101
ST	56	40	39	71	98
Administration	1,337	1,061	967	79	91

Source: MoF Financial Statement C 2013.
Note: ST = service teacher; TVET = Technical and Vocational Education and Training.

13 percent during the same period, and the higher education expenditure ranges from 8 percent to 11 percent. TEVET expenditure is generally small and ranges from 0.2 percent to 1.1 percent during the period; it has been gradually increasing since 2013. Administration expenditure ranges from 18 percent to 40 percent in this table, and actually includes capital expenditures belonging to different education levels. The budget for administration in 2015, about 6 percent of total education budget, reflects the more accurate administration cost since it is prepared based on the Output-Based Budgeting (OBB).[3]

Education expenditure at constant price also grew steadily between 2006 and 2013. The trend of inflation-adjusted education expenditure shows that the actual value invested in public education has also grown during this period except for a small drop in 2010. The total public education expenditure decreased from

TABLE 2.3 Trend of Public Education Expenditure

ZMW, nominal millions

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Budget	Budget
Basic (G1–9)	644	683	1,091	1,294	1,500	1,463	2,288	2,994	4,808	5,365
High school (G10–12)	154	147	223	309	354	342	515	661	1,102	2,112
Teacher education	47	44	54	57	65	67	90	102	192	
TEVET	3	3	27	19	12	16	42	33	63	153
Higher education	162	223	266	312	289	352	382	413	391	1,184
ST	4	3	9	7	5	10	14	39	62	78
Administration	499	748	701	849	684	1,273	1,144	967	1,982	523
Total	1,513	1,851	2,371	2,847	2,909	3,522	4,501	5,209	8,599	9,415

Sources: MoF Financial Statements C 2006–13; MoF Activity Based Annual Budget 2014 and 2015.
Note: Administration includes capital expenditures, which are distributed to different education levels except for 2015. ST = service teacher; TEVET = Technical Education, Vocational and Entrepreneurship Training.

TABLE 2.4 Trend of Public Education Expenditure at Constant Price

ZMW, constant millions, 2013

	2006	2007	2008	2009	2010	2011	2012	2013
	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual
Basic (G1–9)	1,288	1,211	1,728	1,844	1,913	1,659	2,451	2,994
High school (G10–12)	308	261	352	440	451	387	552	661
Teacher education	95	78	86	81	83	76	96	102
TEVET	6	6	42	27	15	18	19	33
Higher education	324	395	420	445	369	399	409	413
ST	7	6	14	11	7	12	15	39
Administration	997	1,325	1,110	1,210	873	1,444	1,281	967
Total	3,026	3,281	3,754	4,057	3,712	3,995	4,822	5,209

Sources: MoF Financial Statements C 2006–13; World Bank World Development Indicators for exchange the GDP deflator.
Note: Administration includes capital expenditures distributed to different education levels except for 2015. ST = service teacher; TEVET = Technical Education, Vocational and Entrepreneurship Training.

ZMW4,057 million (adjusted to new currency) in 2009 to ZMW3,712 million in 2010 (table 2.4). During this year, many countries faced a sharp financial constraint due to the global economic crisis, and it is likely that Zambia was not an exception. In Zambia's case, it is likely that the adjustment was made mainly through a reduction in the capital expenditure. The administration budget heads, which also include capital expenditure, dropped from ZMW1,210 million in 2009 to ZMW873 million at the constant price in 2010; but they jump up again in 2011 to ZMW1,444 million. While basic and high school education did not face a reduction in 2010, the allocation to higher education reduced for this year. In turn, basic and secondary education expenditure faced a decrease in 2011.

The education and skills sector consistently received the highest volume of external aid throughout the 2000s, but on a decreasing trend. Between 2006 and 2014, the education sector received US$488 million from cooperating partners (CPs) (table 2.5). The percentage of the CPs' contribution to total education expenditures remained relatively high up to 2009. However, partly as a result of the GRZ's

decongesting exercise of CPs, the number of active CPs reduced from 12 in 2005 to only 5 CPs by 2010. The contribution of the CPs to total education expenditure also dropped from 18 percent in 2009 to 3 percent in 2014.

By economic classification

Capital expenditure is expected to rise from around 10 percent in 2013 to 20 percent in the 2015 budget. In 2013, capital expenditure was ZMW518 million, which was 10 percent of the total ZMW5,209 million education expenditure.[4] The capital budget increased to ZMW1,281 in 2014 and to ZMW1,877 million in 2015 (table 2.6). Huge increases have been observed for secondary education and tertiary education. The capital expenditure for secondary education was ZMW303 million in 2013 and is expected to increase to ZMW814 million in 2015. This reflects the growing needs of secondary schools as a result of increasing secondary school enrollment, which grew by 20 percent during five years between 2008 and 2013, from 243,019 to 292,012. As the country is expecting a rapid population growth of 3 percent per annum, this investment in secondary education seems very necessary and meaningful investment for the population. The capital expenditure also increased significantly for tertiary education mainly for two reasons: one is the upgrading of some colleges to universities, and the other is the construction of hostels for students to provide accommodations to a larger number of university students. The capital expenditure for tertiary education is more closely analyzed in chapter 5.

Salaries make up a large proportion of recurrent expenditure, especially at basic and secondary education. The total amount of recurrent budget in 2014 was ZMW7,315,[5] of which ZMW4,808 million was allocated for basic education (table 2.7). Out of this ZMW4,808 million, ZMW4,716 million was spent for teacher and staff salaries and remuneration, taking up to 98 percent of the basic education budget. The expenditure

TABLE 2.5 Trend of Financing, by Cooperating Partners
US$, millions

	2006	2007	2008	2009	2010	2011	2012	2013	2014
CP financing	58	84	67	102	33	45	49	12	37
GRZ financing	361	378	566	462	574	679	826	953	1,361
Total education expenditure	420	462	633	564	606	725	875	965	1,398
CP financing (%)	14	18	11	18	5	6	6	1	3

Sources: MESVTEE Annual Report (various years).
Note: Exchange rate is the annual average of official exchange rate. CP = cooperating partner; GRZ = Government of the Republic of Zambia.

TABLE 2.6 Trend of Public Education Expenditure on Infrastructure Development
ZMW, millions

	2012	2013	2014	2015
	Actual	**Actual**	**Budget**	**Budget**
Early childhood education	0	0	5	42
Basic education (G1–9)	138	52	40	214
Secondary education	313	303	821	814
TEVET	13	41	60	87
Tertiary/higher education	56	71	340	682
Science, technology, and innovation	0	0	2	33
Adult and youth literacy	0	0	9	0
Management and support services	9	50	4	6
Total	529	518	1,281	1,877

Sources: World Bank staff calculations based on Financial Statements C 2012–2013, Activity Based Annual Budget 2014–2015.
Note: TEVET = Technical Education, Vocational and Entrepreneurship Training.

TABLE 2.7 Breakdown of the GRZ's Direct Recurrent Expenditure, by Level of Education, 2014

ZMW, millions

	Salary	Goods and services	Grants	Recurrent total	Salary (%)
Basic	4,716	0	92	4,808	98
Secondary	1,060	1	40	1,102	96
TEVET	12	21	45	78	16
Higher Education	138	63	410	611	23
ST	2	5	38	45	3
Administration	175	368	128	672	26
Total	6,103	459	753	7,315	83

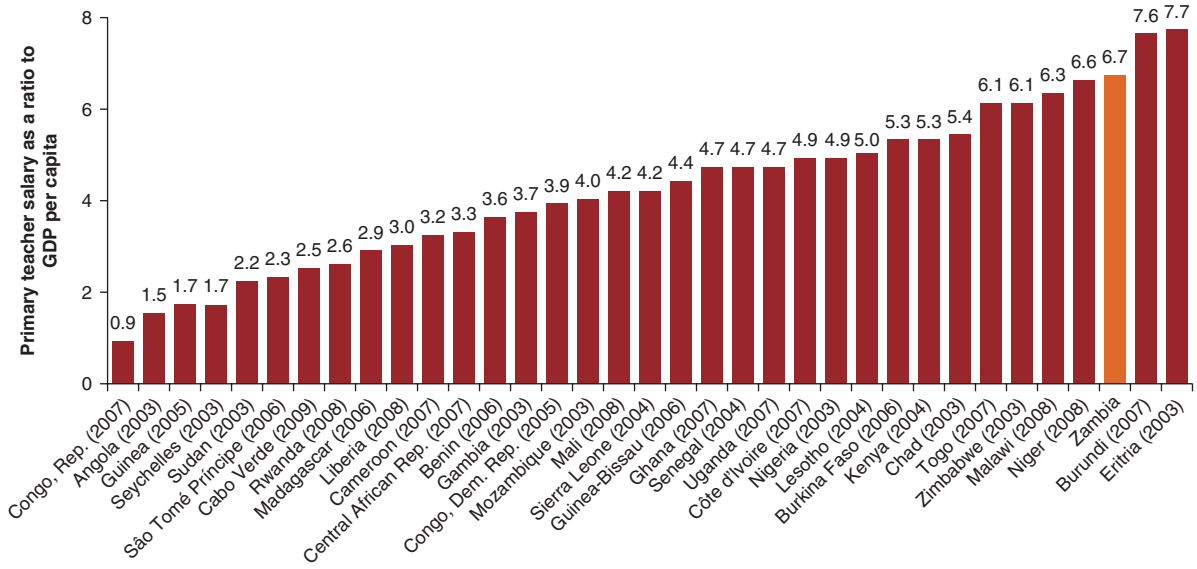
Source: World Bank staff analysis using Activity Based Annual Budget 2014.
Note: ST = Service Teacher; TEVET = Technical Education, Vocational and Entrepreneurship Training.

pattern is also similar in secondary education, where out of ZMW1,102 million recurrent expenditure, ZMW1,060 million was spent for teacher and staff salaries. This expenditure pattern could possibly mean that basic and secondary schools may not have much of an operating budget at the school level. Grants are provided to schools for compensating of the tuition-free policy, and it is likely that schools are using only this fund for their school activities. The salary shares of TEVET and higher education are much smaller than basic and secondary education. It is mainly because staff salaries are not directly financed by government sources, but instead the government expenditure is transferred to semiautonomous institutions and universities in the forms of grants. The recipient institutions and universities use these grants to pay their teachers' salaries. Salary costs appear here are only for the government TEVET institutions and government colleges whose teachers are listed on the government payroll. The detailed cost breakdown of staff salary cost is analyzed in the chapter on higher education.

Recent civil service reform has provided teachers in Zambia with relatively generous remuneration packages. Civil service reform was made in 2013 and all the civil servants enjoyed a salary raise by 45 percent (World Bank 2014). Today, 46,403 primary school teachers receive on average ZMW61,404 per year, which is approximately US$9,520. Secondary school teachers, numbered 24,091, receive a slightly higher salary, ZMW65,088 per year. In comparison to GDP per capita, the average teacher salaries for primary and secondary teachers are 6.7 times or 7.1 times higher.[6] An international comparison of primary teacher salary from 35 Sub-Saharan African countries (from different years) shows that the ratio of 6.7 times higher belongs to a relatively higher end of the distribution (figure 2.3). The reasonable remuneration is often considered to be a necessary, but not sufficient, factor for attracting high-quality teachers, but it is important that those high-quality teachers are not concentrated only in urban areas and deployed to areas where they are needed. However, nonteaching staff salaries are on average higher than teacher salaries. There are 13,761 administrative staff members throughout the country, and their salaries were ZMW92,772, which is 10.2 times higher than GDP per capita. In addition, due to an increase in salary in 2013, the ratio to GDP per capita increased from 3.6[7] in 2011 to 6.7 in 2014.

The salary level of TEVET instructors and lecturers at colleges are on different scales, but instructors of TEVET institutions seem to receive the same level of remuneration as primary school teachers. In fact, there are only a few public TEVET institutions where teachers are listed on the payroll. Most other TEVET institutions are semiautonomous so they are able to set their own remuneration standards. In sampled cases of Evelyn Hone College and Northern Technical College,[8] the average remuneration for teaching staff was ZMW130,627, which was 15.7 times higher than GDP per capita (table 2.8).

FIGURE 2.3 Primary Teacher Salary as a Ratio to GDP per Capita Compared across African Countries



Sources: UNESCO Institute for Statistics 2011; World Bank staff analysis using Activity Based Annual Budget 2014.
Note: The teachers' salary in Zambia consists of a basic salary, housing allowance, and transport allowance for all the teachers. Other allowances such as a remote allowance for teachers deployed in remote areas, a responsibility allowance for teachers with diploma teaching in secondary schools, and a double class allowance for the primary school teachers teaching two classes are not included.

TABLE 2.8 Average Annual Teacher and Staff Remunerations, 2014

	Number of teachers	Average annual gross salary[a] (ZMW)	Average annual gross salary[b] (US$)	Salary as a ratio of GDP per capita
Civil service teaching staff				
Class teachers (primary)	46,403	61,404	9,520	6.7
Subject teachers (secondary)	24,091	65,088	10,091	7.1
Instructor (public TEVET)	102	61,848	9,589	6.8
Lecturer (teacher college)	378	101,004	15,660	11.1
Civil service nonteaching staff				
Administrative staff	13,761	92,772	14,383	10.2
Workers	2,592	38,784	6,013	4.2
TEVET institutions (autonomous)				
Teaching staff	261	130,627	20,252	15.7
Nonteaching staff	192	73,995	11,472	8.9
Universities				
Academic staff	1,023	451,885	70,060	54.4
Nonacademic staff	2,361	168,706	26,156	20.3

Source: World Bank staff calculations using civil service data and data collection from institutes (not publicly available).
Note: GDP per capita for 2014 is calculated as ZMW9,135 by linear projection, based on World Development Indicators 2013 data. Data of TEVET institutions and universities are from 2013 and the corresponding GDP per capita is ZMW8,308. TEVET institutions assessed include Evelyn Hone College and Northern Technical College. Universities assessed include the University of Zambia and Copperbelt University.
TEVET = Technical Education, Vocational and Entrepreneurship Training.
a. and b. Gross salary includes all the benefits.

University staff salaries are even higher. Combined data of the University of Zambia (UNZA) and Copperbelt University (CBU) give an average salary of ZMW451,885 per academic staff, which is 54.4 times higher than GDP per capita, and a nonacademic staff salary of ZMW168,706, which is 20.3 times higher than GDP per capita.

Expenditure per Student

The pattern of government expenditure per student shows that government subsidies are noticeably small for TEVET students while other levels seem to receive adequate government subsidies.[9] In 2013, the GRZ's spending per basic education student was ZMW849 = (US$131@6), and it was on an increasing trend since ZMW332 in 2008 (table 2.9). Secondary education expenditure per student was ZMW2,265, or 2.7 times higher than that for a primary student. This is due to several reasons, including (a) higher remuneration level of teachers, (b) relatively smaller pupil-teacher ratios (PTRs) because of the subject teaching system, and (c) estimated higher costs of materials and equipment for secondary education. Teacher education costs 8.9 times more than primary education, and the government subsidy to university student at UNZA and CBU was 15.2 times higher than for primary students. While this pattern is understandable because upper level education usually costs more, it is noteworthy that the government expenditure per TEVET student is significantly small—smaller than that per secondary student. Excluding revenue generated by semiautonomous TEVET institutions, the GRZ's spending per TEVET student is only ZMW1,195. Given that the TEVET institutions are generating their own resources to run their programs, such a low expenditure per student is not surprising. However, the government expenditure per TEVET student is 16 percent of gross national income (GNI) per capita, which is relatively small in comparison with some other countries from Sub-Saharan Africa. South Africa, Uganda, and Rwanda spend, respectively, 51 percent, 263 percent, and 311 percent per postsecondary, nontertiary student.[10]

Equity of Public Expenditure on Education and Household Expenditure

Private expenditure on education plays an important role in education financing in Zambia, especially at postsecondary levels. While a large portion of students are enrolled in TEVET institutions and universities that receive a government subsidy, the contribution of the public grants is relatively small in the cost of running both TEVET institutions and public

TABLE 2.9 Government Expenditure per Student, by Level of Education
ZMW

	2008	2009	2010	2011	2012	2013	Ratio to primary education	As % of GNI per capita
Basic (G1–9)	332	386	474	429	637	849	1.0	10
High school (G10–12)	916	1,167	1,568	1,406	1,790	2,265	2.7	27
Teacher education	—	—	—	—	—	7,566	8.9	91
TEVET	802	603	362	474	1,195	—	1.9	16
UNZA and CBU	—	14,460	12,363	13,229	12,713	12,921	15.2	156

Sources: CBU Financial Statements for 2008–13; enrollment from MESVTEE Annual Report; TEVETA; UNZA.
Note: Enrollment of teacher education is missing in four teacher colleges, so the average enrollment of 12 other colleges is used for imputation. Enrollment in basic and high schools includes private school students. For TEVET, most technical institutions are semiautonomous. To cross-check the information, the government subsidy per student has been calculated for two large colleges in the country, Evelyn Hone College and Northern Technical College, by using their accounting documents, and the information was found consistent. Expenditure on UNZA and CBU includes only recurrent subsidy and bursaries to these two universities. For all other levels, expenditure includes capital expenditure as well due to complexity of sorting information. GNI per capita for TEVET is for 2012 and the rest are for 2013.
— = not available; GNI = gross national income.

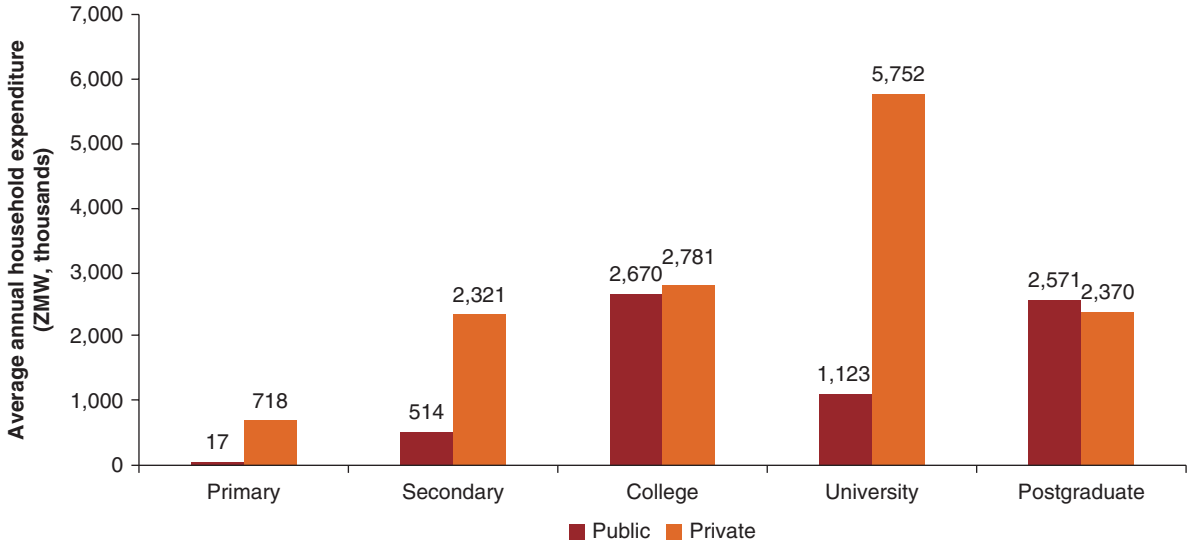
universities. TEVET institutions and universities are considered semiautonomous bodies, overseen by management boards.

Private expenditure on education is small among lower basic students who attend public schools. While the free primary education policy was introduced in 2002, some students continue to pay schools fees, however little. The annual household (i.e., private) expenditure on education, including tuition, PTA fees, textbooks, stationery, uniforms, private tuition, and any other expenditures is ZMW17 (US$1@4.797 for 2010) on average among primary students in public schools. Annual household spending on one secondary school student (grades 8–12) is ZMW514. educational costs for private school students are much higher at the same level. For primary education, annual average spending is ZMW718, and ZMW2,321 for secondary school students. In most cases, tuition increases the total cost.

There is a great difference between public school and private school costs in postbasic education levels. The cost difference in absolute term grows quite substantially from secondary education. While households spend on average ZMW514 to a public secondary student, average cost is as large as ZMW2,321 for a private secondary school student. Here again, tuition is the main reason for this cost difference. What is interesting is the cost difference at the university level. While a private university student pays ZMW5,752, on average, a public university student pays only ZMW1,123. The survey shows that the average tuition of public university students is lower than that of college students, and textbook and stationery costs are virtually zero. This case can be explained by the relatively generous bursary programs for public university students. More on this will be discussed under chapter 5, but its phenomenon can be interpreted in two ways: one is that the bursary has contributed significantly to lowering the private cost of education and thus enabling financially disadvantaged students to access higher education; the other is that the generous subsidy possibly contributes to the augmentation of the inequitable distribution of public expenditure, since most university students are from relatively wealthy households (figure 2.4).

Household expenditure on education is progressive against the income decile. An analysis of household expenditure on education

FIGURE 2.4 Average Annual Household Expenditure on Education per Child, by Educational Level, 2010



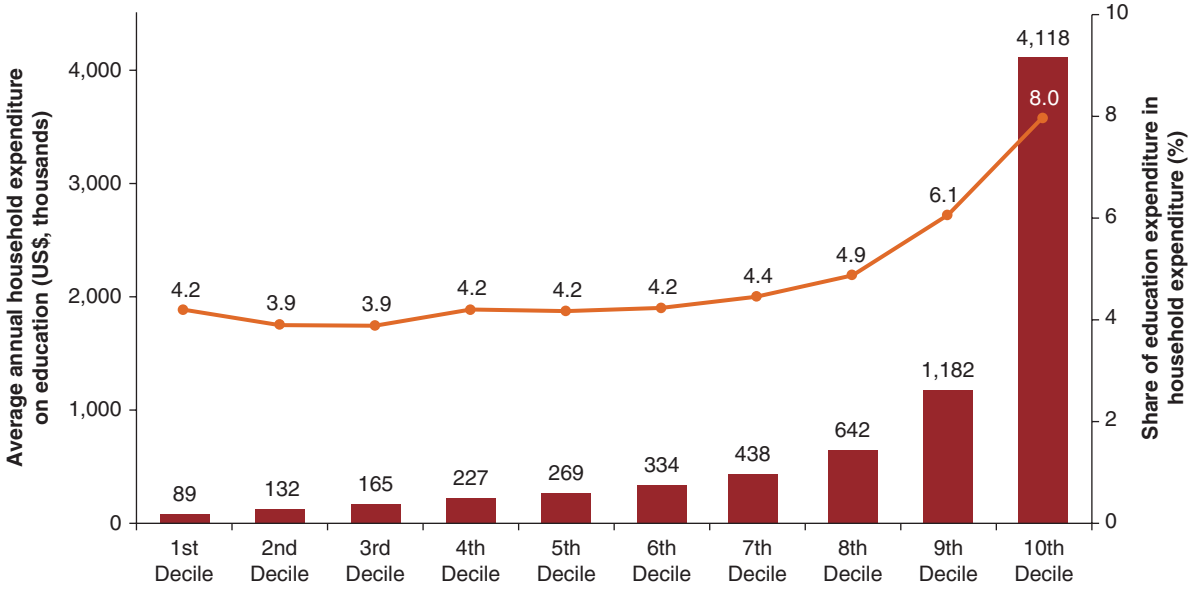
Source: World Bank staff calculations using LCMS 2010.
Note: The currency is rebased on the denominated new Zambian kwacha (ZMW).

among the households with at least one student in the household shows that household expenditure grows with income level. Among the poorest households, the annual average expenditure on education is ZMW89 in 2010,[11] 4.2 percent of all household expenditures (figure 2.5). The nominal amount of education expenditure grows gradually to decile 9 when it reaches ZMW1,182, and jumps up to ZMW4,118 at the richest decile. It is likely that the enrollment pattern for this decile is different from those of other deciles, and it is considerable that many private university students come from this decile. The share of education expenditure in total household expenditures remains fairly consistent between decile 1 through decile 7. This share is larger in the richest 30 percent of the households.

Benefit incidence analysis shows that public expenditure is pro-poor at the basic education level, but pro-rich for postbasic levels. The distributional pattern of public expenditure on education across different socioeconomic groups shows that public expenditure on basic education is distributed in preference for the poor (figure 2.6). This means that free basic education policy is effectively providing educational access to the poorest children. Statistics from the household survey show that the share of private school enrollment in basic education level is high among children from wealthier deciles: only 64 percent of the children from the richest decile attend public schools at the basic education level. Because those who can afford tuitions tend to go to private schools (which are likely to provide higher quality education), public education expenditure is well targeted to the poor at the basic education level.

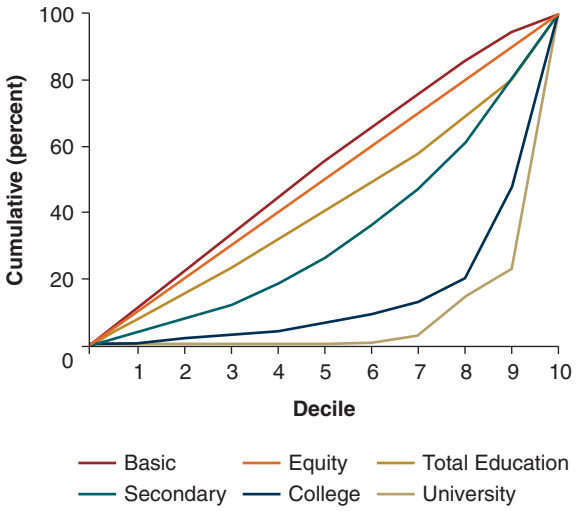
While 88 percent of students in primary education aspire to university education, only 3 percent to 4 percent of students can actually access higher education (World Bank 2015). The distributional pattern is very pro-rich at postbasic education levels simply because there are few children from poor households who continue their education at postbasic levels. Only 26 percent of students in secondary schools are from the lower 50 percent of the households (i.e., deciles 1–5). For the college and university level, the share of enrollment for children from the lower 50 percent is 7 percent in college and almost nil at the university level. Although the government provides generous support to public university students to eliminate financial burdens, the support does not

FIGURE 2.5 Annual Average Household Expenditure on Education, by Income Decile, 2010



Source: World Bank staff calculations using LCMS 2010.

FIGURE 2.6 Benefit Incidence Analysis of Public Education Expenditure



Source: World Bank staff calculations using LCMS 2010.
Note: Exchange rate used is ZMW4,797=US$1, using the old currency of ZMW and average exchange rate of 2010. Basic and secondary education in 2010 refer to grades 1–9 and grades 10–12, respectively.

reach the poorer students who drop out from the education system before reaching university. In 2010, 77 percent of university students were from the richest (10th) decile.

Key Findings

- The largest share of the government budget for education reflects the strong commitment of the government to improve the education system in the country.
- The Ministry of Education, Science, Vocational Training and Early Education (MESVTEE) invests mainly in salaries for basic and secondary education and recently increased its investment in capital expenditure especially for secondary and higher education.
  - Teacher salaries in primary and secondary are relatively high compared to both domestic salaries (6.7 times [primary] or 7.1 times [secondary] higher than GDP per capita) and to those in other African countries. The relatively high investments on teachers should reflect the education outcomes and student learning outcomes.
  - Salaries for teaching and nonteaching staff in TEVET and higher education are on different scales and are significantly higher than GDP per capita. They require a more detailed analysis (chapters 4 and 5).
  - The increased investment in capital expenditures on secondary and higher education seems to respond well to the growing demand in the education system. However, the tight budget requires more efficient use of the investment in secondary and higher education.
- Government expenditure per student in TEVET is very small. This poses a question on the government commitment to skills development.
- There is a great difference in private education spending by income. The richest 10 percent spend more than the total of the rest of the population. This distortion tranlates into inequality in secondary and higher education levels where the costs of education are relatively high.

Notes

1. The Bank of Zambia introduced the new Zambian kwacha at a rate of 1,000 old kwacha = 1 new kwacha on January 1, 2013. To avoid confusion, this PER uses only the new Zambian kwacha (ZMW) by rebasing the currency for the pre-2013 period by the new value.
2. One of the reasons for a gap between budgetary allocation and actual expenditure is the relatively low execution rate of capital expenditure under education.
3. This trend by education levels is according to budget heads. In fact, most of capital expenditure is included under the project unit in the headquarters. table 2.3 includes the capital expenditure for subsectors under the administration. Therefore, actual administrative cost is much smaller than what is shown in this table although it is not easily separable using the available information. The breakdown of capital expenditure for data-available years (since 2012) is separately analyzed in table 2.6.
4. Financial contributions from communities, known as *community mode*, are not included. Through the community mode, the government

provides 75 percent of school construction costs while the remaining 25 percent is provided by the community.

5. This analysis was done by World Bank staff by analyzing the raw data of education budget 2014. The same analysis was not possible for actual expenditure of other years due to unavailability of the database of the same kind.
6. GDP per capita for 2014 is estimated by World Bank staff as ZMW9,135 by using linear projection.
7. Business Case for Zambian Education Sector Budget Support Program, DIFID 2011.
8. There are three categories of training institutions, namely (a) college, (b) trades training institutes, and (c) training centers under TEVET. A college is a registered training institution providing education and training leading to qualifications up to level 5 and level 6 of the TEVET Qualifications Framework. A trades training institute is a registered training institution providing education and training leading to qualifications up to level 4 of the TEVET Qualifications Framework. A training center is a registered training institution providing education and training leading to qualifications up to level 3 of the TEVET Qualification Framework (TEVETA 2012). More details in chapter 4.
9. For detailed information on the school grant and its formula, please refer to another report on Education PETS-QSDS in Zambia (World Bank 2015).
10. Data are the most recent years between 2011 and 2013 from the UNESCO Institute for Statistics. The education level of the reference is ISCED4—postsecondary nontertiary level education—which covers postsecondary TEVET programs.
11. ZMW89,000 in old currency.

Chapter 3

Expenditure on General Education (Grades 1–12)

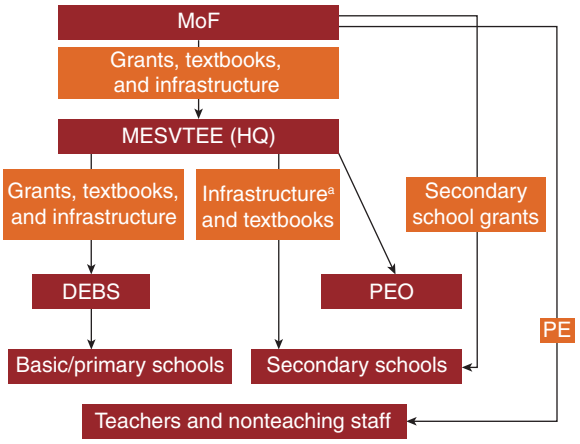
This chapter aims to review the government's policy on general education (primary and secondary education) in relation to the efficiency and effectiveness of the education budget and expenditure. In efficiency, this chapter mainly looks at how much of the government budget indeed reaches out to intended beneficiaries (e.g., poor students). It also discusses the effectiveness of the implementation of the government policies such as free primary education to see whether or not poor students receive intended benefits. The chapter is organized as follows. First, it describes the overall expenditure structure and budget execution in general education, followed by discussions on free primary and secondary education policies. Budget execution in certain types of funds is inefficiently executed, with varying degrees across provinces. The chapter then discusses the feasibility of free primary and secondary education policies. It is found that while primary education is progressive, secondary education is regressive. With limited funding available, secondary education has to heavily rely on private spending (i.e., out-of-pocket) to run the schools. As a result, access to secondary education is highly correlated with the wealth status of a student's family. The supply of secondary schools is strikingly short in comparison to the number of prospective secondary students. Expanding the provision of secondary education should continue to be a policy priority. In addition, facing the chronic low performance of student learning achievement, this chapter addresses areas for improvement in school inputs (teachers, textbooks, and learning hours) as other policy documents and the previous Public Expenditure Review (PER) emphasize.

General Education Expenditure Structure and Budget Execution

Expenditure on general education can be categorized into three items: staff and teacher salary (personal emolument [PE]), school grants for education materials and free primary and secondary education, and infrastructure development mainly for the construction of school. These three items capture government policy priorities on teachers, free primary and secondary education,[1] and increasing the supply of schools. PE and secondary school grants flow from the Ministry of Finance (MoF) to individual accounts and secondary school accounts, and infrastructure funds for construction flow from the Ministry of Education, Science, Vocational Training and Early Education (MESTVEE) to individual secondary schools (figure 3.1). In primary, the free primary school grants are disbursed through decentralized units (i.e., District Education Board Secretaries [DEBS])[2] to primary schools, and the textbook funds are disbursed directly to publishers (however, the order of textbooks are still maintained by DEBS). In secondary, textbooks are delivered directly to secondary schools from publishers and the funds flow directly to the publishers from MESVTEE.

The majority of expenditure (89 percent)[3] is spent on salaries of teachers and staff; the second major expenditure item (7.5 percent) is construction and upgrading of secondary schools. In 2013, out of the total spending on primary and secondary education (ZMW4,034 million): 89 percent goes to salaries of basic and high school staff and teachers; 8.5 percent goes to infrastructure development, especially to constructing and upgrading secondary school (7.5 percent); and

FIGURE 3.1 Public Education Fund Flows in General Education, Grades 1–12



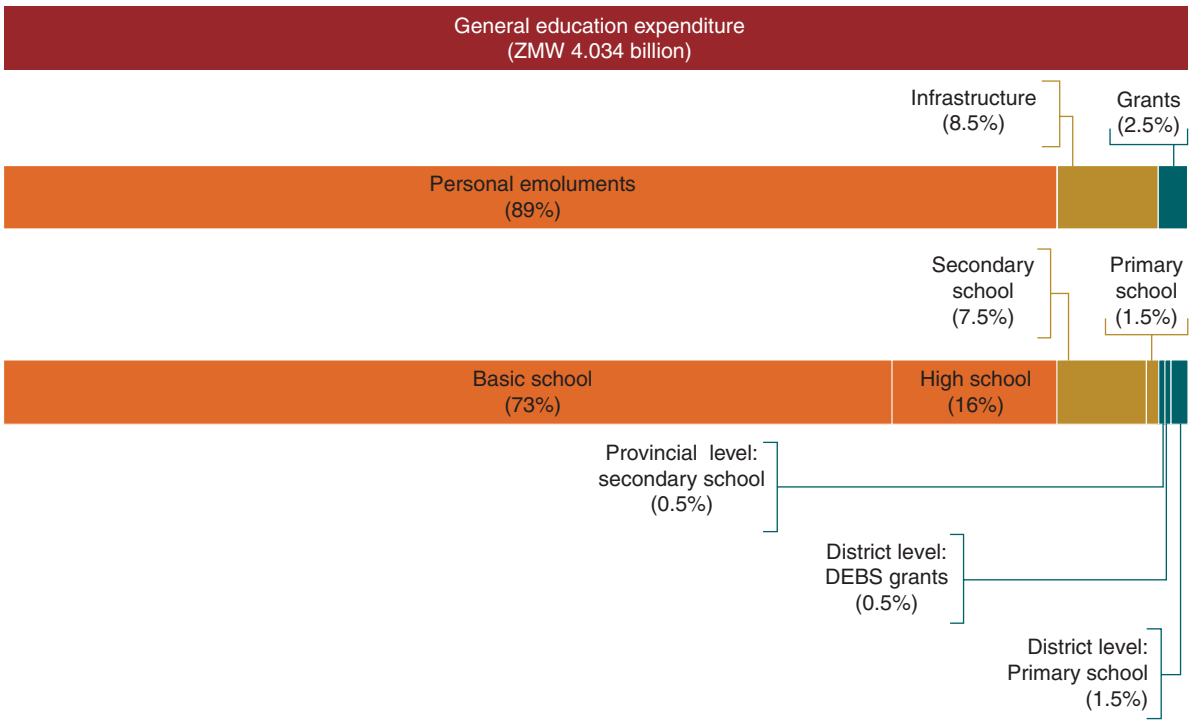
Note: DEBS = District Education Board Secretaries; MESVTEE = Ministry of Education, Science, Vocational Training and Early Education; MoF = Ministry of Finance; PE = personal emolument; PEO = Provincial Education Office.
a. Infrastructure is for secondary school building; Textbook procurement is decentralized; however, due to the new curriculum, the textbooks were centrally procured in 2013 and delivered to schools in 2014.

only 2.5 percent of spending is primary and secondary school grants (figure 3.2). Of this 2.5 percent, 0.5 percent is spent on education materials for secondary schools, another 0.5 percent goes toward DEBS grants,[4] and 1.5 percent is used for free primary school grants. figure 3.1 does not include the budget for textbooks. In 2013, the actual expenditure for textbooks was about ZMW8 million (0.2 percent of the general education expenditure), which was significantly lower than budget (about ZMW42 million) because of the serious delay in textbook procurement and delivery caused by new curriculum development.

DEBS Grants for Primary Education

While 99 percent of the budget was executed in 2013, the level of the budget execution varied depending on the budget item and province. While 100 percent of the PE was executed, only 84 percent of the budget on the DEBS grants was

FIGURE 3.2 Government Expenditure Flow in Basic and Secondary Education, 2013



Source: MoF Financial Statement C 2013.
Notes: DEBS = District Education Board Secretaries; PE = personal emolument.

disbursed to DEBS while some grant categories were overly executed (106 percent for district level grants for free primary; 105 percent for provincial level grants for free early childhood education [ECE], secondary, and special schools).[5] In addition, the degree of the DEBS grant in budget execution varies across provinces. The Copperbelt Province executed only 57 percent of its budget in 2013 (figure 3.3).

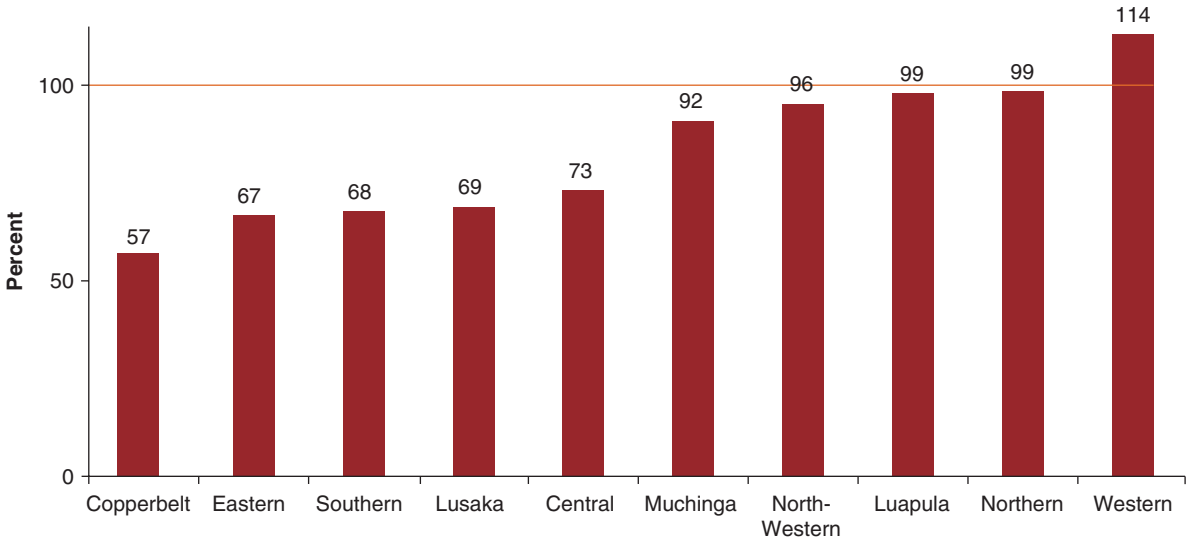
The poor budget execution of DEBS grants is correlated with size of expenditure and enrollment. Copperbelt has the largest expenditure and enrollment, but it performs the lowest budget execution in DEBS grants. In contrast, while provinces such as North-Western and Muchinga have the smallest expenditure and enrollment, their budget execution rates of the DEBS grants are much higher than that of Copperbelt (figure 3.4). Larger provinces in terms of enrollment size tend to have lower budget execution, while smaller provinces in enrollment tend to be higher in budget execution rates.

School Grants for Primary Education

The actual disbursement of school grants for primary education does not fully align with the budget allocation rule. According to the free primary grant allocation rule, the amount of school grants is determined by three factors: (a) school location (remoteness), (b) gender ratio, and (c) size of schools (enrollment). Provinces determine how much each factor contributes to the total grant amount to schools. An econometric analysis using the data from Public Expenditure Tracking Survey-Quantitative Service Delivery Survey (PETS-QSDS) in 2014 shows that only 18 percent of the actual amount received by primary schools is explained by these factors; each province accords a different degree of weight to the factors (figure 3.5).[6] This could mean that the funding formula may not be properly implemented for allocating the resources to schools, or that although the funding allocation is properly calculated, the proper amount is not disbursed to schools.

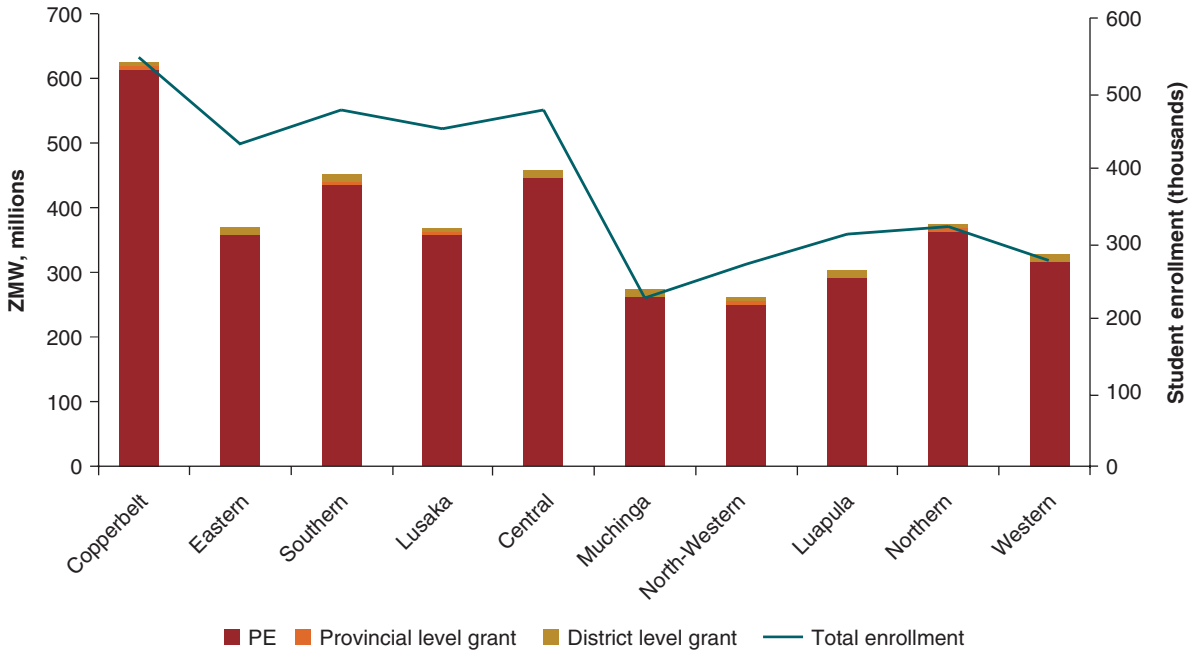
Partly because of the incompliance of the budget allocation rule, 28 percent of primary schools do not receive any school grants from the government. In 2013, 72 percent of primary schools received school grants; each school received ZMW15 per student on average.

FIGURE 3.3 Percentage of Funded Budget Executed from DEBS Grants, by Province



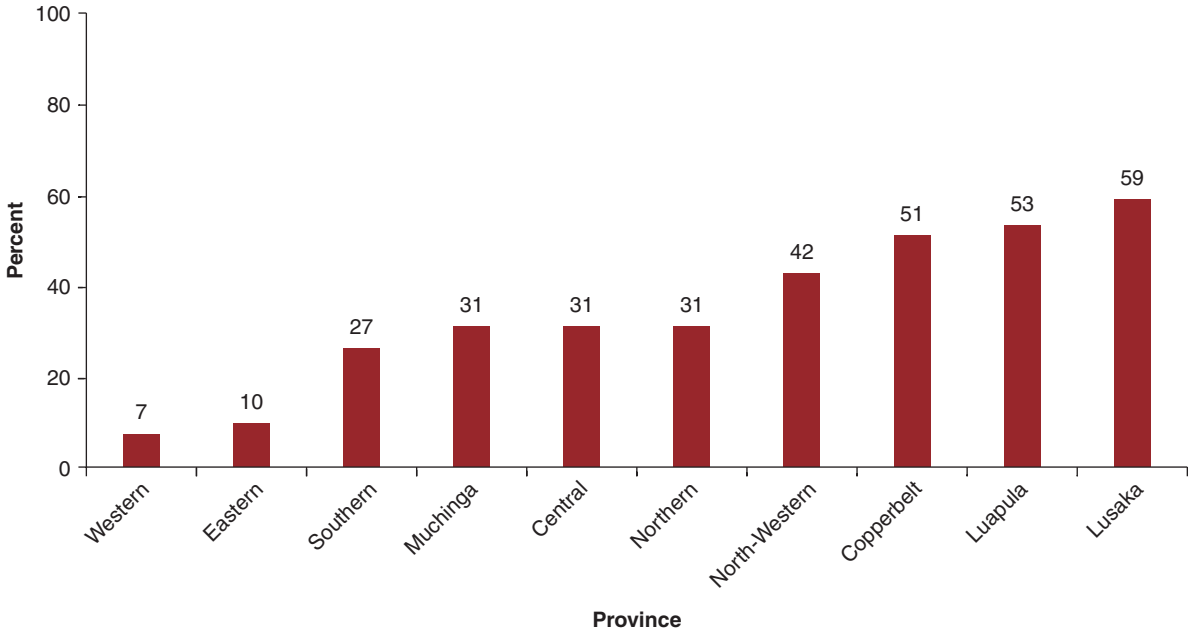
Source: World Bank staff calculations using 2013 MoF Financial Statement C.
Note: Percentage of funded budgets for grants to DEBS disbursed to DEBS.

FIGURE 3.4 Education Expenditure and Enrollment Size, by Province



Sources: World Bank staff calculations using MoE Education Statistical Bulletin 2013 and MoF Financial Statement C 2013.
Note: Provinces are sorted by the rate of budget execution. PE = personal emolument.

FIGURE 3.5 Percentage of School Grant Amount Explained by Budget Allocation Rule



Source: World Bank staff analysis using PETS-QSDS 2014.
Note: Amount of school grants received from District Education Board Secretaries (DEBS) is regressed on gender parity, enrollment, and school location (rural and distance to DEBS) in each province. R-squared of regression is shown in the graph, which indicates how much of the grant amount can be explained by the above-mentioned factors.

In principle, all primary schools are supposed to receive school grants based on the grant allocation rule. However, the proportion of schools receiving these grants varies significantly across provinces. For instance, only 37 percent and 56 percent of primary schools in Muchinga and Eastern provinces, respectively, received school grants in 2013. This contrasts with Northern, Lusaka, Copperbelt, Southern, and North-Western provinces where more than 80 percent of primary schools received school grants (figure 3.6).

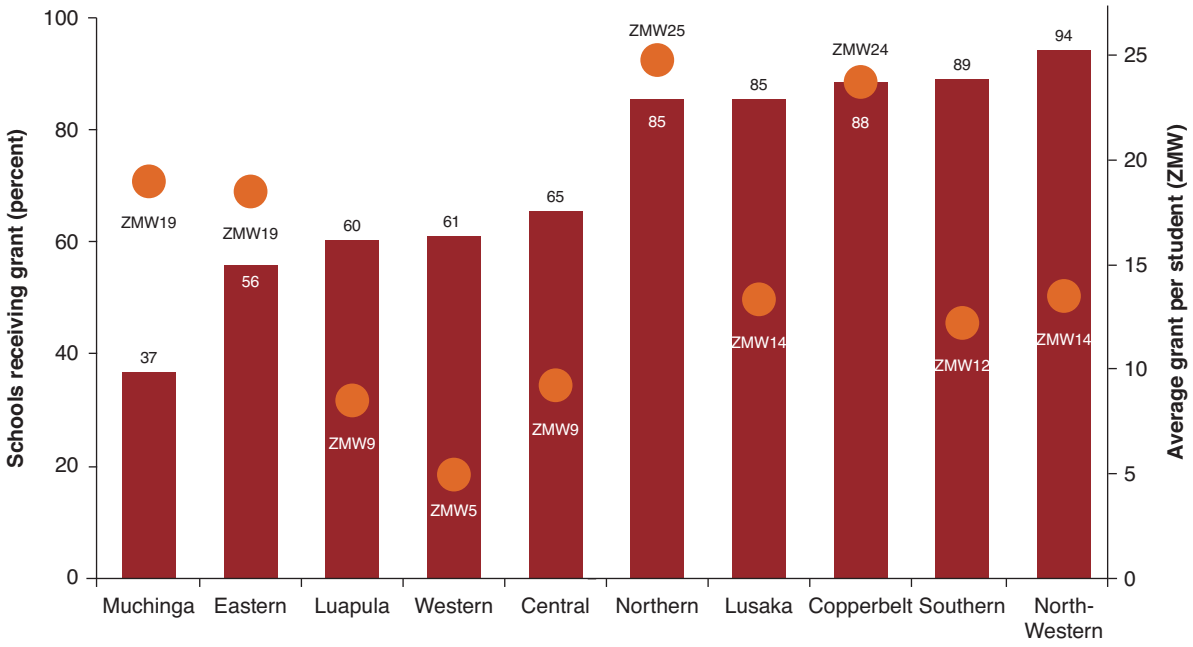
There is a significant difference in the amount of school grants received within a province. Both Muchinga and Eastern provinces, for instance, received ZMW19 per student on average (mean), which is a relatively large amount of school grants. However, the median (not mean) amount of school grants per student is almost zero in both provinces. This indicates that most of the primary schools in these provinces do not receive any school grants at all while a few primary schools receive much more than the average ZMW19 of school grants per student. A similar phenomenon is observed in Western, Central, Northern, Lusaka, and Copperbelt where there is a large difference between mean and median amounts in school grants per student.

The free primary school grant[7] per pupil disbursed at the MESVTEE was ZMW22 according to MoF Financial Statement C (actual expenditure for the free primary school grant), while that actually received by grant eligible primary schools was ZMW15 according to PETS-QSDS. This gap does not necessarily mean a leakage in school grants. From a follow-up survey with government officials at PEO, DEBS also uses the school grant for delivery of textbooks[8] to remote schools and other operation costs (especially, transportation) to support the schools.

School Grants for Secondary Education

Unlike school grants for primary education, there is no budget formula available for school

FIGURE 3.6 Distribution of per Student Primary School Grants, by Province



Source: World Bank staff analysis using PETS-QSDS 2014.
Note: Bars represent the percentage of schools receiving grants (left y axis); dots represent the average grant per student (right y axis). Bottom 5 percent and top 5 percent of schools in per pupil grant amount distribution are considered as outliers and removed from analysis due to highly skewed grant amount.

grants for secondary education. In terms of budget execution, school grants for secondary education seem consistent across provinces. Almost all provinces show 100 percent budget execution rates, except for Southern Province whose budget execution rate was high at 143 percent in 2013 (table 3.1). Actual expenditure of school grants for secondary education is positively correlated with the size of student enrollment and the number of secondary schools in the province. However, the correlation becomes negative when compared with actual expenditure per student. In other words, the more students (or the more schools), the more spending in the province (and vice versa). However, the actual expenditure per student becomes smaller if there are more students or more schools in the province.

Cost of Free Primary and Secondary Education

Majority of primary and secondary schools charge school fees although not all students pay the fees. Fifty percent of primary schools (government and grant-aided community schools) still charge school fees in spite of the government's free primary education policy, and 27 percent of students in government and grant-aided primary schools actually pay the school fees. On average, primary schools charge an annual school fee of ZMW31 to each student, 72 percent of which is a parent-teacher association (PTA) fee. In secondary education, almost all schools (98 percent) charge an annual school fee of ZMW275 on average, and 60 percent of secondary students actually pay the fees (figure 3.7).

Primary schools continue to partially rely on private sources of funding (students' out-of-pocket), and secondary schools rely heavily on private sources of funding. Combining public and private sources, primary and secondary schools receive ZMW35 and ZMW250 annual revenues per student, respectively (figure 3.8). The school grants cover only 64 percent and 10 percent of primary and secondary school revenues, respectively. This indicates that the government free primary and secondary school policies are not fully in practice. Further, the government funding of ZMW22 (or 64 percent) per student for primary education and ZMW25 (or 10 percent) per student for secondary education is below the targets of ZMW46 and ZMW144, respectively, given in the Performance Assessment Framework (PAF) for 2015. Since the government school grants are not enough to fully operate the schools, charging school fees (especially PTA fees in primary schools) seems to be an inevitable option for schools. On the one hand, as long as the school fees are not mandatory, charging school fees could function as a redistribution mechanism among

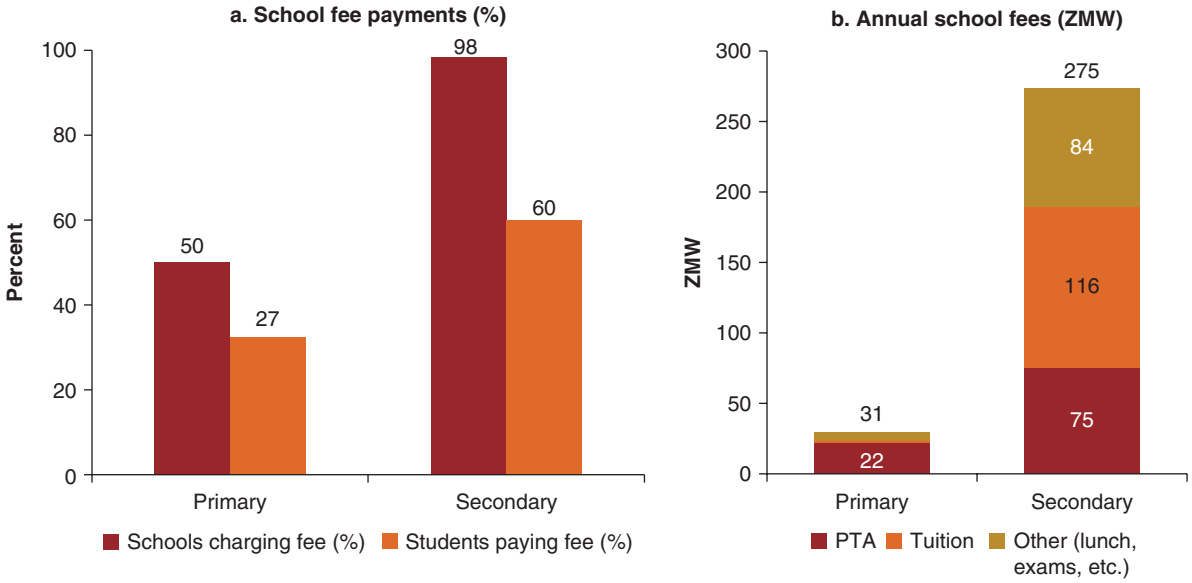
TABLE 3.1 Funding Rates and Execution Rates of Secondary Education School Grants, by Province, 2013

ZMW, thousands

Province	Authorized provision	Funded budget	Actual expenditure	Funding rates (%)	Execution rates (%)
Central	3,667	2,335	2,328	64	100
Copperbelt	4,759	2,257	2,331	47	103
Eastern	4,829	2,946	2,946	61	100
Luapula	2,960	1,724	1,724	58	100
Lusaka	4,253	2,006	2,009	47	100
Muchinga	2,702	1,565	1,552	58	99
Northern	2,826	1,711	1,711	61	100
North-Western	2,872	1,745	1,737	61	100
Southern	4,038	2,689	3,852	67	143
Western	2,766	1,846	1,870	67	101

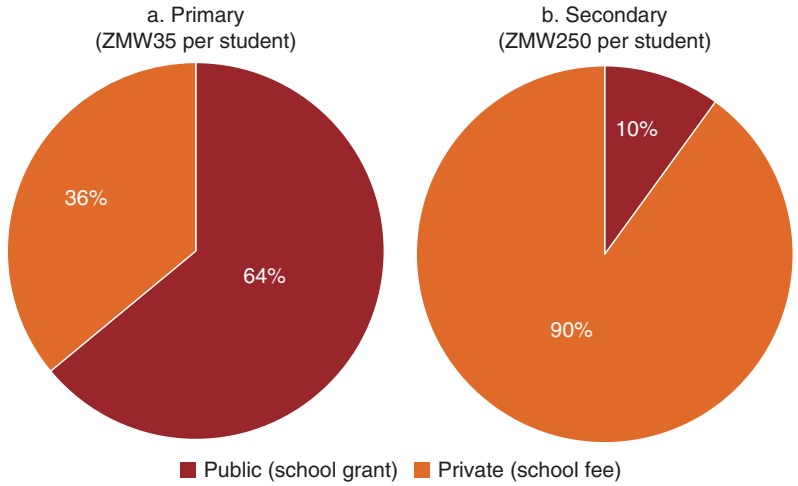
Source: MoF Financial Statement C 2013.

FIGURE 3.7 Comparison Between Percentage of School Fee Payments and Annual School Fee Amounts



Source: World Bank staff analysis using PETS-QSDS 2014.
Note: Analysis includes only government and grant-aided community schools. Due to the highly skewed school fee amounts, bottom 5 percent and top 5 percent of schools with school fees are considered as outliers and removed from analysis. In the PETS-QSDS report 2015, similar analysis is conducted with all primary and secondary schools (including private nongrant-aided schools). PTA = parent-teacher association.

FIGURE 3.8 Per-Student School Revenue, by Source



Source: World Bank staff analysis using PETS-QSDS 2014.

rich and poor students. The school grants, on the other hand, could play a role to promote equality, focusing on those schools with poorer students.

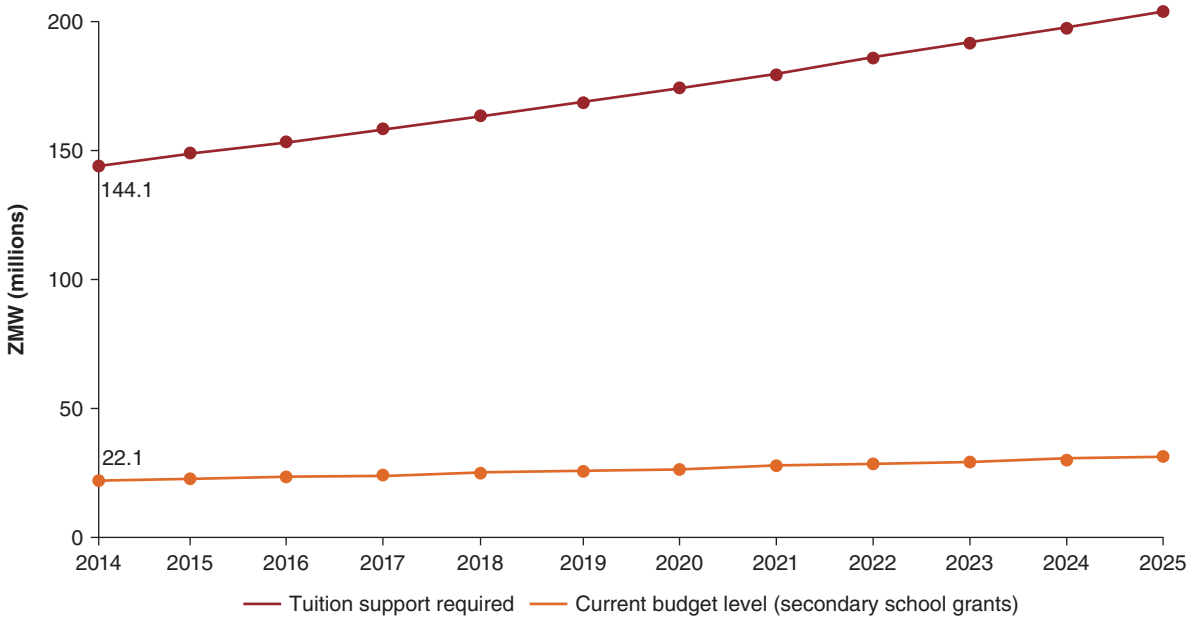
Primary school grants are pro-poor, but secondary school grants seem to support the schools with richer students. A regression analysis indicates that if there are more poor students than rich students in a primary school, school grants per student actually increase in the school. Hence, school grants flow more into poorer schools. In secondary education, however, a higher percentage of richer schools[9]

receive the secondary school grants with higher amounts than that received by poorer schools.[10] Furthermore, if there are more rich students in secondary schools than poor students, school revenues rise through the increase of school fees, which are paid by students. In other words, secondary schools with a larger number of rich students charge more school fees to the students and generate a higher volume of school revenues. Such secondary schools have a stronger financial capacity to, for instance, buy relatively expensive equipment for science classes while secondary schools with more poor students tend to find it difficult to have a similar financial capacity.

A free secondary education that the government aims to introduce progressively would require increases in government spending on secondary school grants by more than sixfold, even if enrollment in secondary education increases at the current pace. Given that secondary education is pro-rich, the government recognizes the importance of the policy intervention from the public policy point of view. In the National Implementation Framework (NIF) III (2012–15), the government introduced free and compulsory secondary education in a phased manner. However, the current level of secondary school grants is far short of the amount necessary for fully implementing free secondary education (figure 3.9). The PETS-QSDS conducted in 2014 shows that secondary schools charge, on average, ZMW312 to each student to finance the operating costs, and students pay ZMW187 annually for tuition and PTA fees. It is apparent that the current school grant of ZMW29 per student at the provincial level is not enough to fully cover the cost of secondary education and that it is unrealistic to expect to fully close the gap only by government grants.

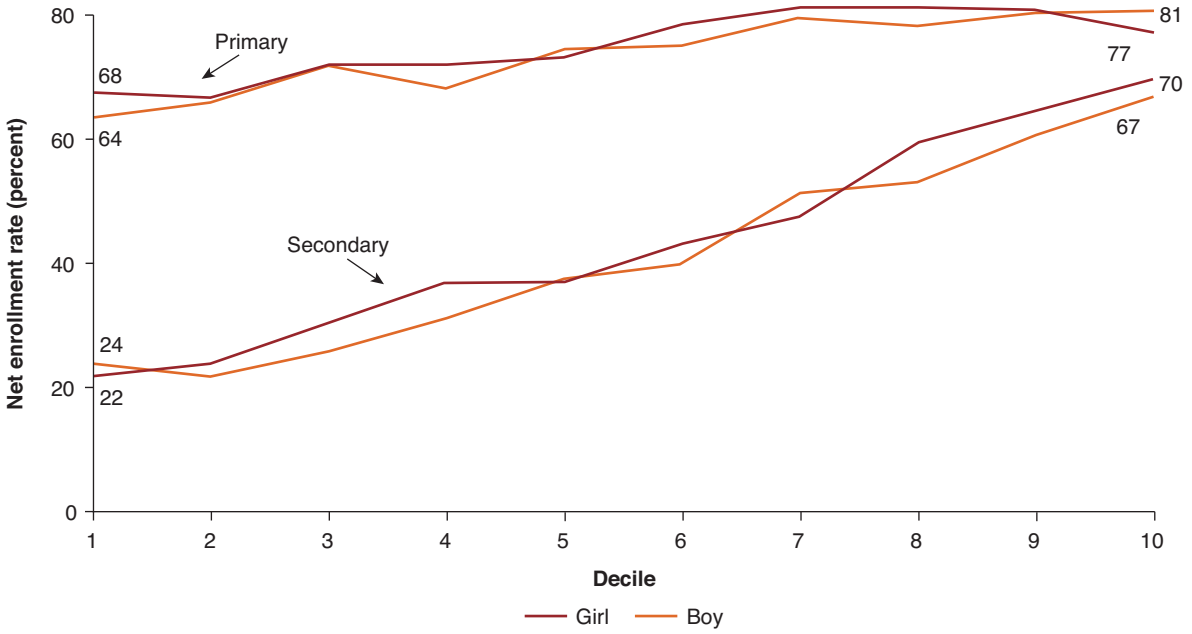
There is a clear income gradient in secondary education enrollment, potentially due to the high private cost of secondary education. Secondary school enrollment is largely determined by family income. About 23 percent of poor children (the bottom 20 percent in income distribution) go to secondary school, while above 60 percent of rich children (top 20 percent in

FIGURE 3.9 Projected Cost for Free Secondary Policy
ZMW, millions



Sources: World Bank staff analysis using MESVTEE Education Statistical Bulletin 2013 and PETS-QSDS 2014.
Note: Price level of 2013 at constant. It is simulated based on per child secondary school grant from Financial Statement C and the secondary school tuition charged by school estimated from PETS-QSDS 2014.

FIGURE 3.10 Primary and Secondary Net Enrollment Rate, by Income



Source: World Bank staff analysis using LCMS 2010.
Note: X-axis is income decile indicating 1 as the poorest and 10 as the richest, and y-axis is primary (ages 7–12) and secondary (ages 13–18) school net enrollment rate.

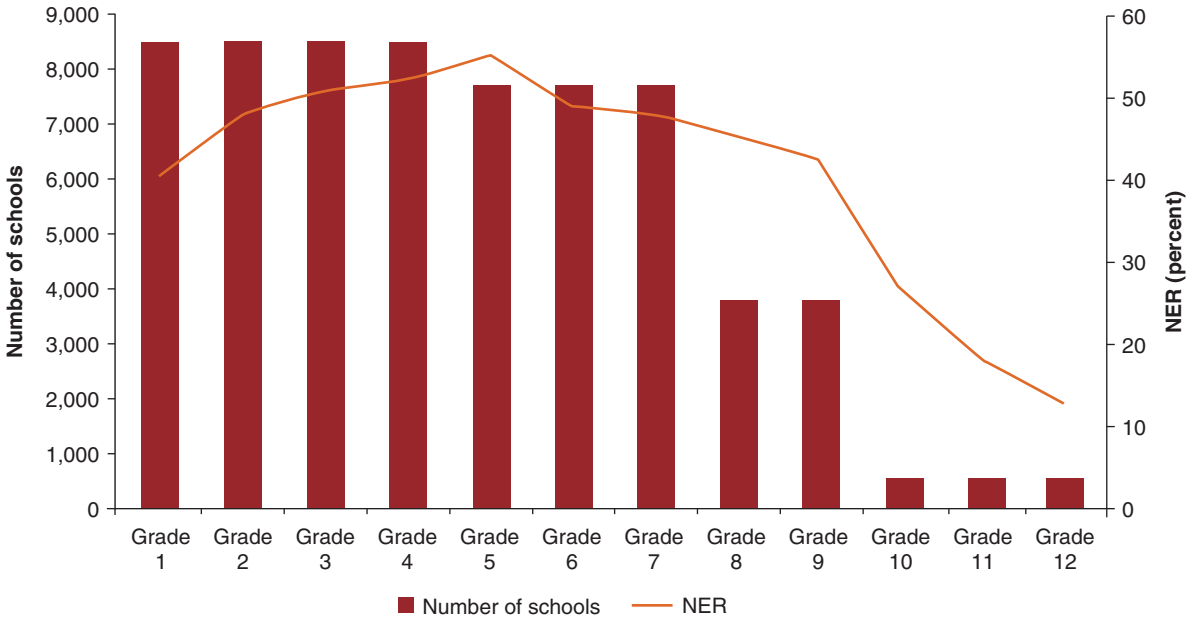
income distribution) have access to secondary education (figure 3.10). The relatively limited access to secondary education is due to not only the student family income status but also to other factors such as the limited supply of secondary schools. However, it is clear that secondary education is more affordable for wealthier students. Given the limited government budget available to secondary education, the government could maximize the usage of the available budget by, for instance, targeting poorer students who would be more likely to end their education at the primary level.

Access in Secondary Education and Infrastructure Development

The low transition rates from primary schools to secondary schools are associated with a sharp decrease in the number of schools offering grades 8 or above. The government recognizes the issue with the low transition rate from grades 7 to 8 in the Education Sector National Implementation Plan (2011–15). While the transition rates within primary education cycle (grades 1–7) are steadily above 80 percent, only 62 percent of grade 7 students continue their education in secondary school. This is seemingly related to a sharp drop in the secondary school supply. The number of schools offering grade 7 is 7,691, and the number of schools offering grade 8 drops by more than half, to 3,764 (figure 3.11). Facing the shortage in secondary schools, the government initiated construction of 47 new secondary schools to accommodate 21,000 pupils for the 2016 school year. This policy intervention reflected the education expenditure in the government's budget books and financial statements. In 2013, 58 percent of infrastructure development funds in the education sector streamed down to secondary school construction, and the related expenditure is expected to increase to ZMW814 million in 2015 from ZMW303 million in 2012.

The current number of secondary schools can accommodate only about 30 percent of the current students in grades 1–5. While the

FIGURE 3.11 Relationship Between Number of Schools and NER



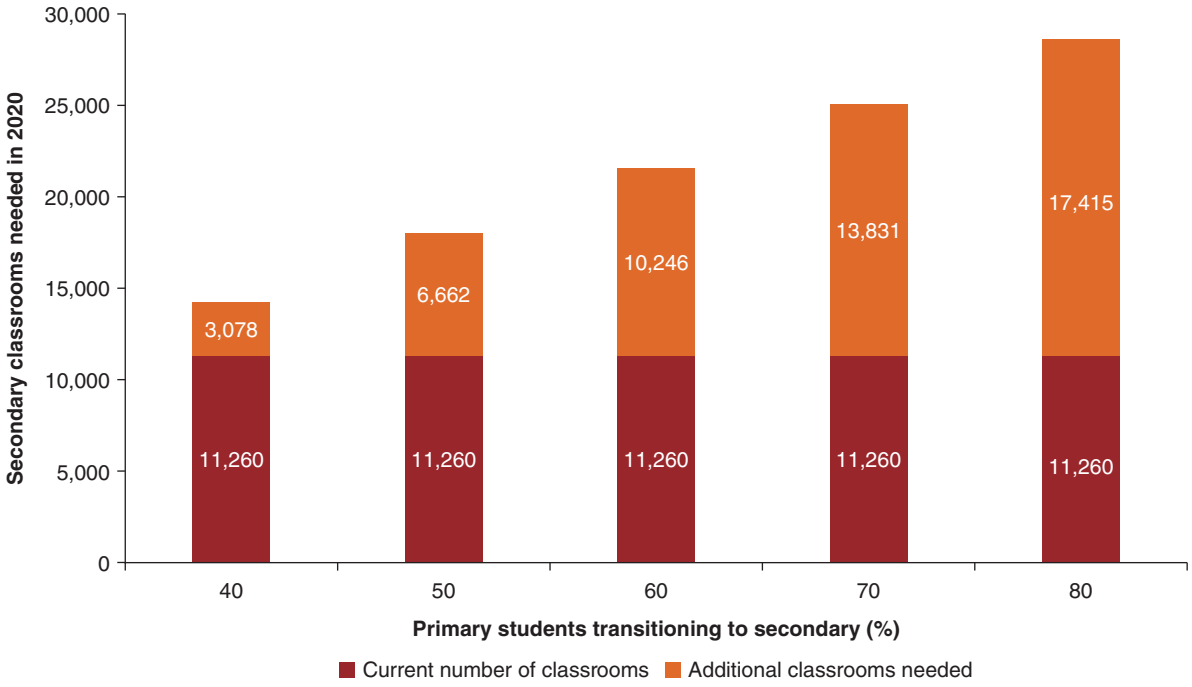
Sources: World Bank staff analysis using LCMS 2010 and MoE Education Statistical Bulletin 2013.
Note: NER = Net Enrollment Rate.

Zambian government continues to improve the accessibility of secondary education, the number of new secondary schools required to accommodate prospective secondary school students is alarming. Suppose 50 percent of the current grade 1–5 students are in the secondary school in 2020, the number of classrooms in secondary education required to accommodate these students *without changing the current classroom-pupil ratio* (1:66) is 17,922, which translates into an additional 6,662 classrooms (figure 3.12). The current number of secondary schools (683 schools as of 2013) can sustain 31 percent of current grade 1–5 students transitioning to secondary education. This means that increasing the accessibility of secondary schools will continue to be a policy priority for the next decade.

The majority of lower secondary schools (grades 8–9) are those that had previously offered basic education (grades 1–9). Further, the recently initiated conversion to primary school needs proper planning (figure 3.13). The government recently initiated reintroduction of the primary and secondary education system from the basic and high school system due to a low conversion rate of primary to basic system that had been introduced in 1996. Eighty-eight percent of lower secondary schools belonged to basic schools (grades 1–9) in 2013. These basic schools are supposed to become primary schools offering only grades 1–7. This means that grades 8–9, previously part of the basic schools, would go through significant school conversion. These grades may be absorbed by secondary schools. However, the number of secondary schools is very small, and there may be many catchment areas where there is no secondary school available within walking distance. The lower secondary school conversion may create stress in the supply of lower secondary grades. Therefore, the conversion of basic schools to primary schools has to be implemented with proper planning along the supply of secondary schools offering grades 8–9.

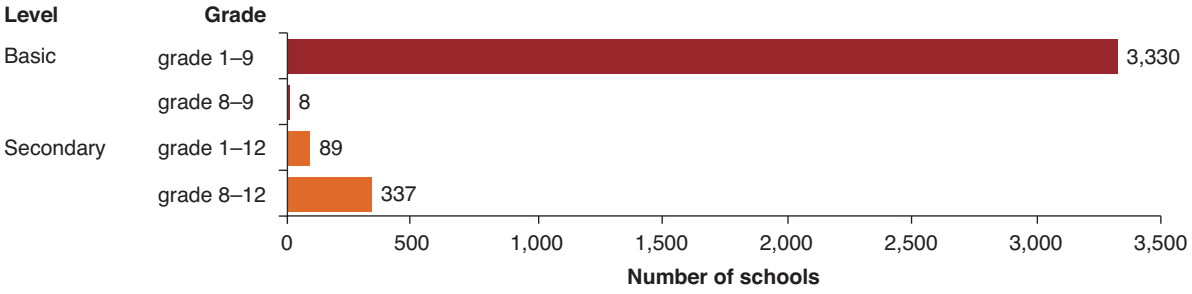
The planning of school conversion can be impeded by the lack of capacity in the Management and Information System (MIS) in the MESVTEE as well as the misalignment of legal system and policy document. Between 2013

FIGURE 3.12 Number of Secondary Classrooms Required in 2020



Source: World Bank staff calculations using MESVTEE Education Statistical Bulletin 2013.
Note: Projected number of classrooms in secondary education required based on scenarios of 40 percent to 80 percent of current grades 1–5 students transitioning to secondary schools in 2020. This assumes no change of pupil-classroom ratio (66:1).

FIGURE 3.13 Number of Schools Offering Grades 8–9, by Type



Source: MESVTEE Education Statistical Bulletin 2013.

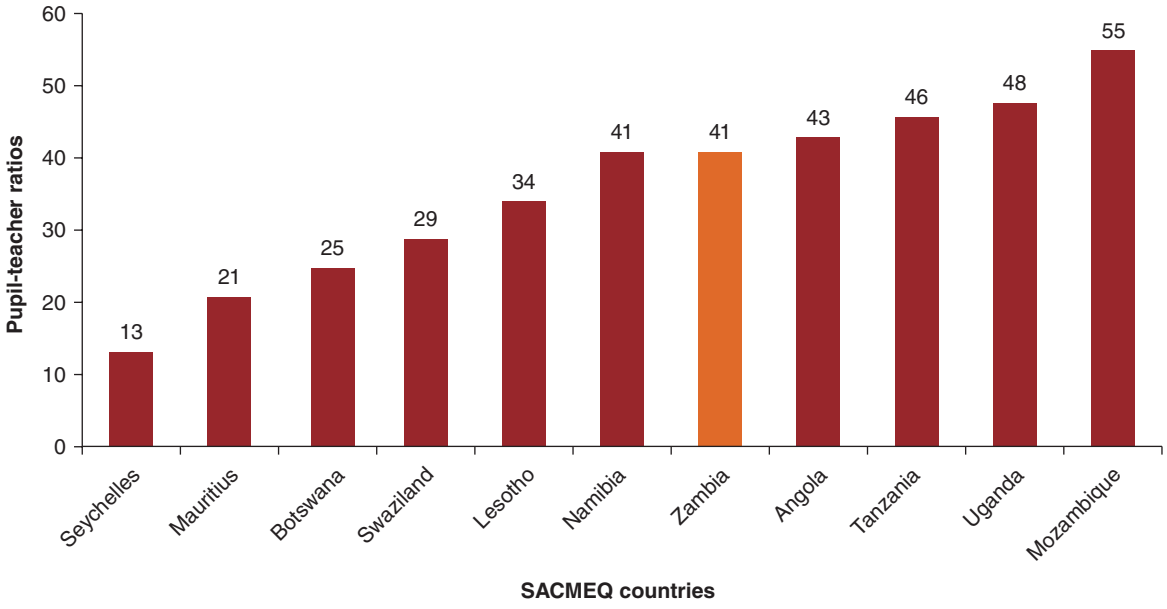
and 2014, there was a large fluctuation in the number of schools offering each grade category (table 3.2), which is provided by the MIS unit of the MESVTEE. On one hand, there is a significant increase (192 percent) in "unknown" category, meaning the grade category of the schools are unknown. On the other hand, other school categories, especially offering former basic school level grades, have decreased. This shows the planning of school conversion can be disrupted by the lack of capacity in the MIS in the MESVTEE. Another impeding factor of the school conversion is that the current policy (Educating Our Future) and legal system (Education Act of 2011) do not align with each other in terms of their terminologies in the education system. The legal system does not recognize primary and secondary schools and keeps the previous system of basic and high school as legal terms. The ministry should accelerate the changes in legal system to match the policy.

TABLE 3.2 Number of Schools Offering Each Grade Category

	2013 (A)	2014 (B)	Percent change ((B–A)/A)
Grades 1–4	745	551	–26
Grades 1–7	4,272	3,864	–10
Grades 1–9	3,330	2,821	–15
Grades 1–12	89	66	–26
Grades 8–9	8	16	100
Grades 8–12	337	403	20
Grades 10–12	86	25	–71
Unknown	617	1,802	192
Total	*9,484*	*9,548*	*1*

Sources: MESVTEE Education Statistical Bulletin 2013 and 2014.

FIGURE 3.14 PTRs in SACMEQ Countries



Sources: MESVTEE Education Statistical Bulletin 2013; World Bank 2012.
Note: PTR = pupil-teacher ratio. SACMEQ = Southern and Eastern Africa Consortium for Monitoring Educational Quality.

School Inputs and Learning Outcomes

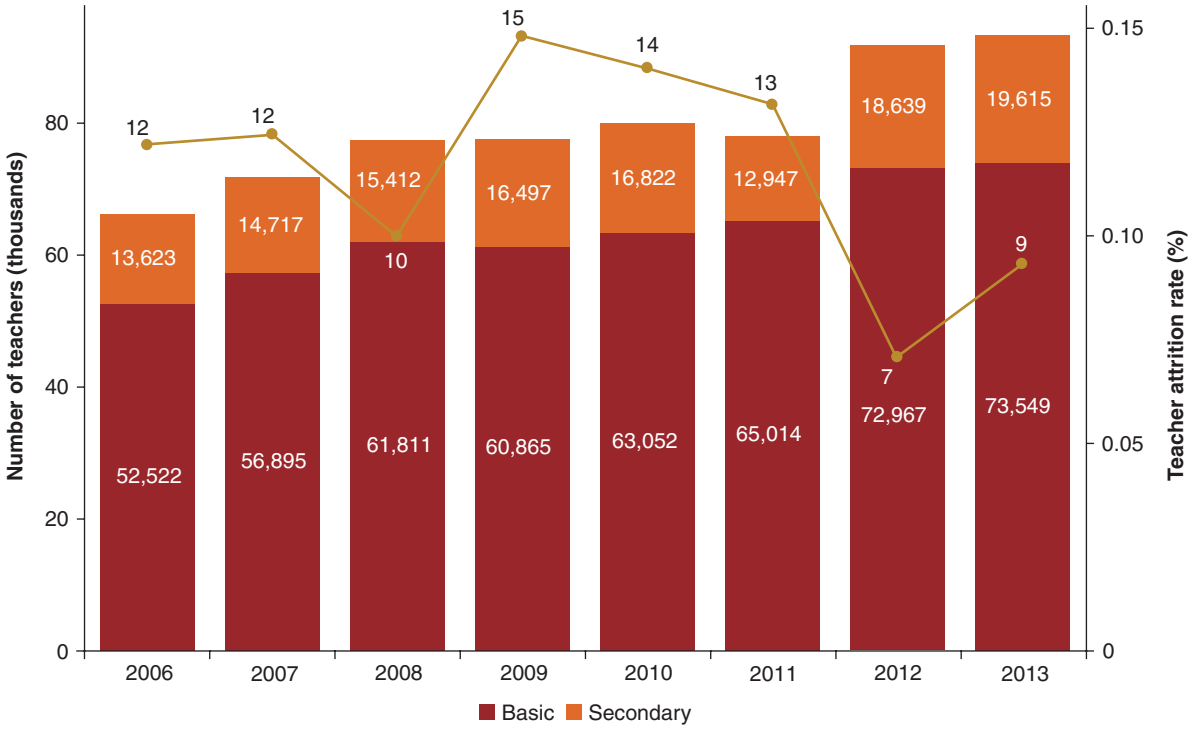
There has been some improvement in the pupil-teacher ratio (PTR). This may be partly due to the government's continuous efforts to recruit new teachers. Currently, the PTR is around 40 (41 in *Education Statistical Bulletin [ESB]*, 2013; 40 in Public Expenditure Tracking Survey-Quantitative Service Delivery Survey [PETS-QSDS] 2014; 31 for grade 7, 37 for grade 5, and 47 for grade 2), which is an improvement on the average ratio of 52 in the mid-2000s. This positions Zambia in the midlevel of PTRs among the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ) countries (figure 3.14). However, the PTR is still high compared to other regions of the world: 17 in East Asia and the Pacific region and 21 in Latin America and the Caribbean.

The teacher attrition rate is hovering around 11 percent even with two major increases in

teacher salaries. The government has been investing in teachers with major salary increases in 2007 and 2013. A recruitment policy aims to harness 5,000 new government teachers graduating from teachers' colleges annually. The total number of teachers has increased by 40 percent, from 66,145 in 2006 to 93,164 in 2013 (figure 3.15). In 2013, 70,937 teachers out of 93,164 were employed in government schools (World Bank 2015). However, the teacher attrition rate is hovering around 11 percent and the reason is mostly listed as "unknown" (MESVTEE 2013). Only 10 percent of attrition is from retirement and about 8 percent of attrition is due to either death or illness. It is necessary for the government to identify the real cause of high teacher attrition. Thirteen percent of teachers are reported to have transferred to other schools in 2013 and the main reasons for teacher transfer between schools are marriage (20 percent) and better locations (16 percent), instead of official transfers by the ministry (26 percent) (MESVTEE 2013).

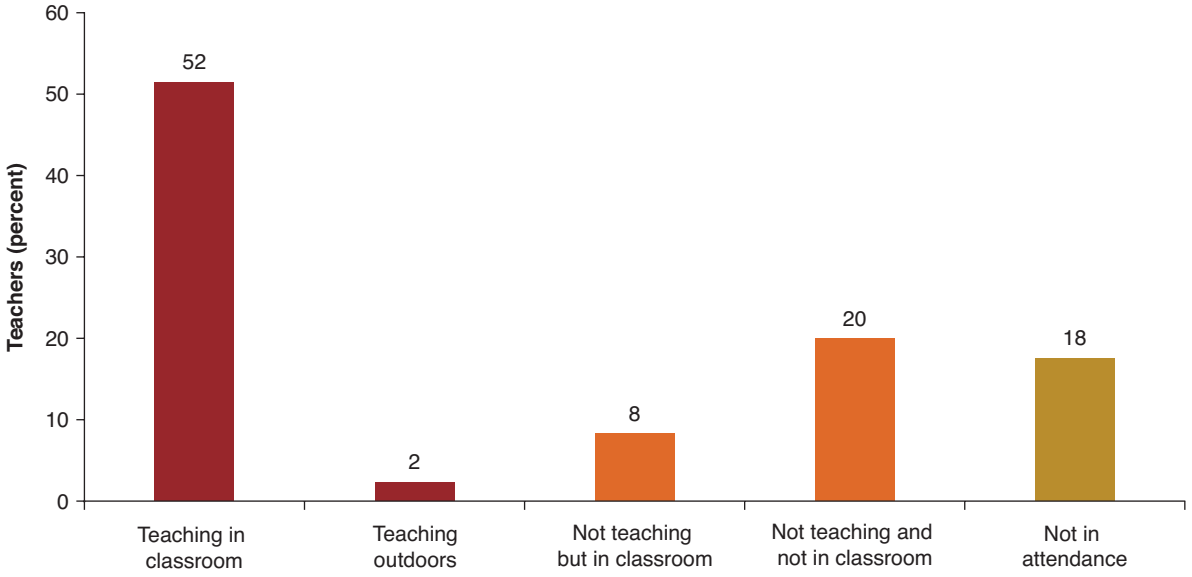
The investment in teachers and the improvement in the PTR, however, have not fully translated into increases in actual teacher inputs to students, which may partially explain the lack of improvement in student achievement. There has been no improvement in teacher absenteeism since 2002, and only half of the teaching staff is involved in teaching activities when present at school, even with multiple increases in teacher remuneration and without reported delays or receipts of salary payments (figure 3.16). Eighteen percent of teachers were not present in schools in 2014. This is almost the same as previous PETS findings in 2002 and 2006. Only 5 percent of teachers were absent due to official reasons such as training, not on their shift, field trips, and maternity leave. Others have various reasons for being absent and there is no single common reason reported. In the early 2000s, teacher absenteeism in Zambia was mainly due to sickness or funerals caused by the HIV/AIDS epidemic. However, these are not the main

FIGURE 3.15 Number of Teachers and Attrition Rate



Source: MESVTEE Education Statistical Bulletin 2013.

FIGURE 3.16 Teacher Activities in School (Random Visit)



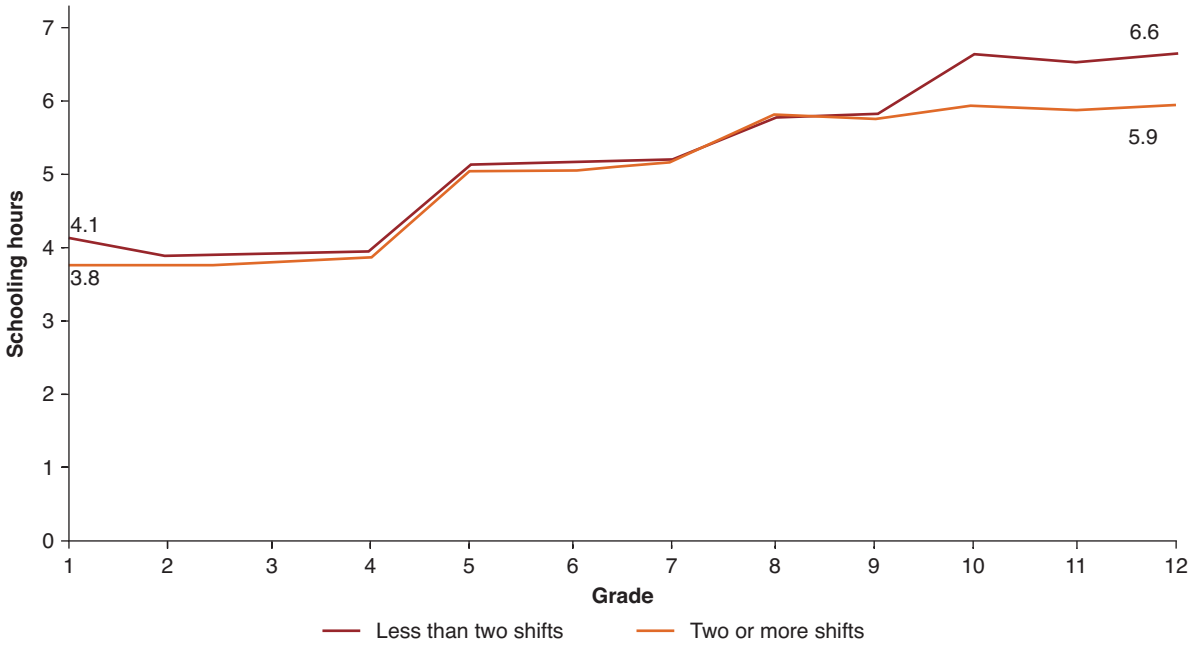
Source: PETS-QSDS 2014.

reasons currently, indicating that regular absenteeism has become a chronic norm. Furthermore, there is no difference between attendance records officially kept in school and attendance checks through random visits to schools.

Shift classes and temporary classrooms mitigate the issue of classroom shortages, and there is no significant difference in schooling hours between schools with shifts and without shifts. Schools have two shifts on average with 10 total operating hours, and each shift consists of four to five hours per day. On average, 78 students share one permanent classroom, and this number drops to 65 students when counting temporary classrooms, and then further to 31 students when accounting for shifts (World Bank 2015). The government aimed to remove school shift practices during the previous national development plan (2006–10). However, without sufficient investment in classroom and school infrastructure achieved, a school shift approach is a practical choice to deal with the shortage of classrooms and teachers. In fact, there is no significant difference in schooling hours between schools with shifts or without shifts (figure 3.17). Schooling hours with shifts range between four and six hours; students in grades 1–4 have four hours, students in grades 5–7 have five hours and students in grades 8–9 have six hours of study in school. Schools without shifts follow almost the same pattern except for grades 10–12.

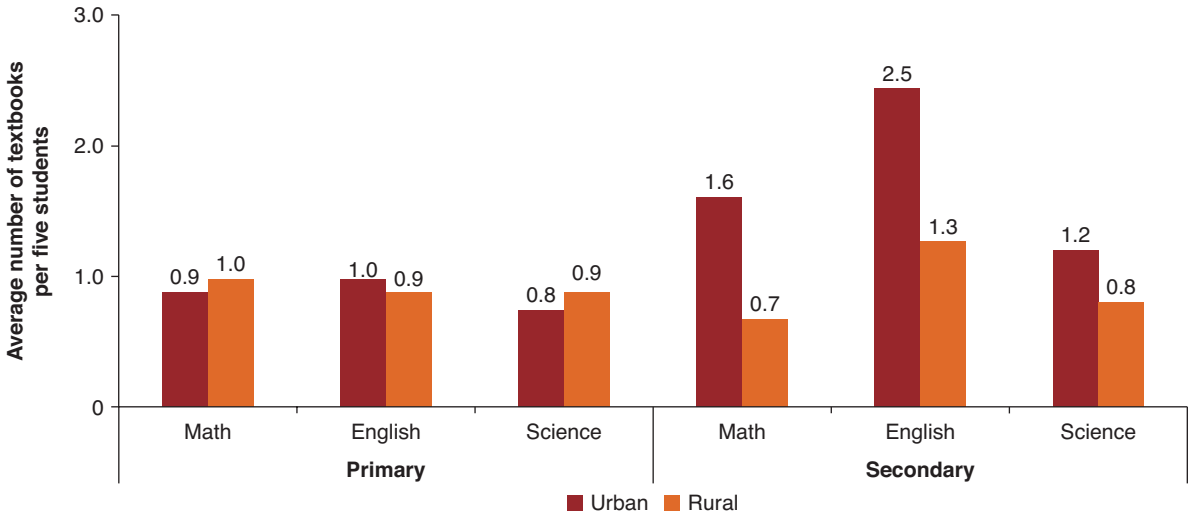
There has been no improvement in textbook provision, and textbook shortages are widespread. Earlier, textbooks were centrally procured, but then textbook provision was decentralized to give more choices to schools. While textbook prices are determined at the central government level, textbooks are procured through DEBS based on primary schools' preorders. Five primary students share one or less textbook for each subject (1 for mathematics, 0.9 for English, and 0.9 for science) and five secondary students share between 1 and 1.5 textbooks depending on the subject (1 for math, 1.7 for English, and 1 for science). At the primary level, there seems to be no urban and rural difference in the availability of textbooks; however, rural secondary schools face more problems with textbook shortage compared to urban secondary schools (figure 3.18). In secondary, shortages in science and math textbooks are more serious than those

FIGURE 3.17 Schooling Hours and Number of Shifts



Source: PETS-QSDS 2014.

FIGURE 3.18 Textbook Availability



Source: PETS-QSDS 2014.

in English textbooks. The problem of textbook shortage was reconfirmed during the classroom observation conducted at grade 5: 84 percent of teachers use textbooks while only 8 percent of students use textbooks. Eighty-two percent of primary schools and 63 percent of secondary schools reported the shortage. Seventy percent of primary schools requested DEBS to supply the textbooks; however, only 26 percent of schools said that the request was resolved at least partially. Fifty-one percent of secondary schools requested the PEO to supply textbooks but only 22 percent of schools said that the request had been met at least partially (World Bank 2015).

One reason for the significant shortage in textbook supply is that while the authorized provision is allocated to the extent that 10 students share eight textbooks, the funded budget is significantly low at one-fourth of the authorized provision amount. There is also a lack of textbook delivery funds at the DEBS level. Since there is no secured budget for textbook delivery, DEBS tends to deduct the cost of textbook delivery from the school grant amount. In addition, there was significant delay in textbook procurement at the MESVTEE headquarters caused by changes in curriculum and revision of textbooks in 2013.[11]

With a mixed picture of school inputs, there has been little improvement in student learning since the first national learning assessment conducted in 1999. Scores for English and mathematics for grade 5 remain as low as 32 percent and 35 percent, respectively (Examination Council of Zambia 2015). Scores in grade 9, too, show low scores of 29 percent for mathematics and 36 percent for English and science, respectively. The problems of student learning outcomes are not only about low scores on the subjects but also three distinctive disparities in scores: by region, by household income (or expenditure), and by gender. Among all examined subjects at both grades 5 and 9, student learning scores in urban are higher than those in rural. When households are categorized by poor, middle, and rich, students from the rich families always outperform all examined subjects at both grades. Lastly, while there is no difference in scores by gender at grade 5, however low they are, scores in mathematics and science at grade 9 are higher for boys than those for girls. The underlying causes for the lower scores are not known yet. Another report, *Education PETS-QSDS* (World Bank 2015) discusses the issues of student learning outcomes and their correlations with potential factors.

Key Findings

- Budget execution for primary and secondary education is at 99 percent. There is almost no problem in budget execution for personal emolument and infrastruture. The issue lies with disbursement of school grants.
  - o DEBS grants: Only 84 percent of DEBS grants is disbursed, and the budget execution of DEBS grants is worse in provinces with a larger student enrollment.
  - o Primary school grants: 28 percent of primary schools do not receive any school grants, and there is a signifincant difference in the amount of school grants within a province (partly due to incompliance of the budget allocation rule).
  - o Secondary school grants: There is no problem in budget execution. However, the actual expenditure per student is smaller in schools with larger enrollment.
- Textbook shortage remains a serious issue. Even though decentralized textbook procurement policy is an official government policy, lack of capacity and fund in implementing at all levels cause confusion and misalignment of textbook distribution. Furthermore, there is a substantial difference in amount between the authorized provision and the funded budget.
- Twenty-seven percent of students pay fees at primary school, and 60 percent of students pay tuitions and fees at secondary schools.
- A small amount of school fees at the primary level could act, to some extent, as an income distribution mechanism at the school level since not all primary school students pay the fees charged by the school. However, the high level of tuitions and fees at the secondary school level prevents poor students from accessing secondary education.
- Free secondary education is not possible, at least in the short run, as it would require a six-fold increase in the current secondary school grant budget. To increase beneficiaries from poorer families, the limited school grants could be distributed by using a poor-targeting mechanism for the time being.
- The limited number of secondary schools contributes to the low student enrollment in secondary education. Hence, investing in construction of secondary schools is an appropriate policy.

However, before building can commence, a detailed school-mapping exercise must be done (including conversion of lower secondary schools [grades 8–9]) to ensure that that acccess to secondary educations can be maximized.

- There has been little improvement in teacher absenteeism (and attendance) over the past decade. This poses a question on whether government spending on relatively higher salaries for teachers is efficient enough.

Notes

1. School grants are mainly for operational expenses for schools (such as electricity, water, and anything else needed to run schools). Until 2013, free primary school grants, school requisites (e.g., notebooks or other learning materials for students), and funds for orphans and vulnerable children were accounted in separate expenditure items; however, since 2014, free primary school grants include school requisites and the funds for orphans and vulnerable children.
2. According to government policy, primary schools submit textbook orders to DEBS, then, DEBS, on behalf of primary schools, order textbooks from the publishers (*Decentralized Textbook and Other Educational Materials Procurement Manual*). However, due to the new curriculum, the textbooks were centrally procured in 2013 and delivered to schools in 2014.
3. This is only for basic and high school education (equivalent to primary and secondary education). It is equivalent to 98 percent of recurrent expenditure as shown in table 2.7.
4. DEBS grants include operating costs to support primary schools.
5. Grants for DEBS include operating costs to support primary schools.
6. Note that the top 5 percent of schools receiving school grants most often are outliers and therefore excluded from analysis throughout this report.
7. Until 2013, free primary school grants, school requisites (e.g., notebooks or other learning materials for students), and funds for orphans and vulnerable children were accounted in separate expenditure items; however, since 2014, free primary school grants include school requisites and the funds for orphans and vulnerable children.
8. Textbook delivery are the responsibility of the publishers according to the *Decentralized Textbook and Other Educational Materials Procurement Manual;* however, so far, the textbooks were centrally procured and the responsibility of textbook delivery and the provision of textbook delivery funds were not clearly stated in the policy document and budget.
9. Bottom 33.3 percent of schools in average income of students' family.
10. Top 33.3 percent of schools in average income of students' family.
11. It includes all primary and secondary schools sampled (government schools and nongovernment schools).

Chapter 4

Expenditure on Technical Education, Vocational and Entrepreneurship Training (TEVET)

This chapter discusses the trend and current status of TEVET financing from the central level to institutional and student levels. While public budget to the TEVET sector is very tight, the financial status at the institutional level looks very healthy especially among relatively large institutions. With strong academic and financial autonomy at the institutional level, relatively larger public TEVET institutions yield a surplus almost every year, and even smaller institutions cover most of the operational costs. However, this healthy financial status does not look sustainable. With an increasing number of graduates from secondary education, demand for TEVET has grown. The TEVET sector in Zambia is historically and significantly less funded by the Government of the Republic of Zambia (GRZ), compared to other education subsectors, and has relied on tuitions from students.

Government Expenditure on TEVET

The share of government education expenditure on TEVET is the smallest among education subsectors, and it accounted for less than 1 percent of total education expenditures in 2013.[1] The government expenditure on TEVET was the smallest of all education subsectors in 2013. The average public education expenditure on TEVET as a share of the total education expenditure was very low, at 0.5 percent from 2006–13 (table 4.1). There are two main reasons for low government expenditure on the TEVET sector: (a) management and financial responsibilities, including revenue generation, are decentralized to management boards at institutions under a semiautonomous management structure; (b) trainers at TEVET institutions are no longer civil servants, and hence, the government does not have to bear the cost of personal emolument, which usually takes up a large share of expenditure. Since the government's grants to TEVET institutions are very small, TEVET institutions usually have to find financial resources for the trainers by themselves.

The share of TEVET expenditures is also very small compared to those of other African countries. table 4.2 compares Zambia with other African countries as well as those outside of the continent in terms of TEVET expenditures as a share of the total government education expenditure. Zambia's TEVET expenditure as a share of the total government expenditure is way below all countries listed in the table, except for Yemen. While TEVET budget in Zambia gradually increased in 2014 and 2015, it is still very much on the lower end when compared to other African countries.

The government provides two sources of funding to TEVET institutions: institutional grants and a competitive TEVET Fund. Institutional grants are provided to public TEVET institutions, but not all public TEVET institutions can receive them. Only approximately 25 out of approximately 80 public institutions receive institutional grants. The selection process for institutional grants is not clear. However, almost the same institutions have received grants since 2006 with only a few changes in recipients. The institutional grants gradually increased from ZMW9.3 million in 2006 to ZMW21.4 million in 2013 (figure 4.1). The number of institutions that received the

TABLE 4.1 Share of Government Expenditure, by Education Level, 2006–15

percent

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Budget	Budget
Basic	42.6	36.9	46.0	45.4	51.6	41.5	50.8	57.5	55.9	57.0
High school	10.2	7.9	9.4	10.9	12.2	9.7	11.4	12.7	12.8	22.4
Teacher education	3.1	2.4	2.3	2.0	2.2	1.9	2.0	2.0	2.2	0
TEVET	0.2	0.2	1.1	0.7	0.4	0.4	0.9	0.6	0.7	1.6
Higher Education	10.7	12.0	11.2	11.0	9.9	10.0	8.5	7.9	4.5	12.6
ST	0.2	0.2	0.4	0.3	0.2	0.3	0.9	0.7	0.7	0.8
Administration	33.0	40.4	29.6	29.8	23.5	36.1	25.4	18.6	23.0	5.6
Total	100	100	100	100	100	100	100	100	100	100

Sources: Recalculated from tables 2.3 and 2.4 in chapter 2. MoF Financial Statements C 2006–13; MoF Activity Based Annual Budget 2014 and 2015; World Bank World Development Indicators for exchange the GDP deflator.
Note: Data in 2014 and 2015 are budgets. ST = service teacher; TVET = Technical and Vocational Education and Training.

TABLE 4.2 Country Comparison in TEVET Expenditure as a Share of Total Government Expenditure

Country	%	Year
Central African Republic	7.4	2008
Gambia	2.6	2009
Ghana	1.1	2008
Liberia (recurrent)	8.5	2012
Malawi (recurrent)	3.4	2007
Rwanda (recurrent)	9.6	2012
Sierra Leone (recurrent)	3.4	2007
South Sudan (recurrent)	1.1	2009
Swaziland (recurrent)	2.4	2007
Uganda	4.0	2004
Yemen	0.7	2006
Bangladesh	2.0	2001
Costa Rica	5.6	2005
Pakistan	5.7	2002
Tajikistan	3.0	2006
Zambia	0.6	2013

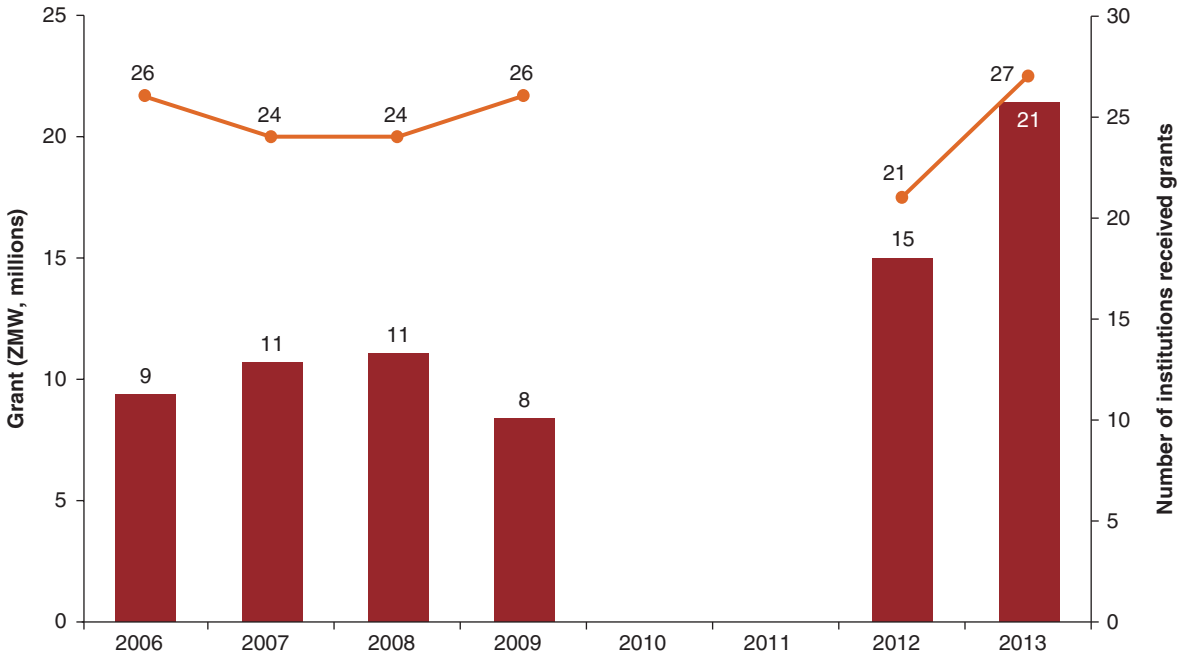
Source: World Bank Growth and Equity in Tertiary Education in SSA 2015.

institutional grants has been more or less the same, around 24 to 27, except for a slight dip to 21 in 2012. The average amount of institutional grants per institution is approximately ZMW0.8 million, ranging from ZMW0.5 million to ZMW2 million, partly depending upon the size of student enrollment.

The amount of institutional grants is mainly based on a historical trend. The Ministry of Finance (MoF) directly allocates and disburses institutional grants to public TEVET institutions based on recommendations made by the Ministry of Education, Science, Vocational Training and Early Education (MESTVEE) (figure 4.2). Instead of using clear criteria for this budget allocation, public TEVET institutions submit their requests to the MESTVEE mainly based on historical grounds, taking the previous year's budgetary allocation as the main input. The MESTVEE then forwards these requests to the Ministry of Finance and National Planning (MFNP). The requested budgets are generally adjusted downward, depending on the total budgetary allocation approved by the MFNP. The MESTVEE does not seem to use a clear formula or criteria for resource allocation to institutions. With clearly established budget allocation mechanisms linked to performance, the MESTVEE may be able to make institutions more accountable in service delivery.

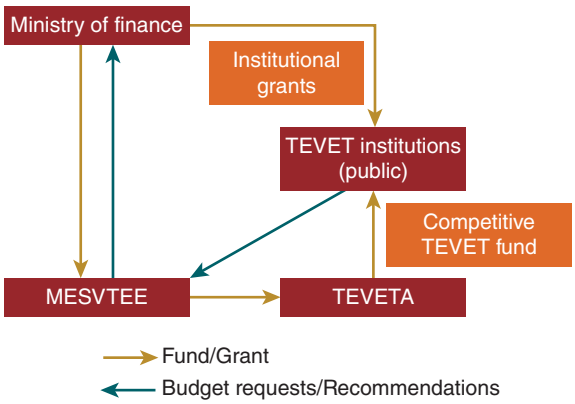
The overall envelopes for the TEVET sector have not changed much over the past years, with fluctuating capital investments. About 60 percent of TEVET expenditures were spent for institutions in the form of either an institutional grant and/or TEVET Fund in 2012 (table 4.3). The expenditures on infrastructure more than tripled between 2012 and 2013. Most of the

FIGURE 4.1 Trend of Institutional Grants to Public TEVET Institutions and the Number of Institutions Receiving Grants, 2006–13



Source: MoF Financial Statements C (various years).
Note: No data provided by government for 2010 and 2011.

FIGURE 4.2 Fund Flow of Institutional Grants and TEVET Fund



Note: MESVTEE = Ministry of Education, Science, Vocational Training and Early Education; TEVET = Technical Education, Vocational and Entrepreneurship Training; TEVETA = Technical Education, Vocational and Entrepreneurship Training Authority.

infrastructure development fund—a capital expenditure besides institutional grants and TEVET Fund—went to existing institutions for refurbishment. Approximately one-third of the institutions receiving the infrastructure development fund were those that also received institutional grants or TEVET Fund. There were several infrastructure development funds going to refurbishment at both the ministry and Technical Education, Vocational and Entrepreneurship Training Authority (TEVETA). The infrastructure fund was also provided to establish two new institutions in 2013. The large amount of the infrastructure development fund is not available every year. Hence, the expenditures in 2012 are more or less the norm of TEVET expenditure.

Distribution of a TEVET Fund is even more selective than the institutional grants. Only six institutions receive the TEVET Fund based on institutional proposals. Like institutional grants, almost the same institutions received this Fund over the past years (table 4.4). The total amount of the TEVET Fund was ZMW8.8 million in 2012. Institutions received between ZMW0.4 million and ZMW3.1 million, or approximately ZMW1.5 million on average. The average amount is almost twice as much as that for institutional grants. The institutions that receive the TEVET Fund usually do not receive institutional grants.

TABLE 4.3 TEVET Expenditure, by Line Item, 2012 and 2013

	2012	(%)	2013	(%)
Institutional grant	26.5	48	21.4	28
TEVET Fund	7.3	13	6.3	8
Infrastructure development	13.5	24	42.9	56
Administration	7.9	14	5.8	8
Total (ZMW, millions)	55.2	100	76.3	100
Total (US$, millions)	10.7		14.1	

Sources: MoF Financial Statements C 2012 and 2013.
Note: TEVET = Technical Education, Vocational and Entrepreneurship Training.

TABLE 4.4 TEVET Fund, 2010–12

	2010	2011	2012[a]
Evelyn Hone College of Applied Arts and Commerce	3.0	2.7	3.1
Gemstone Processing and Lapidary Training Centre	0.6	—	—
Kabwe Trades Training Institute	0.7	0.8	0.4
Livingstone Institute of Business and Engineering Studies	1.1	2.3	1
Lusaka Business and Technical College	0.6	0.8	0.7
Northern Technical College (NORTEC)	1.8	2.4	2.4
Zambia Air Services Training Institute	1.3	0.8	1.1
Total (ZMW, millions)	9.0	9.8	8.8
Total (US$, millions)	1.9	2.0	1.7

Sources: TEVETA Annual Reports 2011–13.
Note: — = not available
a. There are differences in the TEVET Fund amount in 2012 between the TEVET annual report and the financial statement.

The TEVET Fund consists of three expenditure categories: (a) four windows of specific training funds (box 4.1), (b) subsidies to institutions, and (c) student bursary. In 2008, the cooperating partners (CPs) stopped funding to the TEVET Fund and the funds available to four windows gradually diminished until they completely drained out in 2012. Subsidies, too, have gradually decreased from ZMW6.5 million in 2009 to ZMW2.0 million in 2012 (TEVETA, various years). Given the relatively high inflation rates over the past years, the magnitude of the decrease in subsidies is even more significant in real terms at the institutional level. Student bursary for TEVET was provided to only less than 1,000 students in 2014, and about half of the bursary goes to those enrolled in urban institutions. The bursaries are provided to those who meet the criteria for vulnerability set by the TEVET Committee and the Ministry of Community Development, Mother and Child (World Bank 2015). One of the reasons that not many TEVET students receive bursaries is that grade 12 completers may be rich enough to pay TEVET tuitions. Hence, many TEVET students do not meet the criteria.

TEVETA has had relatively good financial flows over the past years. Table 4.5 shows that 80 percent of its revenue comes from government grants, while fees for registration, accreditation, and examination account for the remaining 20 percent. In terms of expenditure, 44 percent is spent on TEVET Fund, which goes to selected institutions. Administrative costs account for 37 percent of the expenditure. Examination takes a relatively large share of expenditure at 12 percent. The financial flow below indicates that TEVETA's main roles are (a) collecting fees, (b) providing TEVETA fund to institutions, (c) conducting examinations, and (d) overseeing system development (including the development and execution of the national qualification framework).

BOX 4.1 Brief History of TEVET Fund

When TEVETA was first established, as part of the Jobs, Prosperity and Competitiveness initiative, this competitive fund was mostly funded by CPs (i.e., donors, including the World Bank). It operated between 2005 and 2008 (piloted in 2005) until the CPs' contributions ended. According to external evaluations, the pilot was reasonably successful, but the results of the full implementation were mixed (McLink Consulting Services 2009).

After the CPs stopped funding, TEVETA was not able to maintain the same level of the funding amount, and the fund was gradually reduced. In 2010, ZMW0.3 million was disbursed as TEVET Fund and almost all the amount went for window 4. Only a fraction of ZMW100,000 was spent for window 3. In 2011, the TEVET Fund was available only for window 4, and it was no more than ZMW0.1 million. In 2012, the TEVET Fund was no longer available for any window. However, it continues to provide funds for subsidy and bursary. One of the reasons why the window system did not work well was due to lack of capacity at institutions in submitting good proposals with high rejection rates (McLink Consulting Services 2009).

During 2005–08, TEVET institutions received most of the funds for window 1 (preemployment) and window 4 (infrastructure). Allocation of the funds to both windows accounted for almost 70 percent of the entire Fund. While the Fund was intended for both private and public providers, most of the resources went to the latter. One of the reasons for private providers not to be able to receive sufficient funds was that private providers did not have the capacities to deliver programs on the prioritized areas for preemployment training. Therefore, the pilot did not fully accomplish the objectives, one of which was to improve the cost sharing mechanism in collaboration with private sector (McLink Consulting Services 2009).

After 2008, the Fund has been mainly allocated to windows 3 and 4 with a much stronger focus on window 4. Focusing predominantly on two windows severely undermines the intended TEVET reforms, which aimed to better align training supply and demand as well as to provide more flexible access to learning opportunities through TEVET institutions. In fact, the Fund seems to have an only limited impact on the TEVET system as a whole when it comes to employability, productivity, and competitiveness in the country.

The Fund has been provided to both public and private TEVET institutions on a competitive basis, and it is currently managed by the TEVETA. The TEVET Fund consists of four windows (see table B4.1.1).

TABLE B4.1.1 TEVET Fund: Four Windows

	Intended focus	Beneficiaries
Window 1 Preemployment training	To increase enrollment in formal skills development in priority courses To improve the quality of training outputs	Grants to TEVET institutions to enroll grade 12 schools leavers
Window 2 Employer-based training	To stimulate employers' demand for in-service training	Grants to TEVET institutions to deliver tailor-made courses for employees
Window 3 Small and medium-sized enterprise (SME)/informal sector training	To stimulate training in the informal sector	Grants to TEVETA registered institutions and to brokers (NGOs, business associations, etc.) to coordinate training schemes with small enterprises and more generally informal workers
Window 4 Infrastructure and system development	To strengthen TEVET providers' institutional capacities to deliver priority skills training.	Grants to TEVET institutions to invest in infrastructure, human resources and equipment

TABLE 4.5 TEVETA Revenue and Expenditure Statement, 2011

		ZMW (thousands)	US$ (thousands)	%
Revenue	Government grant	18,194	3,639	80
	Fees	4,469	894	20
	Others	189	38	1
Subtotal		22,851	4,570	100
Expenditure on activities	TEVET Fund	9,811	1,962	44
	Examination	2,631	526	12
	Supervision	124	25	1
	System development	1,545	309	7
Admin. expenditure	Remuneration	5,431	1,086	24
	Operating costs	2,853	571	13
Subtotal		22,395	4,479	100
Balance		**456**	**91**	

Source: TEVET Annual Report 2011.

Revenue and Expenditure at Institutional Level

Despite the low public investment in the TEVET sector, financial management at the institutional level is impressive. While the availability of institutional information is limited, four institutions are sampled for comparison in terms of financial management. They are different in size and location, but they provide training in similar trades, such as light and heavy engineering, agriculture, automotive mechanics, business, etc. Institution A is located in Eastern Province, while Institution B is placed in Western (table 4.6).[2] Their enrollment figures are 267 and 518, respectively. They are considered relatively small institutions. Evelyn Hone and Northern Technical College (NORTEC) represent large TEVET institutions in the country. They are located in Lusaka and Copperbelt, respectively. In the financial statements of these four institutions, they all accrue a surplus in their financial flows, except for Institution B, which breaks even. The evidence from four institutions indicates how carefully they manage their financial resources and how they make an effort to build financial strength.

The effort made by institutions to keep TEVET costs affordable to students seems commendable. While TEVET tuition fees may be relatively expensive for those from poorer family backgrounds, the tuitions and fees are less than one-third of those at University of Zambia (UNZA). In fact, the TEVET tuitions and fees (an average of the four institutions) are 35 percent less than gross national income (GNI) per capita of ZMW9,668 in 2013. In the case of higher education, for instance, at UNZA, tuition fees are 85 percent higher than GNI per capita. These comparisons indicate that TEVET institutions try not to impose their financial constraints on students at the cost of maintaining a healthy financial flow despite their financial constraints. Further, salaries of both teaching and nonteaching staff in TEVET institutions seem to be managed adequately when compared to those at universities (table 4.7). Besides the significantly higher salaries at universities, there is a clear contrast in the number of nonteaching staff. While the number of nonteaching staff is lower than that of teaching staff at TEVET institutions, it is the complete opposite at universities. That said, TEVET institutions cannot afford to lose talented teaching and nonteaching staff due to inadequate salaries. To retain the staff and pay their salaries, TEVET institutions pay meticulous attention to their financial management. Their deficit, if any, will not be usually compensated, unlike public universities, by the government. Hence, it is very important for them to maintain their strong financial status to continue their training.

TABLE 4.6 Revenue and Expenditure at Institutional Level, by Item

ZMW, millions

		Inst. A	Inst. B	NORTEC	Evelyn Hone
Year		2014	2014	2013	2013
Province		Eastern	Western	Copperbelt	Lusaka
Enrollment		267	518	3,288	6,684
Revenue	Government grant	0.5	1.2	2.5	2.5
	Tuitions and fees	1.1	1.3	16.6	50.2
	Income generating project	0.3	0.1	3.0	3.9
	TEVET Fund			1.5	
	Total	1.9	2.6	23.6	56.5
Expenditure	Recurrent cost on training	0.7	0.8	1.2	15.6
	Personal emoluments	0.8	1.6	13.6	34.7
	Capital expenditure	0.01	0.05	1.2	1.6
	Others	0.1	0.2	4.3	
	Administration (incl. training of staff)	0.1			
	Total	1.7	2.6	20.3	51.8
	Balance	**0.2**	**(1)**	**3.3**	**4.7**

Sources: Financial statements from the institutions.
Note: Inst. = institution; NORTEC = Northern Technical College; TEVET = Technical Education, Vocational and Entrepreneurship Training.

TABLE 4.7 Average Annual Teacher and Staff Remunerations, 2014

	Number of teachers	Average annual gross salary (ZMW)	Average annual gross salary (US$)	Salary as a ratio of GDP per capita
TEVET institutions				
Teaching staff	261	130,627	20,252	15.7
Nonteaching staff	192	73,995	11,472	8.9
Universities				
Academic staff	1,023	451,885	70,060	54.4
Nonacademic staff	2,361	168,706	26,156	20.3

Source: World Bank staff calculation using civil service data and data collection from institutes.
Note: World Bank staff calculations using based on table 2.8 in chapter 2. TEVET institutions assessed include Evelyn Hone College and Northern Technical College. TEVET = Technical Education, Vocational and Entrepreneurship Training.

However, it should be noted that the four sample institutions receive either institutional grants or the TEVET Fund. Little data are available for those that do not receive any grants or funds from the government. Most likely, such institutions have a smaller student enrollment than the four institutions. With a smaller amount of collected tuitions and no grant from the government for many years, their financial situations are probably more difficult and more likely to be aggravated over time.

In general, revenues from tuitions and fees cover personal emoluments of TEVET institutions. Another example of healthy financial management is that all the TEVET institutions in table 4.8, except for Institution B, receive enough tuitions and fees from students to fully cover personal emoluments. Indeed, a ratio of operating costs (recurrent and personal emoluments) to tuitions and fees indicates how financially sustainable the respective institutions are. The ratios at NORTEC and Evelyn Hone are more than 1.0, which means that tuitions and fees fully cover their operating costs. The ratios of smaller Institutions A and B are less than 1.0, indicating that they are facing some difficulties in financial management compared to the larger institutions. That being said, tuitions and fees at Institution A can fully cover its personal emoluments

TABLE 4.8 Ratio of Operating Costs to Tuitions and Fees
ZMW

	Recurrent costs	Personal emoluments	Operating costs	Tuitions and Fees	Ratio
	a	b	c = (a + b)	d	d/c
Institution A[a]	693	803	1,496	1,107	0.7
Institution B[b]	769	1,635	2,404	1,317	0.5
NORTEC[c]	1,225	13,587	14,811	16,641	1.1
Evelyn Hone[d]	15,573	34,714	50,287	50,153	1.0

Sources: Financial statements from four institutions.
Note: NORTEC = Northern Technical College.
a. Financial statements for Institution A are from 2014.
b. Financial statements for Institution B are from 2014.
c. Financial statements for NORTEC are from 2013.
d. Financial statements for Evelyn Hone are from 2013.

TABLE 4.9 Share of Revenue and Expenditure at Institutional Level, by Item
percent

	Inst. A	Inst. B	NORTEC	Evelyn Hone
Year	2014	2014	2013	2013
Enrollment	267	518	3,288	6,684
Revenue (%)				
Government grant	26	46	11	4
Tuitions and fees	58	51	70	89
Income generating project	16	3	13	7
TEVET Fund	0	0	6	0
Total	100	100	100	100
Expenditure (%)				
Recurrent cost on training	41	29	6	30
Personal emoluments	47	63	67	67
Capital expenditure	1	2	6	3
Others	7	6	21	0
Administration (incl. training of staff)	4	0	0	0
Total	100	100	100	100

Source: World Bank staff calculations based on financial statements from the institutions.
Note: Inst. = institution; NORTEC = Northern Technical College.

(but not recurrent costs). Even at Institution B, tuitions and fees can cover more than 80 percent of its personal emoluments.

Government financial support is critical to smaller TEVET institutions. While the financial management at TEVET institutions seems sound in general, smaller institutions would probably need financial support, to some extent, from the government to compensate the differences in the ratio of operating costs to tuition fees. While the shares of government revenues (including TEVET Fund) are 17 percent and 4 percent at NORTEC and Evelyn Hone, respectively, those of Institutions A and B are considerably higher at 26 percent and 46 percent, respectively. It is clear from table 4.9 that dependency on financial resources from the government is more pervasive among smaller institutions. This is mainly because larger institutions receive more revenue through student tuitions and fees, as seen in table 4.8. Hence, taking advantage of economies of scale, they do not have to heavily depend on government grants. Without financial support from the government, it seems difficult for smaller institutions to maintain their current healthy financial status in the long run.[3]

It should be noted that a good financial balance is possible partially at the sacrifice of capital investment, especially for smaller institutions. Low capital investment is probably the main victim of expenditure items. The TEVET system inherently requires continued investment in relatively expensive equipment to provide relevant training to meet the latest labor market demands. Hence, it is of great concern that the low level of capital investment, especially at relatively smaller institutions, could adversely affect the quality of training in the long run.

Expenditure and Cost per Student

Government expenditure per student is significantly low in the TEVET sector. As discussed in chapter 2, government expenditure per TEVET student is the least of all its spending on education. In 2012, the government expenditure per TEVET student was ZMW511 and ZMW637 for basic education. Given that TEVET in general tends to be relatively expensive compared to basic education, it is unusual to see that per-student expenditure in the TEVET sector is smaller than in the basic education sector. In contrast, the higher education sector spends more than double the per-student expenditure of the TEVET sector. It is understandable that higher education costs more than TEVET due to differences in, for example, facility, laboratory, and faculty costs. However, given that the size of student enrollment at public universities and public TEVET institutions is similar, TEVET students receive significantly less financial support from the government than those at public universities, most of whom are from the richest quintile. This finding poses a concern in equity.

The amount of the institutional grants per student varies substantially at the institutional level. The same four institutions (Institutions A, B, NORTEC, and Evelyn Hone) are sampled for comparison. For instance, government grants per student range between ZMW374 to ZMW760 at larger institutions such as Evelyn Hone and NORTEC. For smaller institutions, grants range from ZMW1,873 to ZMW2,313. As discussed previously, smaller institutions depend more on government grants compared to relatively larger institutions. Although small institutions have strong financial autonomy, too, they find it very difficult to increase tuition fees due to pressure from students as well as the government. Hence, smaller institutions are likely to continue to be financially dependent on the government.

Costs per TEVET student are relatively similar across institutions. Regardless of size and location, there are small differences in the unit cost across institutions, unlike grants per student. The costs include (a) personal emoluments, (b) recurrent costs on training, (c) capital expenditures, (d) administration (including training of staff), and (e) others. The cost per student ranges from ZMW5,000 to ZMW7,700 (table 4.10). This range seems to be close to an optimal point given that the ratio of operating costs to tuitions and fees is almost 1:0 at Evelyn Hone and NORTEC. A ratio of 1:0 means that the institution breaks even between operating costs and tuitions and fees. When it comes to smaller institutions, this ratio is below one, which means that tuitions and fees cannot fully cover operating costs such as

TABLE 4.10 Grant per Student, Cost per Student, and Tuition per Student
ZMW

Institutions	Year	Enrollment	Province	Grant per student	Cost per student
Institution A	2014	267	Eastern	1,873	6,357
Institution B	2014	518	Western	2,317	5,032
NORTEC	2013	3,288	Copperbelt	760	6,160
Evelyn Hone	2013	6,684	Lusaka	374	7,756

Source: World Bank staff calculations based on financial statements from institutions.
Note: NORTEC = Northern Technical College.

recurrent costs and personal emoluments. Similar per-student costs across TEVET institutions are another implication of the financial effort by institutions. On the one hand, they try to keep the costs low to respond to students' pleas for lower tuitions and fees. On the other hand, they seek an optimal level of per-student costs so that they can continue to run their institutions, taking into account the need for financial sustainability.

Students seem to respond well to labor market signals in wages. Tuition for engineering courses is, in general, higher than those for other trades. For instance, tuition for engineering courses at the Livingstone Institute for Business and Engineering Studies is more than 50 percent higher than that of business courses. This is probably due to the need for relatively expensive equipment and consumables for engineering training. Despite the high tuition, science and engineering programs grew the fastest over the past few years. table 4.11 shows the seven fastest growing programs in terms of student intake. Taking 2010 as a base year, student intake in science and engineering programs doubled or tripled between 2010 and 2014. While chapter 1 shows that there is little change in the composition of student intake within craft, advanced certificate, and diploma, the student dynamics in *intake* have greatly altered since 2008. While student *enrollment* in craft, advanced certificate, and diploma have not substantially changed (except for advance certificate between 2008 and 2009), student intake in science and engineering programs grew rapidly from 2010. The growing supply of science and engineering programs is consistent with the findings that construction and transportation are the fastest growing sectors. Students know that the chances of getting a wage employment job are high for these sectors. Fifty-nine percent of graduates with training certificate in mechanics-related trades are employed as wage workers. Apparel (including beauty), information and communication technologies (ICT), electrics, and business trades have lower graduate employment rates of 15 percent, 35 percent and 41 percent, respectively.

Following up secondary education (grade 12) with postsecondary education (i.e., TEVET and higher education) makes a significant difference in the chances of getting formal employment. As discussed in chapter 1, the MESVTEE focuses mainly on qualification level 4 (craft certificate) or above, which requires at least secondary education completion. There is a clear gap in employability in the formal sector between secondary (grades 8–12) and postsecondary education. While 31 percent of male workers who have secondary education (grades 8–12) work in the formal sector, 78 percent of those with a certificate qualification work in the formal sector. For female workers, the contrast is even starker. Fifteen percent of female workers with secondary education are employed in the formal sector, while 77 percent of those with a certificate qualification work in the formal sector. Further, while almost all secondary education graduates in the formal sector have nonprofessional occupations, more than 60 percent of those with a certificate qualification hold a professional occupation.

This chapter mainly focuses on the country's formal sector. However, upgrading of existing labor forces, which is predominantly from the

TABLE 4.11 Growth in Intake at Public/Government TEVET Institutions, by Program, 2010–14

	2010 (Base)	2011	2012	2013	2014
Diploma in Science Laboratory	84	101	124	154	258
Diploma in Physiotherapy	44	84	54	65	125
Diploma in Mechanical Engineering (Technology)	28	24	74	81	73
Diploma in Aircraft Maintenance Engineering	18	27	31	26	45
Advanced Certificate in Heavy Equipment Repair	172	342	411	493	403
Advanced Certificate in Mechanical Engineering	78	105	150	162	179
Diploma in Automotive Technology	77	55	80	96	149

Source: TEVETA Data System 2014 (not publicly available).

informal sector and the major labor force in the country, should be considered further, and it could be an area of the next study.

Key Findings

- While TEVET expenditure is increasing, it remains the government's smallest education expenditure (as per 2013) in terms of the share of total government expenditure, and is low even in comparison with the shares that other African countries spend on TEVET.
- Financial management at the institutional level is impressive regardless of the size and location of the institutions; sampled institutions revealed no deficits.
- Revenues from student tuitions and fees can probably cover personal emoluments of TEVET institutions.
- Capital investment (equipment and rehabilitaion) seems insufficient at the institutional level which may, in the long run, adversly affect the quality of training.
- Institutional grants per student sustantially varies between institutions (smaller institutions get more grants), but the cost per student is relatively similar across institutions. This indicates that larger institutions enjoy more economy of scale.
- Training in science and engineering is in an increasing trend.
- TEVET graduates have a significantly higher chance of obtaining a formal job compared to grade 12 graduates.
- It should be noted that institutional data in the TEVET sector remain limited. NORTEC and Evelyn Hone are the leading TEVET institutions in the country, and we selected relatively small Institutions A and B as "average" small institutions in many aspects (e.g., financial and population size). While the findings could be a good start point for further policy discussions, it is premature to generalize all the findings and fully apply them into final policy decisions.

Notes

1. Some ministries have their own budgets for their respective training institutions. This paper presents only those regulated under MESVTEE. Other ministries include the Ministry of Community Development, Mother and Child Health; the Ministry of Youth and Sport; and the Ministry of Education, Science, Vocational Training and Early Education (MESVTEE).
2. We treat them as anonymous because we do not have the permission from these institutions to use their information.
3. A very small TEVET institution, visited by the World Bank team, is in severe financial trouble. It cannot pay staff salaries, most of its trainers are on contract rather than full time, and equipment is not being adequately provided to trainees.

Chapter 5

Expenditure on Higher Education

Higher education in Zambia has expanded rapidly during the past decade as a result of the increased completion of lower level education and the Government of the Republic of Zambia's (GRZ) persistent commitment to improving the country's human capital. The institutional and legal setup for higher education is gradually being established, and an effort for quality assurance has emerged. However, the present method of financing higher education seems unsustainable for the long term, especially with the increasing demand for higher education. The higher education system is heavily dependent on the GRZ's financing. Three national universities, which accommodate a large share of university students, have been granted academic and financial autonomy. Yet most of their revenue comes from government grants, either recurrent or capital grants, or in the form of student tuitions that were indirectly financed by the GRZ. In contrast, expenditures consistently exceed revenue and the financial status of public universities is always in the red. The GRZ's large bursary expenditure is also a concern since 77 percent of university students are from the richest 10 percent of households. There is no doubt about the importance of expanding higher education in Zambia for the economic development and improvement of citizens' social well being. However, from the public expenditure point of view, it is important to make it a sustainable system that also prioritizes equity issues.

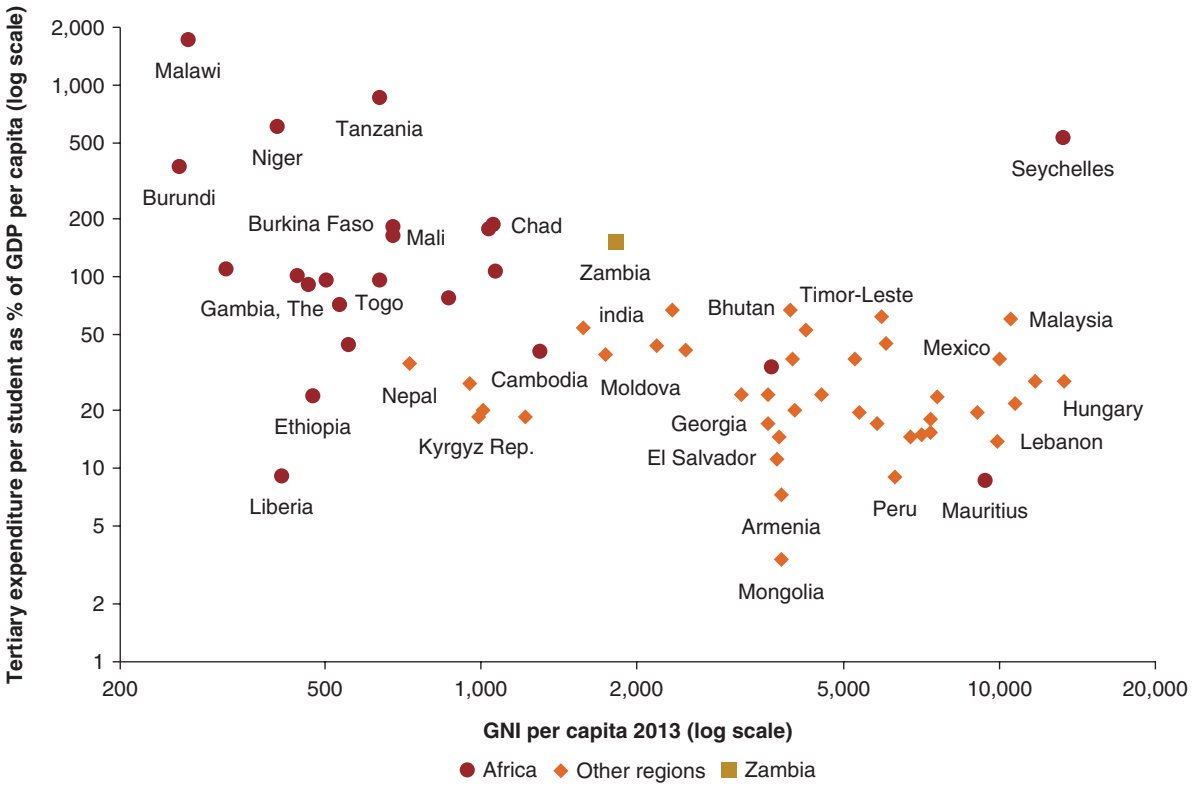
Government's Expenditure on Higher Education

GRZ allocates a relatively large share of education expenditure to higher education. As seen in chapter 2, expenditure on higher education was ZMW413 million in 2013, or 7.9 percent of the education budget. The amount and share increased to ZMW1,184 million and 12.6 percent of the total education expenditure in the 2015 budget, indicating that more resources are being directed to the higher education subsector. In Zambia, government expenditure per higher education student was ZMW12,912 in 2013,[1] which is 156 percent of the GDP per capita.

Figure 5.1 shows the relationship between GNI per capita and higher education expenditure as a percentage of GDP per capita. It shows that the government higher expenditure per student is generally decreasing as the country's economic level goes up.[2] Neighboring African countries tend to spend a relatively large amount of resources per tertiary student, while countries in other regions tend to spend a relatively smaller amount even for the same economic level. For example, India's per-higher-student expenditure is 54 percent of GDP per capita; in Moldova, it is 42 percent of GDP per capita. It is rare to find a middle-income country that spends more than 100 percent of GDP per capita on higher education per student.[3]

The GRZ funds universities in the form of operational grants, bursaries, and infrastructure development. The GRZ supports universities with operating grants. These amounts gradually increased over time from ZMW67 million in 2006 to ZMW111 million in 2013 for UNZA (table 5.1). The amount of bursaries increased at a faster rate in response to the increasing number of students, from ZMW41 million to ZMW125 million during the same period. While bursaries are supposed to be for students, the majority of the bursary is spent on tuition, which goes directly to the university. Therefore, while students receive accommodation and some petty allowances for study,

FIGURE 5.1 The Relationship Between GNI per Capita and Higher Education Expenditure per Student



Sources: Zambia: Reports prepared by CBU and UNZA for the World Bank team (not publicly available); MoE Education Statistical Bulletin 2013; TEVETA Annual Report (various years); MoF Financial Statements C 2006–13; MoF Activity Based Annual Budget 2014 and 2015.
Other countries: World Bank World Development Indicators database.
Note: GNI = gross national income.

TABLE 5.1 Breakdown of Public Expenditure on Higher Education
(ZMW, nominal millions)

	2006 Actual	2007 Actual	2008 Actual	2009 Actual	2010 Actual	2011 Actual	2012 Actual	2013 Actual
Grants								
University of Zambia	67	75	115	126	108	127	138	111
Copperbelt University	23	28	48	56	43	53	56	45
Mulungushi University	3	12	14	17	16	17	18	15
Bursaries, tuition, and accommodation								
University of Zambia	41	41	55	71	80	103	119	125
Copperbelt University	20	21	25	34	35	43	41	100
Mulungushi University	0	0	0	0	0	0	0	2
Abroad	6	7	7	7	7	8	8	15
Bursary administration	1	1	1	1	1	1	0	0
Outstanding bills	—	38	—	—	—	—	—	—
Capital expenditure	—	—	—	—	—	—	56	71
Total	161	222	266	312	289	352	439	483

Sources: MoF Financial Statements C 2006–13.
Note: The total amounts for 2012 and 2013 do not match table 2.3 because table 2.3 includes capital expenditure in the administrative category. The period 2007–09 includes arrear financing grants to both UNZA and CBU. — = not available.

the GRZ is ultimately channeling the funds to universities' revenue either in the forms of operating grants, tuitions, or capital grants.

Recently, the budget allocation for capital expenditure has been increasing for higher education (see tables 2.3 and 2.4 in chapter 2). In 2015, the biggest capital expenditure item for higher education of ZMW250 million is earmarked for the establishment of student hostels for the University of Zambia (UNZA) and Copperbelt University (CBU), and Mulungushi University. This is part of Zambia's effort to increase student access to university and improve student welfare. The Ministry of Finance (MoF) issued a US$1 billion sovereign bond in April 2014 (equivalent to approximately ZMW6 billion) for infrastructure development. While the main portion of the expenditure goes to the transport and energy sectors, this infrastructure bond will also fund the development of hostels. On a smaller scale, capital expenditure is also planned for college infrastructure to enable these colleges to upgrade to universities.

The government expenditure per student in UNZA and CBU follows similar patterns. In 2013, UNZA and CBU received ZMW5,449 and ZMW4,903 per student as an operating grant, and ZMW6,185 and ZMW10,861 per student for student bursary (table 5.2). The total education expenditure per student as a percentage of GDP per capita was 156 percent in 2013, a decrease from 287 percent in 2009.

Analysis of Revenue and Expenditure at University Level

Public universities rely on government grants for about half of their annual budget. Although universities receive grants from the GRZ, it is not the only source of revenue since they are semiautonomous institutions. An analysis of the last six years of university budgets and expenditure shows that universities rely on government grants for some 50 percent of their budget. In 2012, UNZA received ZMW228.6 million from the government; generated ZMW156 million from tuitions and other student fees; and made ZMW48.7 million from research and consultancy, business venture and other income (table 5.3). For the period of 2010 to 2012, the proportion of government grants gradually increased from 49 percent to 53 percent of revenue. The trend is slightly different for CBU. The government contribution to the total revenue ranged between 42 and 53 percent between 2008

TABLE 5.2 Trend of Government Expenditure per University Student, 2006–13
(ZMW)

	2006	2007	2008	2009[a]	2010	2011	2012	2013
Government subsidy per university student (total of operating grant and bursary)								
UNZA				14,314	13,170	14,199	13,571	11,635
CBU	11,292	9,900	16,619	14,793	10,780	11,360	10,903	15,764
Total				14,460	12,363	13,229	12,713	12,921
Per student operating grant								
UNZA				9,155	7,578	7,831	7,302	5,449
CBU	6,017	5,705	10,861	9,205	5,926	6,263	6,283	4,903
Total				9,170	7,020	7,296	6,975	5,279
Per student bursary								
UNZA				5,159	5,592	6,368	6,268	6,185
CBU	5,275	4,195	5,759	5,589	4,854	5,097	4,620	10,861
Total				5,290	5,343	5,934	5,739	7,642
Higher education expenditure per student as % of GDP per capita				287	210	193	169	156

Sources: Enrollment data from CBU and UNZA; World Bank staff calculations using MoF Financial Statements C 2006–13.
Note: CBU = Copperbelt University; UNZA = University of Zambia.
a. 2009 includes arrear financing, which is likely to have resulted in higher unit subsidy than in 2010.

and 2012, while the proportion dropped to 25 percent in 2013 (table 5.4).[4]

Tuition and student fees are the second largest source of revenue for both UNZA and CBU. As it is discussed in detail in the section for bursary, most tuitions and fees are originally financed by the central government in a form of bursaries to students. In 2013, UNZA collected ZMW156 million from tuition and student fees and CBU collected ZMW172 million. As discussed earlier, universities have the authority to set their own tuition levels in consultation with the GRZ. Between 2009 and 2013, the average student tuition more than doubled—ZMW8,300 to ZMW17,000 at CBU, and ZMW8,336 to ZMW17,910 at UNZA (figure 5.2). The increase in tuition outpaced the cost of inflation. Using the inflation adjusted constant price, tuition increased by 44 percent to ZMW11,930 at CBU and by 51 percent to ZMW12,569 at UNZA. This increase in tuition in real terms must have made students feel that tuition was becoming increasingly expensive in these universities unless the quality of educational services had improved accordingly.

Both UNZA and CBU have begun raising revenues from their own research and business activities. UNZA collected ZMW29 million from research and consultancy, ZMW4.6 million from business ventures, and ZMW14.7 million from other sources of income. UNZA started a Public-Private Partnership initiative that allowed investors to develop a business park in a corner of the UNZA campus; the university will gain additional rental income for 25 years and the established building will be transferred to the university after that period. The income from such initiatives is reflected as part of other income in these financial statements. UNZA also

TABLE 5.3 The Trend of UNZA's Revenue and Expenditure, 2010–12

ZMW, new millions

	2010	2011	2012
Revenue			
Government grants	114.8	168.5	228.6
Tuition and other student fees	95.8	130.0	156.0
Research and consultancy	19.8	24.5	29.4
Business ventures	2.7	3.8	4.6
Other income	2.8	2.8	14.7
Total	236.1	329.6	433.3
Expenditure			
Staff costs	326.1	630.5	540.7
Other operating expenses	43.9	136.7	89.8
Depreciation	0.0	11.4	33.7
Financial charges	7.1	11.8	3.1
Total	377.0	790.5	667.3

Sources: Financial statements of UNZA.
Note: UNZA = University of Zambia.

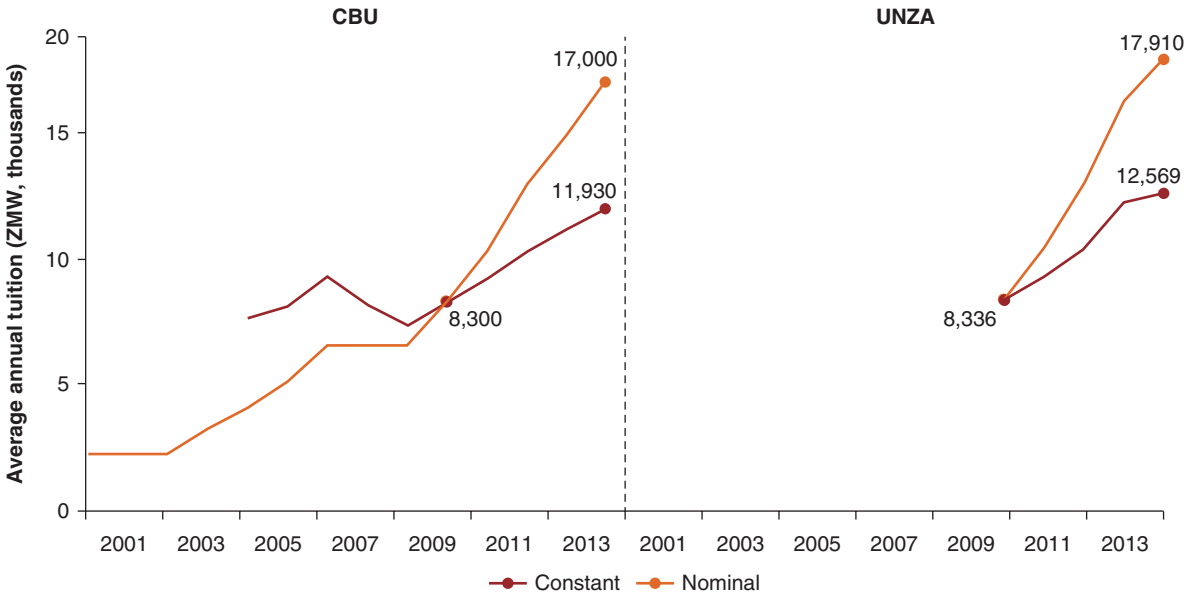
TABLE 5.4 Trend of CBU's Revenue and Expenditure, 2008–13

ZMW, new millions

	2008	2009	2010	2011	2012	2013
Revenue						
Government grants	46.7	51.6	43.3	72.0	107.3	60.0
Tuition and other student fees	32.9	42.9	55.9	83.5	97.6	171.6
Projects	0.0	0.1	0.5	0.1	0.5	0.3
Other income	2.9	3.6	4.0	4.0	5.2	6.5
Total	82.5	98.3	103.7	159.6	210.6	238.4
Expenditure						
Staff costs	—	97.2	117.6	134.6	181.1	230.1
University council and admin. office	—	27.3	33.1	38.1	84.6	68.8
Student hall and residence	—	1.8	2.1	2.3	2.3	3.4
Academic schools	—-	68.2	82.4	94.2	94.2	157.9
Total	—	194.5	235.1	269.3	362.2	460.1

Sources: Financial statements of CBU.
Note: — = not available; CBU = Copperbelt University.

FIGURE 5.2 Trend of Average Student Tuitions at CBU and UNZA at Constant and Nominal Prices, 2001–13



Source: World Bank staff calculations using data from CBU and UNZA.
Note: The data show average tuitions for all types of academic programs. CBU = Copperbelt University; UNZA = University of Zambia.

started new distance courses and a School of Business to attract more tuition-paying students. CBU also started a similar initiative and allowed private investors to gain concessions for 20 years for the hostels that they develop on CBU's land.

Despite an effort by the universities to increase their revenue base, expenditures are persistently higher than revenue, resulting in chronic deficits for the financial flows of both UNZA and CBU. While the universities are trying to raise revenues, the annual accounting cash flow at public universities has been in a difficult situation over the past several years. In 2012, revenue was ZMW433 million at UNZA, whereas its expenditure was ZMW667 million—a funding gap of about 35 percent. At CBU, expenditure was ZMW460 million and revenue was ZMW238 million—a funding gap of 42 percent. It is important to point out that, in the case of UNZA, even the staff salary is not fully financed by the generated revenue. The expenditure on staff costs was ZMW541 million in 2012 whereas the total revenue from all sources was ZMW433 million.

Deficit financing is primarily made through the GRZ grants for arrears and bank loans. The financing of the chronic deficits have been historically made through special grants from the GRZ. For three years between 2007 and 2009, a total of ZMW110 million (rebased) has been financed by GRZ to UNZA and CBU only for paying the outstanding debts. Yet no silver bullets have been identified by the universities to reduce the cumulating debts. Since 2010, UNZA has been borrowing from commercial banks to settle outstanding bills, especially for the pension scheme, according to the financial statements. However, the interest payment also creates additional burdens on the universities' financial flows.

Salary bills seem to be a burden for both UNZA and CBU, but solutions are in the hands of these universities. Public universities have financial and academic autonomy; therefore, university councils have the right to recruit and determine the pay scale for their staff. While tuitions are partly regulated by the government, financial and human resource management

autonomy provides universities with flexibility in their management decisions. The financial burden on the salary bills seems to come from different channels:

Large number of staff: Both public universities have a relatively large number of staff. UNZA has 1,062 academic staff (20 percent of them are part-time lecturers and fellows) for some 20,000 students (table 5.5). The ratio of student to academic staff is 19:1. CBU tends to have less academic staff per student—322 academic staff for approximately 9,000 students, with a ratio of 28.5:1. As implied by these ratios, there is little risk of a shortage of teaching staff in these universities. A comparison with a private university shows a similar academic staffing level of 18.2:1. On the other hand, the ratio of nonacademic staff to students follows quite a distinct pattern between public universities and a sampled private university. While the ratio is 73.4:1 students per nonacademic staff member in the sampled private university, the ratios are, respectively, 15.3:1 and 15.4:1 for UNZA and CBU. This means there is almost five times more nonacademic staff in the public universities per student than at the sampled private university.

Level of remuneration: The second reason for the relatively large salary bill is the level of remuneration. For the sake of simplicity, the total amount of the salary bill is divided by the total number of staff (including academic and non academic staff). The average gross remuneration per staff member is ZMW226,444 (US$37,540@ US$1=ZMW6) for UNZA; ZMW250,877 for CBU, and ZMW48,085 for the sampled private university. While the share of nonacademic staff is much larger at UNZA and CBU, it does not seem to contribute to the lower average remuneration per staff member when compared to the sampled private university. While it is important that the salary level of the academic staff is high enough to attract internationally competitive professionals, universities may benefit from better management of overall financial and human resources.[5]

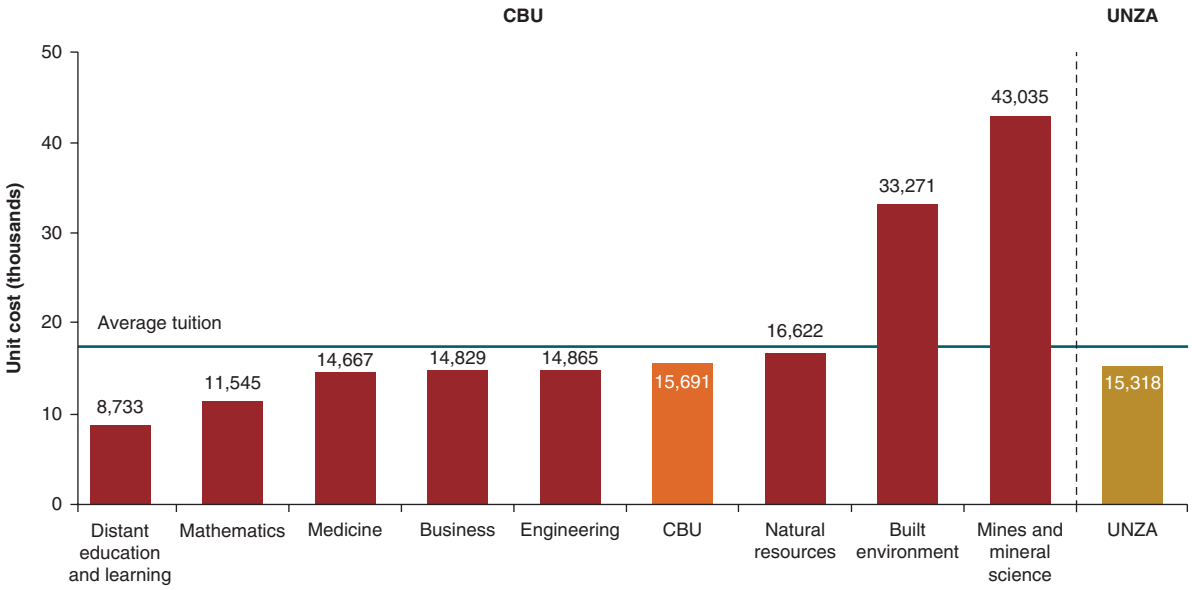
The average unit cost for academic activities is actually lower than the tuition collected, implying that the current tuition level is sufficient for sustaining basic academic activities. Analysis of this cost breakdown shows that average tuitions collected from students, between ZMW17,000 and ZMW17,900, are in just about the right range for covering academic activities at both CBU and UNZA. The average cost for academic activities at CBU was ZMW15,691 (figure 5.3).[6] UNZA spent ZMW15,318 on academic staff costs and instructional costs (professional and technical staff costs and research and consultancy costs are not included). These average costs for academic activities are in fact lower than the average tuitions of around ZMW17,000 to ZMW17,900. Therefore, tuition levels seem to be relevant from the student perspective. Given that the GRZ provides operating grants to run nonacademic activities, running the basic business of academics could be managed under the current fee and tuition structure.[7] Yet for both UNZA and CBU, nonacademic costs are greater than academic costs and seem to be a driving factor for the costly structure of university operations.

TABLE 5.5 Number of Academic Staff, Staff Cost, and Ratio to Student, circa 2013

	UNZA	CBU	Private university A
Staff			
Academic staff	1,062	322	149
Nonacademic staff	1,326	595	37
Total	2,388	917	186
Cost			
Annual salary mass (ZMW, millions)	541	230	9
Average salary per staff member (ZMW)	226,444	250,877	48,085
Number of students	20,280	9,180	2,717
Ratio of students to academic staff	19.1	28.5	18.2
Ratio of students to nonacademic staff	15.3	15.4	73.4

Sources: Anonymous private university; CBU; UNZA.
Note: UNZA includes 127 part time lecturers and 120 fellows, and 118 temporary staff. Salary bill for UNZA is for 2012; salary bill for CBU and private university is for 2013. 2013 data for number of students for all universities. CBU = Copperbelt University; UNZA = University of Zambia.

FIGURE 5.3 Unit Cost per Student, by Faculty at CBU and UNZA



Source: World Bank staff calculations using data from CBU and UNZA.
Note: For CBU, expenditure data is from 2013 while enrollment data is from 2014; therefore, the actual unit cost is likely to be slightly higher. Similarly for UNZA, enrollment data is from 2013 and expenditure data is from 2012. CBU = Copperbelt University; UNZA = University of Zambia.

Bursary Scheme

One of the important areas for improving the financing of higher education in Zambia is the bursary scheme. The current bursary scheme, which began in 2004, targets students in public universities in Zambia and students who are accepted to study abroad. The bursary targeted for domestic undergraduate students has four levels based on the students' financial needs. Tuition coverage can be 25 percent, 50 percent, 75 percent, and 100 percent. The bursary program also supports some other education costs including a book allowance, a project allowance, and a daily subsistence allowance. The estimated amount of bursary is shown in table 5.6. Typical bursary sponsored students receive ZMW19,000 to ZMW27,000 (US$3,200 to US$4,500) per year. In 2013, the number of bursary recipients at UNZA and CBU was 8,371 and 5,396—approximately 42 percent and 59 percent of total enrollment in these universities. Of the total 13,767 stipend beneficiaries, 54 percent (7,372) of the beneficiaries are male and 46 percent (6,395) are female (table 5.7). By level of stipend support, 41 percent receive 100 percent tuition support and 56 percent receive 75 percent support. The share of bursary beneficiaries is slightly larger among arts, humanities, and business students than among science, engineering and medicine students. For UNZA and CBU, 57 percent of total bursary recipients or 7,916 students belong to arts, humanities, and business studies (table 5.8).

The beneficiaries of the bursary scheme are identified through a detailed screening of background information. The Department of Social Welfare under the Ministry of Community Development, Mother and Child Health, is responsible for assessing applicants' financial status and producing a social welfare report. The field officers of this department visit households to verify the information received in the application and to check for necessary documentation.[8] The assessments are concluded with the assessor's recommendation for eligibility to the bursary scheme. The social cash transfer program that the GRZ provides for some 180,000 beneficiaries has a proxy-means testing

TABLE 5.6 Simulated Amount of Bursaries for Students in UNZA

ZMW

	Art student		Science student	
Percent	100	75	100	75
Tuition	16,024	12,018	19,795	14,846
Meal	5,625	5,625	5,625	5,625
Book	533	533	533	533
Project	1,250	1,250	1,250	1,250
Total (annual per student)	23,432	19,426	27,203	22,254
US$ equivalent	3,905	3,238	4,534	3,709

Source: World Bank staff calculations using information from the Bursary Committee.
Note: Simulation for 1st year student of 2014; meal allowance for 250 days. UNZA = University of Zambia.

TABLE 5.7 Number of Students Receiving Bursaries, by Support Category and University, Academic Year 2013/14

Tuition supported (%)	UNZA			CBU			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
25	62	46	108	24	26	50	86	72	158
50	84	82	166	114	69	183	198	151	349
75	1,601	3,171	4,772	1,825	1,069	2,894	3,426	4,240	7,666
100	1,973	1,352	3,325	1,689	580	2,269	3,662	1,932	5,594
Total	3,720	4,651	8,371	3,652	1,744	5,396	7,372	6,395	13,767

Source: Bursary Committee.
Note: CBU = Copperbelt University; UNZA = University of Zambia.

TABLE 5.8 Number of Students Receiving Bursaries, by Academic Disciplines, Academic Year 2013/14

	Tuition supported (%)	UNZA	CBU	Total	Aggregate total	%
Arts, humanities, business	25	92	26	118	7,916	57
	50	106	83	189		
	75	3,490	962	4,452		
	100	2,509	648	3,157		
Science, engineering, medicine	25	16	24	40	5,851	43
	50	60	100	160		
	75	1,282	1,932	3,214		
	100	816	1,621	2,437		

Source: Bursary Committee.
Note: CBU = Copperbelt University; UNZA = University of Zambia.

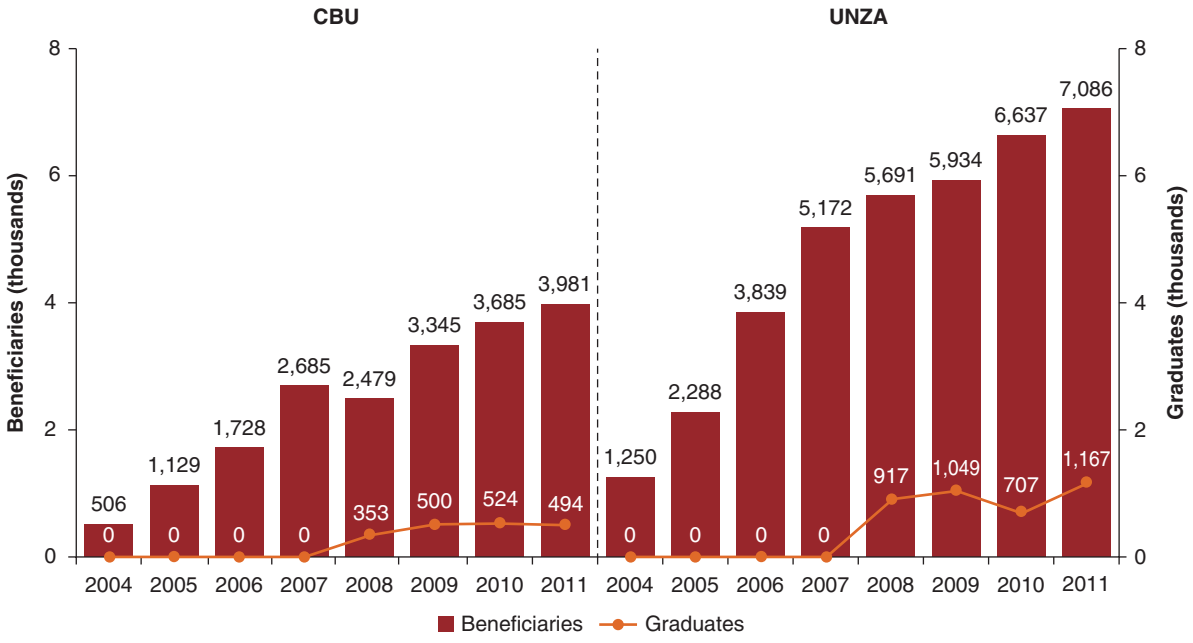
mechanism that gives systematic scores for each piece of collected information; however, such a proxy-means testing mechanism has not been introduced for the bursary selection criteria. The Bursary Committee receives the information together with the assessors' recommendations and makes decisions about who should receive the bursary. The whole process of beneficiary selection takes advantage of the field presence of welfare officers at the district level, and effectively engages different parties in preparing the final list of beneficiaries.[9] There is scope, however, to make the program more objective by introducing proxy-means

testing mechanisms. This has already begun under a different program since the current identification mechanism still relies on assessors' and evaluators' subjective decisions at different stages of reviews.

The bursary scheme is an important means of providing access to higher education for poor students; however, there is a range of options that could make the program more cost-effective. In 2013, the government's expenditure on university students' bursary was 59 percent of the GRZ's higher education expenditure and 4.7 percent of total education expenditure.[10] The actual amount that the GRZ spent on bursaries was ZMW242 million, which is 8 times larger than the total TEVET expenditure of ZMW33 million, or more than twice as large as the total spending on teacher education of ZMW102 million in 2013. The bursary scheme targets relatively poor students, so it serves an important social welfare purpose; yet it is important to remember that 77 percent of those who enter university education are from the richest 10 percent of households in the country, according to the Living Conditions Monitoring Survey (LCMS) 2010. Therefore, there is still room for further improvement of the equity of public education expenditure by reviewing the government's expenditure on bursaries.

The current bursary scheme is a loan scheme by law, but lacks the means to collect on loans. The current bursary scheme was introduced in 2004 as a loan scheme, replacing the former scholarship scheme. The repayment period of the loan under the current program is 10 years for a four-year academic program, with a one-year grace period upon completion of the course. However, 10 years after introduction, none of the student beneficiaries have repaid even a penny to the treasury despite the fact that the contract specified it was a loan program with a return period and interest rates. One of the reasons for this issue is the unclear authority for loan collection and ineffective collaboration with other agencies.[11] Figure 5.4 shows the number of beneficiaries and graduates from universities who

FIGURE 5.4 Number of Beneficiaries and Benefited Graduates from the Current Bursary Scheme, 2004–11

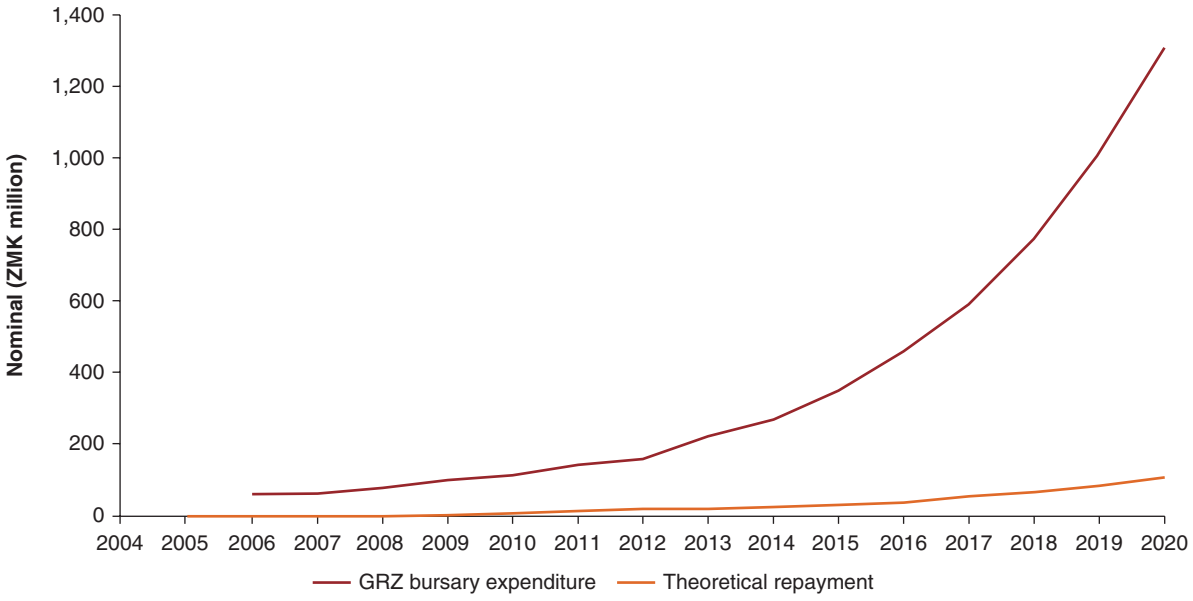


Source: Bursary Committee Secretariat.
Note: CBU = Copperbelt University; UNZA = University of Zambia.

received bursaries. For the first four years, the number of beneficiaries increased steadily as the scheme was introduced to new students only; but after four years, the number of beneficiaries reached a steady state. The number of beneficiaries in 2011 was 3,981 at Copperbelt University (CBU) and 7,086 at the University of Zambia (UNZA).[12] The annual flow of graduates fluctuates from around 500 at CBU and around 1,000 at UNZA but varies up to 30 percent depending on the year. The number of graduates does not seem to be proportionate to the number of beneficiaries. For example, while 1,250 students benefitted from bursaries in UNZA in 2004, only 917 graduated in 2008. While some students belong to longer academic programs (such as medicine), the number does not pick up in later years. The ratio of graduates to beneficiaries was 16 percent in 2011 (1,167 graduates to 7,086 beneficiaries), indicating that inefficiency exists in the system, probably in the form of repetition or dropout of sponsored students.

If a loan scheme is fully functional, the loan repayment can contribute to about 10 percent of the annual bursary allocation. To understand the cash flow associated with the bursary scheme, a simulation model was produced. Assuming that the number of GRZ-sponsored students grows at the current pace of 11 percent per annum and university tuitions increase by 17 percent per annum, the nominal amount of bursary expenditure will grow from ZMW225 million in 2013 to ZMW1,309 million in 2020 (figure 5.5). Yet the annual repayment from graduates[13] could have contributed about ZMW22 million in 2013 if the scheme had been fully functional. This revenue would have contributed about 10 percent of the GRZ expenditure on bursary in 2013, and its contribution will remain roughly around 8 percent toward 2020. This ZMW22 million is sufficient to cover approximately 1,200 fully sponsored students.[14] Between 2009 and 2013, a cumulative ZMW66 million could have been available if the loan had been repaid as per the contract. While repayment can make an important contribution to the sustainability of the bursary scheme, it is also important to note that the current structure of the bursary scheme, even if it is fully repaid, is not

FIGURE 5.5 Simulation of the Repayment and Cost of Bursary Scheme



Source: World Bank staff calculations.
Note: Expenditure until 2013 is the actual expenditure. GRZ = Government of the Republic of Zambia.

self-sustaining because of the high inflation rate. Students are exempted from paying any interest while they are in school and during the one-year grace period. By the time that they start repaying the loan, the real value of the loan (which students started receiving five years earlier) is almost one-third its nominal value. Therefore, the scheme itself won't be self-sustaining even if the loan scheme is fully functional as per the contract.

Key Findings

- Higher education budget is large, accounting for 8 percent of the total education budget, and it is expected to further increase.
- Public universities heavily rely on government grants.
- UNZA and CBU face chronic deficits, which are periodically compensated by the government.
- The main cause of the chronic deficits is heavy salary bills.
- While the revenue from student tuitions and fees can cover basic academic activities (e.g., classes), the administrative expenses are very high due to the large number of non academic staff.
- The current bursary scheme does not function at all. None of the beneficiaries have ever paid back the loan amount to the government.

Notes

1. This includes only UNZA and CBU, and the expenditure includes only the government subsidy on recurrent grants (from table 2.9).
2. This indicator contains capital expenditure while Zambian data do not.
3. This could be partly because the cost per student is lowered as a result of increased access to tertiary education, but also students are more able to self-finance or access other financing mechanisms.
4. The allocation to bursaries seems to have increased for 2013 instead.
5. In contrast, private universities tend to maintain proper accounting. One of the private institutions that shared a financial statement showed that the annual recurrent expenditure (including salary and nonsalary recurrent expenditures) takes up only around 40 percent of the total revenue generated for the last five years, so the cash flow is positive during this period. Income generated from its business activities takes up around 15 percent to 25 percent every year, contributing to a constant income flow for the university.
6. Data years are different: CBU—expenditure data are from 2013, enrollment data from 2014; UNZA—expenditure data are from 2012, enrollment data from 2013.
7. This analysis is a simple assessment of aggregated expenditures. Universities provide library services, computer labs, etc., which are not included as part of the cost and hence should be considered as factors that increase the educational cost per student.
8. Such as certificate of death of parents if an applicant is claiming to be an orphan.
9. Bursary Committee consists of 12 members from different ministries, including Ministries of Foreign Affairs; Finance; Health; Labor; Community Development, Mother and Child Health; and Education, Science, Vocational Training and Early Education.
10. Calculated from table 2.3 and table 5.1.
11. In the 1980s, sponsored students were supposed to work at the government, so the scholarship effectively contributed to the social benefit. However, with diversification of careers and an increase of the number of university graduates, such a policy is not useful today. One of the options currently discussed is coordination with the Revenue Authority to trace the graduates.
12. The number reached 8,371 and 5,396 for UNZA and CBU in 2013 as shown in table 5.7.
13. With one-year grace period after graduation and 10-year repayment period. Interest rate is assumed to be 13 percent, quoted from the Bank of Zambia's official rate in February 2015.
14. Or ZMW22 million is 66 percent of the GRZ expenditure on TEVET in 2013, which was ZMW33 million.

Chapter 6

Discussions and Conclusions

General Education

A degree of the budget execution of District Education Board Secretaries (DEBS) grants varies across provinces. Provinces with larger expenditure and enrollment tend to show lower budget execution. Capacity development of budget execution is needed for such provinces.

Most primary schools do not receive the intended amount of school grants, and nearly 30 percent of primary schools do not receive school grants at all. One reason could be that actual disbursement of primary school grants does not fully follow the budget allocation rule. Indeed, the allocation formula explains only 18 percent of the actual disbursement amount. While the allocation rule is relatively complicated, it does try to promote gender parity and prioritize the rural remote schools in distribution of public funding. The current allocation rule might have helped the progressiveness (pro-poor) of school grants. The critical problem seems to be the lack of information about the allocation formula and the amount of school grants at district and school levels. It seems that most primary schools, if not all, do not know how much grants they are supposed to receive. Hence, even if schools receive no grants or grants less than what they should receive, they would have no grounds to dispute it. The lack of understanding on grant amounts at school level was one of the findings in the previous Public Expenditure Tracking Survey (PETS) 2008, as well. *Therefore, to improve the efficiency of grant disbursement, the transparent and clear guideline of grant distribution should be disseminated to District Education Board Secretaries (DEBS) officers and schools through head teachers with training. At the same time government should accelerate the financial decentralization and direct installment of primary school grant to individual primary school accounts.*

Furthermore, there is a clear indication of the low level of budget execution in primary school grants especially in Copperbelt, Eastern, Southern, Lusaka, and Central provinces. The reasons for the low level of budget execution are not clear. *The Ministry of Education, Science, Vocational Training and Early Education (MESVTEE) would need to investigate further the main issues and provide operational support to DEBS, especially for the larger provinces with more schools and students.*

The free primary education policy does not function perfectly, but the current situation is at least pro-poor. In primary education, half of government schools charge school fees mostly through parent-teacher association (PTA) fees to cover operation expenses at schools (36 percent of students actually pay). Given the limited public funding available, as long as the PTA fee is not mandatory and it does not prevent students from accessing primary education, school fees could mitigate financial burdens on primary schools. It could function as a redistribution mechanism of the limited funds between rich and poor students. Charging fees on some students should be accompanied by the progressiveness of primary school grants, promoting equity. This is indeed what is happening on the ground. Based on the PETS-QSDS conducted in 2014, the current situation of charging fees to some students but promoting equity through school grants is progressive and seems to be the unavoidable reality at least in the short run.

The promotion of free secondary education faces two pressing issues: supply shortage and regressiveness (pro-rich). The current capacity of the secondary education system can accommodate only 30 percent of the students currently enrolled in grades 1–5. Hence, the current government effort to increase the number of secondary schools (as well as the appropriate number of teachers and amount of school supplies) should be supported more by all stakeholders. The other pressing issue is the significant regressiveness of the system. First, secondary schools heavily rely on out-of-pocket spending. Ninety-eight percent of schools charge fees (60 percent of students actually pay). Second, the richer schools charge students a high amount of fees. This leads to fewer resources being available to the poorer schools. Third, as a result, there is a clear difference in access to secondary education between rich and poor students. The government aims to incrementally implement the free secondary education policy and continuously increase the secondary school supply. Unfortunately, the free secondary education requires a sixfold increase in the budget, which has a significant implication for the government budget. Given the limited funds available and the large income disparity in access, *the government could maximize the effective usage of the public funds by primarily reducing the cost of secondary education for poor students who are more likely to end their education at the primary level.*

School conversions especially at grades 8–9 need careful attention. Current basic education schools offering grade 8–9 schools should be converted to either primary or secondary schools. Given the limited number of secondary schools available in the country, transferring students at grades 8–9 needs careful consideration especially for schools in the adjacent areas. *Geographical mapping of current schools offering each grade and analysis of demand and supply of each grade are essential prior to the conversion.*

Management of teacher performance needs to be improved. Teacher performance has been a most serious issue for more than a decade, and past public expenditure reviews (PERs) have discussed it extensively. Teacher absenteeism remains high at almost 20 percent. Random visits to schools show that less than half of teachers are teaching in classrooms. Teacher attrition rate is also high at 11 percent. Without a proper incentive system and monitoring of teacher performance, this issue would be expected to continue. Empirical literature shows the mixed effect of teacher characteristics (such as certification and years of experience) on student performance. However, teacher subject knowledge, teacher attitudes and behavior (e.g., motivation), and better management of teachers (e.g., supervision and autonomy) have consistent positive effects on achievement. *It is recommended that the MESVTEE study more on how to improve teacher subject knowledge, identify an effective incentive system (e.g., recruitment of motivated teachers), and develop school management for proper supervision and autonomy of teachers.* This issue is discussed in more detail in the PETS-QSDS report (World Bank 2015).

The shortage of textbooks continues to be a challenge. The previous PER in 2006 showed some improvement of the textbook-pupil ratio from 1:5 in core subjects to 1:2 in English and 1:3 in mathematics partly because of financial support from cooperating partners (CPs). However, the recent data shows that the ratios deteriorated back to 1:5 each in English, mathematics, and science. Further, rural secondary schools tend to show more shortages in textbooks, especially English textbooks. The reason for the shortage in textbooks is likely to be mainly threefold, among other issues. One is the fund deficit for textbooks. As the number of students increase, so does the demand for textbooks.[1] The current textbook budget cannot fully cover all the textbooks needed for students. Second, there is misalignment of textbook policy, especially between timing of curriculum development and procurement policy. In 2013, the textbook delivery was significantly delayed due to new curriculum development and lack of procurement capacity in decentralized unit, which led to procuring the textbooks centrally and delivering only after the new textbook with revised curriculum was

published in the middle of the 2013/14 academic year. The third reason is the lack of a textbook delivery fund. Since there is no secured budget for textbook delivery at local levels, DEBS deducts the cost of textbook delivery from school grant amount. *It is strongly recommended the government (a) secure sufficient textbook funds to procure all textbooks necessary in collaboration with CPs; (b) create a harmonized curriculum development, textbook procurement and delivery system; (c) secure the funds for textbook delivery both at central and DEBS levels; and (d) inform and build the capacity of all the stakeholders involved in the process: the central government, PEO, DEBS, schools, publishers, and CPs that may work on textbook delivery.*

There was unambiguity in responsibilities of textbook delivery and the delivery funds created by mismatches between textbook procurement policy and implementation. The current textbook procurement policy (MESVTEE 2013) states that the delivery of textbooks is the responsibility of publishers. The primary schools submit textbook orders to DEBS, DEBS conveys the orders to publishers on behalf of primary schools, and then the publishers deliver the textbooks to the primary schools. The secondary schools directly purchase textbooks from publishers and the publishers are responsible to deliver the textbooks to the secondary schools. However, because the textbooks were procured centrally, which was not the government's official textbook procurement policy, there was no provision stated in terms of the responsibility of textbook delivery and the delivery budget support to local units (such as DEBS and PEOs). This created the issue of the lack of textbook delivery funds and the part of school grants were deducted by DEBS to deliver the textbooks to schools.

TEVET

Improvement of access to Technical Education, Vocational and Entrepreneurship Training (TEVET) is a rational policy choice. One of the Sixth National Development Plan's (SNDP) targets of 50,000 TEVET enrollment by 2015 is unlikely to be achieved. Given the increasing number of graduates from secondary education and the growing demand for TEVET, it is recommended that the government continue to enhance the access to TEVET at a faster pace. It makes sense to expand the TEVET system from the economic and equity points of views.

Economic aspects: First, while we do not have information about private institutions, at least public TEVET institutions show a healthy fund flow. Hence, public funding is unlikely to be inefficiently used if it is appropriately allocated. Second, graduates of TEVET institutions seem to perform better than secondary education completers in the labor market. While 63 percent of TEVET graduates have a professional occupation, secondary graduates are hardly ever employed in professional occupations. Third, annual tuition fees of TEVET graduates in mechanics trade, for instance, amount to merely three to four months of their future expected salaries. Wage premiums of TEVET graduates are almost double, compared to secondary education completers. Even taking into account the opportunity costs accrued during the training, the costs of TEVET education can be recovered in relatively short period.

Equity aspects: Our analysis shows that there is a clear difference between secondary and certificate levels for the possibility of obtaining a formal job. Among male workers, while 31 percent of those with secondary education work in the formal sector, those with a certificate have a much higher chance of getting a job (78 percent) in the formal sector. For female workers, the contrast is even starker. Only 16 percent of female workers with secondary education belong to the formal sector, 77 percent of those with certificate work in the formal sector. If poor students overcome the barrier between secondary and postsecondary, it would have significant implications for their future economic status. Of course, at the secondary education level, particularly at grade 12, many students are already prescreened mainly for economic reasons. As a result, relatively richer students

remain in grade 12. While there is need for support to poor students at the basic education level, it is the jump between secondary and post-secondary that creates a huge difference to future earnings. Hence, enhanced access to—and of course completion of—TEVET institutions at level 4 and above would provide a unique opportunity for poor students to obtain relatively stable jobs and significantly increase their earnings. There is already a targeting mechanism in place in the country to target poor students.

While it is important to figure out how to improve access to TEVET, it is essential that improvements are done efficiently given the limited public funding available to the TEVET sector. While it is premature to generalize our findings given the small sample, there seems to be little difference in actual training cost per student across TEVET institutions regardless of size and location. Larger institutions seem to gain more revenue from tuition fees. This means that larger institutions such as Northern Technical College (NORTEC) and Evelyn Hone take advantage of economies of scale and provide training in more cost-effective ways. Hence, the financial status of larger institutions tends to be healthier than at smaller ones. Therefore, unless new institutions are large enough to run efficiently, it would probably make more sense to develop the capacity of existing institutions.

That being said, supporting only large institutions would not create the right incentives to improve the training quality in the system. Hence, government funding to TEVET institutions could be performance-based with clear criteria for the funding formula, such as job placement, among other things (see box 6.1). As long as small institutions succeed in equipping students with employable skills, they should be eligible to receive government funding and be given an opportunity to expand their institutions.

Lastly, from the equity point of view, the government may need to continue the support to institutions located in rural areas. Since they would be more financially dependent on the government, it is recommended that the government strategically select such institutions.

Strategic bursary schemes could help TEVET institutions improve the relevance of skills. Public TEVET institutions seem to respond well to the growing sectors and continue to increase student intake in science and engineering. Construction, electricity, gas, water, transportation, and communication are all growing sectors that require skills in science and engineering. Further, these are the sectors where value-added products are developed with more technical skills. As Zambia is shifting toward being a middle-income and industrialized country, development of more technical skills is indispensable. To improve the current momentum of the increasing supply of the skills in science and engineering, the government could make the bursary scheme not only supportive to poor students but also more strategic in relevance.

TEVET institutions should be encouraged to diversify the funding channels. Given the current low public investment in the TEVET system and the likelihood of continued low public investment, at least for few years, the TEVET institutions ought to diversity their funding channels and the government would need to support their effort. Further, the selection process for institutional grants is not clear. As the healthy competition for the grants could be a driving force to improve the quality of Technical and Vocational Education and Training (TVET) institutions, more transparent selection process would be needed.

The current information system could further strengthen monitoring and evaluation of the TEVET system. To maximize the efficient use of the limited government funding to the TEVET system, it is critical for the MESVTEE and Technical Education, Vocational and Entrepreneurship Training Authority (TEVETA) to accumulate quality data in the system to make strategic decisions based on evidence. They have a relatively good information system and produce annual reports with more information available as compared to past years. However, the following areas could be further improved:

- *Quantity and quality of the data from TEVET institutions*. While TEVETA collects a

BOX 6.1 TVET Financing Models

Models of Technical and Vocational Education and Training (TVET) structure and reform in France, the United Kingdom, and Germany are widely used throughout the world. All of these systems show the benefits of both public and private support for TVET. Mixed financing allows the program to target a wider group of participants by offering needs-based public sector subsidies and private sector user fees. This diversification can also ensure scalability and sustainability for TVET programs. Each provides possibilities for financing options for TVET systems:

a) **Full subsidy of TVET within the national education system (France)**
The state budget pays for vocational training, but schools limit the number of new participants every year.

b) **Private sector financing and delivery (U.K.)**
The U.K.'s liberal economic model places responsibility for training and investment in the workforce on the private sector. Costs of TVET training are paid by the individual worker or by the firms for the trainings they provide. Government programs may include subsidies for at-risk youth.

c) **Mixed public and private financing (Germany)**
Germany's dual system incorporates market approaches with both state and private sector stakeholder support. This model requires the public and private sector to take on specific responsibilites within the system. The public sector finances initial training with vocational schools for upper secondary and higher education. The private sector controls placings for apprenticeships and in-firm trainings, providing a stipend to trainees. Individual companies pay for these trainings as operating expenses.

In developing countries, financing is often the largest constraint for TVET programs. To support these systems, mixed financing policies need to be transparent and decentralized to develop demand-driven TVET programs. Pursuing mixed financing policies also requires considerable reform of budget policy and decision-making.

Source: TVET Models, Structures, and Policy Reform: Evidence from the Europe & Eurasia Region.

relatively good amount of information from TEVET institutions, the validity of the collected information and the coverage of the institutions, in particular private institutions, can be further enhanced.

- *Utilization of the collected data*. The current information system is designed in such a way that almost anybody can create specific tabulations. However, it is too rigid to customize tabulations to conduct deeper analysis. Providing simple training in Microsoft® Access and basic statistics to key staff members would enhance the utilization of the collected data.
- *Analysis of the collected data*. With the currently available data in TEVETA, the annual report can include more analytical information. Institutional benchmarking, at least for those that receive public funding, would improve the accountability and provide useful information for future fund allocations.

Higher Education

Higher education plays an important role as a driver for economic and social development in Zambia, and the GRZ's policy to expand access to higher education is sensible. Zambia is considered a middle-income country and the economy is gradually shifting its focus from the primary sector to secondary and tertiary sectors. The GRZ has emphasized the importance of human capital development in its Vision 2030. Focusing on the development of high-skilled workers and human capital is important for the

future. With increasing enrollment in lower levels of education, it is obvious that the demand pressure for higher education opportunities will be ever growing. In this regard, an increasing allocation of public education expenditure to the higher education subsector is rational and consistent with policy.

The higher education subsector in Zambia seems to receive a relatively large allocation of public expenditure. Higher education expenditure in 2013 was ZMW413 million, taking up 7.9 percent of the total education expenditure. In 2015, the share of higher education budget has risen to 12.6 percent of total education budget partly due to increased capital budget. This large allocation is translated to a relatively high expenditure per student. A student at the University of Zambia (UNZA) or Copperbelt University (CBU) receives on average ZMW12,921 per year, which is 15.2 times higher than the amount of public subsidy that a basic education student receives, and is 1.56 times larger than the gross national income (GNI) per capita. International comparison of statistics shows countries that spend on higher education per student by more than 100 percent of GDP per capita are rare among middle-income countries. The level of higher education expenditure that Zambia is investing thus seems relatively well-endowed.

However, public expenditure on higher education can be utilized more effectively by improving: (a) equity of resource allocation and (b) effectiveness of resource management. The first area to be improved is the targeting of the neediest. While it is the national policy to expand higher education, the public resources can be better targeted to the neediest areas of higher education (see figure 1.3). Today, 77 percent of the university enrollment is from the richest 10 percent of the population. While the bursary scheme has a built-in mechanism to identify relatively poor students, it should be acknowledged that the majority of the students who come to universities are from better-off households since most poor students drop out before reaching the level of higher education. Therefore, a huge subsidy to universities and a huge subsidy to bursaries benefit the relatively rich segments of the population and thus contribute to an inequitable distribution of public expenditure.

A possible solution to improve the equity in overall resource allocation across various socioeconomic strata is a properly functioning loan scheme. The issue of equity affects both the GRZ and university students. Despite the fact that the bursary is a loan scheme, none of the graduates have repaid the loans that they borrowed for their higher education. The current bursary scheme is a means to give away free money to relatively wealthy students (i.e., mostly from the richest 30 percent of households), contributing to inequitable distribution of public expenditure on education. In a hypothetical case, where new loans are fully sustainable by repayment from previous students, some saved amount can be used for students at different levels of education or for those who are poor. An analysis of the returns to higher education shows the personal return is very high for higher education, so it is logical and ethical to enforce repayment of the loans by those who finish university education.

Even if fully functional, the current bursary scheme cannot fully recover costs and may need to be revised. First, the current bursary scheme is a loan scheme without the means to effectively collect the loan back. If the loan scheme is fully functional as it is designed now, about 10 percent of the bursary can be paid from this repaid amount. This means the current scheme won't achieve self-sustainable status even if it is fully functional. After they graduate, students are given a one-year grace period before they have to repay the loan. By this time, the high inflation rate renders makes the amount repaid less than the amount loaned. The total amount of repayment is as large as two-thirds of the annual TEVET budget; therefore, by collecting student loans, the GRZ will have more financial flexibility to allocate funds to improve the equity. To improve the sustainability of the bursary scheme, a larger proportion of students could be allocated 25 percent or 50 percent of the tuition's

support—at present, this is only 4 percent of all university bursary beneficiaries. This will allow keeping the total budget for the bursaries small while providing support to those who are most in need of it.

The second issue, effectiveness of resource management, mainly concerns universities. Public universities are guaranteed their financial and academic autonomies. This is a major advantage for provision of quality university education. Yet it should be recognized that the autonomy is vested with responsibilities. Two public universities, UNZA and CBU, have had chronic budget deficits over the past decade and constant arrears. While they are trying to find new sources of income, they continue to rely for more than 50 percent of their revenue from the GRZ. On the other hand, despite chronic budget deficits, the number of staff seems to be much larger than at private universities, and the remuneration levels of the staff are much higher than at any other type of educational institution in the country, including private universities. While such high level of remuneration is necessary to attract high-quality staff (SARUA 2012), current resource management is unsatisfactory and raises concerns for the sustainability of higher education financing and could possibly lead to a serious moral hazard of public universities.

Poor resource management at universities results in, or at least contributes to, the increasing level of tuition, which is growing annually and outpacing national inflation. The level of tuition seems sufficient for the two public universities to provide basic academic services. Yet universities spend a large amount on management and nonacademic services with the result that tuition is insufficient to run the universities. There are 1 nonacademic staff for each 15 students in both universities, while the academic staff to student ratio is 19 or 29 in UNZA and CBU. Balancing revenue and expenditure requires efforts from both the revenue and expenditure sides; however, continuously increasing university tuitions at a faster pace than national inflation could become a moral hazard of university accounting unless the increased tuitions are directly linked to an increased quality in academic services.

Overall Conclusions and Policy Implications

The Zambian education system is historically well endowed with public resources and the government's strong commitment to education. This has enabled good progress in educational development in Zambia. Between 2006 and 2013, public education expenditure grew steadily both in nominal and real terms. Government expenditure on education grew from ZMW1.5 billion in 2006 to ZMW5.2 billion in 2013 in nominal terms. The education expenditure took 15.3 percent to 20.5 percent of the total government expenditure during this period, and it is translated as the ratio of government expenditure in education to GDP, ranging between 3.7 percent and 4.4 percent. The budget for 2014 and 2015 indicate that the expected public education expenditure exceeds 5 percent of GDP and 20 percent of total government expenditure.

The GRZ's overall direction of the education strategy is appropriate and relevant for the context but there is a need to elaborate the scope of the skills development sector. The GRZ has developed an education strategy that is overall relevant for the current country context. As the country comes close to accomplishing universal primary education (UPE) and economic development has moved on to the middle-income stage, the GRZ's strategic shift to invest more on postprimary education is relevant. While the "how" part can still be improved, increasing the number of classrooms for secondary education and investing in the infrastructure of higher education to accommodate the growing demand for secondary and higher education are laudable moves in advance of anticipated pressure for student seats in the near future. On the other hand, the strategic vision for the skills development sector (i.e., TEVET) is slightly

underdeveloped in comparison to other subsectors. While the country experiences steady economic growth, unemployment and underemployment persist. By improving the TEVET sector to be more labor market relevant and accommodating the skills needs of the labor market needs, the subsector could support skills development of not only postsecondary students but also primary and secondary school dropouts who need breadwinning skills. The education sector vision and strategy should be elaborated in consideration of the labor market and societal needs and public expenditure can be even more strategically planned.

Despite stable funding to the education sector, the system continues to face challenges in improving the efficiency and effectiveness of resource use. The GRZ's relatively large allocation to the education sector gives ample opportunities for improving educational development. However, the wealth of public education resources is not efficiently and effectively translated to educational outcomes. Two causes can be observed: weakness in targeting the right beneficiaries and ineffectiveness of implementation. In terms of targeting, the study has found that public expenditure does not necessarily follow the pro-poor allocation. While instruments to identify the poor are in place, such as poverty targeting of university bursaries, almost everybody receives the bursary, so the public expenditure is not well targeted after all. Ineffectiveness of implementation adds to the problem. In general education, schools are supposed to receive school grants, but 30 percent of schools do not receive any government grants and therefore end up collecting fees from students despite the free primary education policy. In universities, the bursary scheme is a loan scheme by law but to date not one bursary beneficiaries has repaid even a penny due to lack of mechanisms to collect the loans. To maximize the impact of public expenditure, efficiency and effectiveness of resource use has to be strengthened.

Zambia's top priority is to achieve efficient and quality UPE. The primary education system in Zambia still suffers from low internal efficiencies, as observed by still high repetition and dropout rates. While a discussion of the causes of repetition and dropout requires another set of studies, broadly, the causes of high internal inefficiencies can be classified into: (a) supply-side reasons and (b) demand-side reasons. For the supply-side reasons, low quality of education is one of the culprits. Supply-side issues that the GRZ must handle include an insufficient number of teachers and low time-on-task due to relatively large absenteeism of teachers, and an insufficient number of textbooks and teaching and learning materials. For the demand-side issues, malfunctioning of free primary education policy is a concern. While the tuitions are officially abolished, schools continue to collect various fees from students and this could hamper access to school for poor students. An important remedy that the GRZ has to take immediately is a review implementation and disbursement of school grants. The study shows that school grants do not reach 30 percent of schools in the country, so lack of funding from the GRZ seems to result in the revival of student fees.

Targeting the poorest and the neediest students is important for maximizing the impact of public expenditure, especially for postprimary education. The GRZ's free secondary education policy is a commendable initiative in consideration of the students' educational opportunities, but a daunting challenge from a perspective of public financing. As the PETS-QSDS survey has indicated, currently 90 percent of the revenue that secondary schools require comes from tuitions and fees. Considering the incomplete implementation of free primary education today, alternative options could be considered from the angle of public expenditures. To maximize the impact of the limited public resources, the GRZ should be open to cost sharing and expect tuitions from students who can afford to pay. The priority for the government is to identify the neediest students who cannot access their respective levels of education without public support. The targeting can be

done by geographical location (to target poor regions, districts, or schools) or by identifying poor individuals (where poor and rich students coexist). Poverty-targeted stipends and interventions for the neediest and cost sharing with those who can afford could be an alternative and sustainable option.

The country will benefit from an expansion of the skills development sector (TEVET). As a middle-income country, Zambia will have greater need for more diversified skill sets to continue with its steady economic growth. Skills not only refer to technical and vocational skills (i.e., TEVET) but also to cognitive and noncognitive skills that also play important roles for labor market productivity and social development. To develop the cognitive and noncognitive skills for the majority of the labor force, the quality of education at all levels must improve. For specific economic sectors, especially the manufacturing and industry sectors, high quality and large enough pool of TEVET skills are also critical. Today, the number of TEVET graduates is relatively small in the labor market, but the majority performs well in the labor market as professional workers and enjoy wage premiums for the training they received. From the perspective of public education expenditure, the allocation to TEVET is relatively small and the students who come to TEVET institutions are expected to self-finance for the most part, unlike students of higher education. While the system of cost sharing seems effective and is still encouraged to continue its balanced performance, it is also important that the financial component is not a constraint for motivated students to attend TEVET institutions. The MESVTEE has established a system of National Qualification Framework under the initiative by TEVETA, and the education system is offering wider options to students. In anticipation of more students moving between academic and technical tracks in pursuit of their best possible skills development, providing attractive options for TEVET in terms of the quality of training, accessibility, and financial aid is also a responsibility of the GRZ. Postsecondary TEVET should be considered as part of the larger tertiary education sector.

The GRZ's orientation toward higher education is highly enabling and conducive to universities, but the higher education system as a whole suffers from weak resource management and ineffectiveness in promoting equity. The GRZ's large allocation to higher education is highly supportive to expanding university education opportunities, which is necessary because of the growing number of secondary graduates and high labor market demand for degree holders. However, today's large public expenditure on higher education appears neither effective nor efficiently utilized. While academic and financial autonomy is the right approach for improving the quality of university education, universities have chronically large debts and continuously negative financial flows due partly to an excessively large number of nonacademic staff and generous remuneration packages. This hints that there is a possible moral hazard in the financial management of public universities. One of the possible options for improving the university management is to gradually introduce performance-based funding, such as competitive funding. Although competitive funding may not directly address the universitywide human resource issues, competitive funding by academic faculties could be a possible option to ensure that limited government resources go to a motivated faculty which is delivering outputs and outcomes. Targeting is also ineffective in higher education. While the bursary scheme is useful for helping disadvantaged students, household surveys show that university students are from the households of the richest decile. Ninety-seven of bursary beneficiaries receive 75 percent to 100 percent tuition support via the bursary scheme. Further, not one student has ever repaid this loan. To promote equity in opportunities and improve the effectiveness of the resource use, resource management and implementation of the programs have to be strengthened for higher education.

Table 6.1 summaries policy recommendations.

TABLE 6.1 Summary Table of Policy Recommendations

Subsector	Short-term (1–2 years)	Medium-term (3–5 years)
Primary and Secondary Education	*Improve the efficiency of public funding in the education sector* • Assess needed budget for textbook procurement and distrubtion to all schools • Plan school mapping and confirm and implement the selection criteria for school conversion plans • Develop a secondary school grant formula that takes into account equity issues • Conduct regular monitoring and reporting on primary school grants distribution • Harmonize the education sector data (Education Management and Information System [EMIS], Examination Council of Zambia [ECZ], projects, etc.) including cleaning up the data discrepancies in *Education Statistical Bulletin (ESB)* (net enrollment rate [NER], repetition, and dropout rates) • Provide training on data analysis (programming) on household surveys (LCMS [Living Conditions Monitoring Survey], Demographic Health Survey [DHS]) to technical staff in the Ministry of Education (MoE)	• Implement the school conversion plan nationwide, using selection criteria • Procure textbooks in a harmonized manner (centralization or discentralization) and increase the textbook budget to ensure distribution is to school level • Analyze education-related areas of LCMS and other household survey data to review possible policy and strategic responses to results
TEVET	*Increase the allocation of the public expenditures in TEVET as a share of total government education expenditure because the (private) rate of returns is high and the supply of the TEVET graduates is welcomed by the market but remains limited* • Identify well-performing institutions that show healthy financial statements and high employment rates and prioritize in investing the limited government funding to such institutions (rather than establishing new institutions) • Identify institutions that show poor performance in financial and academic management (they are likely to be small institutions in rural areas) • Diversify funding sources through public-private partnerships • Develop the financial capacity of bursary scheme to target more poor but capable students to provide financial support • Identify strategic sectors to strengthen specific skills in those sectors (science, engineering, and technology) • Develop the EMIS capacity	
Higher Education	*Improve the efficiency of the public spending on higher education—arrears of public universities are compensated by the MoE* • Establish a better targetting mechanism to identify poor students who cannot enroll in university without bursary • Study a new sustainable loan scheme with a strong mechanism in which the MoE tracks down students for repayment • Conduct a thorough assessment of resource management at public universities and mutually agree between public universities and the MoE on a new funding mechanism (such as performance-based funding) and science, technology, and engineering • Identify three to four national priority fields in higher education, especially science, technology, and engineering	• Overhaul the current bursary scheme and establish a new loan scheme with more effective targeting mechanism (possibly linking with the national pension scheme) • Gradually introduce performance-based funding not only to public but also to private universities • Strategically provide public funding to more support to science, technology, and engineering fields

Note

1. Other issues include the cost of the curriculum rollout, delays because of court cases, and a high distribution cost of textbooks.

Appendix A

TEVET National Qualification Framework

Zambia's National Qualification Framework (NQF) consists of ten levels, starting from level 1 for primary education to the level 10 for doctorate (figure A.1). The TEVET stream is placed at NQF levels 3–6. Level 3 is for a trade certificate, which is the most introductory level of the TEVET stream and further broken down by three levels. The most elementary level under the trade certificate is trade test level 3. While there is no specific requirement to be eligible for this level, one usually needs to have at least one year of work experience. As this level does not require grade 7 certificate, it is mainly for those who do not have general education or with education levels below grade 7. The next level under the trade certificate is trade test level 2. This level requires a grade 7 certificate with three years of work experience, or one year of nonformal training institute (NFTI) training with one-year work experience. The highest level under the trade certificate is trade test level 1. Those eligible for this level must have completed grade 9 and have at least three years of work experience, or two years of NFTI training with one-year work experience. Trade test levels 1–3 are mainly offered by the Ministry of Community Development, Mother and Child Health (MCDMCH) and the Ministry of Youths and Sports.

MESVTEE provides certificates mainly at levels 4–6. Level 4 is a craft certificate/certificate. There are several ways to be eligible for this level. The first option is to have two years of work experience after obtaining the trade test level 1, and to take an entry exam for the craft level. The second option is to complete grade 12 education. Level 5 is advanced certificate/technician. This level is further broken down to sublevels: technician level and technologist level. The former requires either (a) craft certificate with one-year work experience or (b) grade 12 with specified O levels. The latter needs either (a) technician level with two-year work experience or (b) grade 12 with specified O levels. Level 6 is diploma level. The diploma level requires a minimum grade 12 certificate to be eligible as a trainee.

In the past, two education ministries independently administered academic (primary and secondary education) and TEVET systems. Students chose from either of two completely separate education tracks: academia or vocational training. Some students chose an academic track from primary education to secondary to higher education. Others chose a TEVET track, which was usually considered as a deadlock on the educational ladder. The MESVTEE is now implementing a new Act to change such a parallel system. The new education system allows students to move between two tracks. Hence, TEVET students can enroll in universities if they meet qualifications. Since this is a new initiative, the government has been collecting information about what works and what does not.

FIGURE A.1 National Qualification Framework Levels

10	Doctorate	**Higher education**
9	Master's degree	
8	Postgraduate qualifications	
7	First degree	
6	Diploma	**TVET**
5	Advanced certificate/technician	
4	Craft certificate	
3	Trade certificate	
2	Secondary education	**Schooling**
1	Primary education	

Source: MESVTEE.

Appendix B

Registered Private Universities in 2014

1. Victoria Falls University
2. Northrise University
3. Zambia School of Management
4. Copperstone
5. City University College of Science and Technology
6. Lusaka Apex Medical University
7. Zambia Catholic University
8. Zambia Open University
9. Livingstone International University of Tourism Excellence and Business Management
10. Pamodzi University
11. DMI-St. Eugene (Lusaka Campus)
12. DMI-St. Eugene (Chipata Campus)
13. Rusangu University
14. University of Lusaka
15. Cavendish University Zambia
16. Chreso University
17. University of Barotseland
18. Trans-Africa Theological College
19. Kaniki Bible College
20. St. Bonaventure College
21. Theological College of Central Africa
22. Morning Star Bible College
23. St. Dominic's Major Seminary
24. Justo Mwale Theological Education
25. United Church of Zambia University College
26. University of Africa
27. Kenneth Kaunda Metropolitan University
28. West East University College
29. Mancosa University
30. Copperbelt Distance Education University
31. St. John's University College
32. Gideon Robert University

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