UNITED REPUBLIC OF TANZANIA



MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY

EDUCATION SECTOR ANALYSIS – 2015
(ESDP 2016-2021, PART 1)

TANZANIA MAINLAND

September, 2016

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Acronyms and Abbreviations

ACSEE	Advanced Certificate of Secondary Education Examination
ANFE	Adult and Nonformal Education
BE-MIS	Basic Education - Management Information System
BEST	Basic Education Statistics in Tanzania
BRN	Big Results Now education initiative
CBET	Competence Based Education and Training
COBET	Complementary Basic Education in Tanzania
CSEE	Certificate of Secondary Education Examination
DHS	Demographic and Health Survey
EAC	East African Community
EFA	Education for All
EGMA	Early Grade Mathematics Assessment
EGRA	Early Grade Reading Assessment
EMIS	Education Management Information System
ETP	Education and Training Policy
FDC	Folk Development College
GDP	Gross Domestic Product
GER	Gross Enrolment Rate
GIR	Gross Intake Ratio
GMR	Global Monitoring Report
GPI	Gender Parity Index
HBS	Household and Budget Survey
HDI	Human Development Index
HEDP	Higher Education Development Programme
HESLB	Higher Education Student Loan Board
IAE	Institute of Adult Education
ICBAE	Integrated Community-Based Adult Education
IEC	Internal Efficiency Coefficient
IMF	International Monetary Fund
IPPE	Integrated Post-Primary Education
LGA	Local Government Authority
LIC	Low-Income Country
MCDGC	Ministry of Community Development, Gender and Children
MDAs	Ministries, Departments and Agencies
MDG	Millennium Development Goals
MoEVT	Ministry of Education and Vocational Training
MoFEA	Ministry of Finance and Economic Affairs
MRY	Most Recent Year
NACTE	National Council for Technical Education
NBS	National Bureau of Statistics
NECTA	National Examinations Council of Tanzania
NER	Net Enrolment Rate
NIR	Net Intake Rate
NGO	Nongovernmental Organization
NTA	National Technical Awards
ODL	Open Distance Learning
OOSC	Out-of-School Children
PCR	Primary Completion Rate
PEDP	Primary Education Development Plan
PER	Public Expenditure Review
PIRLS	Progress in International Reading Literacy Study

PMO-RALG	Prime Minister's Office - Regional Administration and Local Government
PO-PSM	President's Office - Public Service Management
PQTR	Pupil-Qualified Teacher Ratio
PRSP	Poverty Reduction Strategy Paper
PSLE	Primary School Leaving Examination
PTR	Pupil-Teacher Ratio
SADC	Southern African Development Community
SEDP	Secondary Education Development Plan
TASAF	Tanzania Social Action Fund
TCU	Tanzania Commission for Universities
TDMS	Teacher Development and Management Strategy
THMIS	Tanzania HIV/AIDS and Malaria Indicator Survey
TIE	Tanzania Institute of Education
TQF	Tanzania Qualifications Framework
TTC	Teacher Training College
TVET	Technical and Vocational Education and Training
UPE	Universal Primary Education
URT	United Republic of Tanzania
USAID	United States Agency for International Development
VETA	Vocational Education and Training Authority
VTC	Vocational Training Center

Chapter 1: The Context of the Education Sector

This chapter provides a broad overview of the demographic, socioeconomic and macroeconomic and fiscal contexts of the Tanzanian mainland education sector, as well as a brief review of the current policy framework. The perspectives offered of the evolution of these background factors over the past five years, and of their likely future trends, highlight some of the challenges and opportunities that the sector currently faces.

Demographic Trends

Demand for education is set to further intensify in current years, as Tanzania has a very young population that continues to grow at a sustained rate. The ongoing process of urbanization may however provide the opportunity for efficiency gains in the organization of service delivery.

The United Republic of Tanzania has a young and growing population, estimated at 43.6 million for the mainland by the latest Population and Housing Census, conducted in 2012. Although population growth has slowed from an earlier annual average of 2.9 percent, the average annual growth rate for the 2002-12 intercensal period remains high at 2.7 percent (See Table 1.1). On this basis, the mainland population is estimated to have reached 46.0 million in 2014 and is projected to reach 61.6 million by 2025.

Table 1.1: Demographic Trends – Tanzania Mainland, 1988-2012

	Census-Years		
	1988	**2002**	**2012**
Population (Millions)	22.5	35.5	43.6
Intercensal Annual Growth Rate (%)	2.8	2.9	2.7
Sex Ratio (Number of Boys per 100 Girls)	94.2	95.5	94.9
Population Under 15 Years (% of Total)	45.7	44.2	43.9
Urban Population (% of Total)	18.0	22.6	29.1

Source: PHC, 2002, 2012 and 2012a.

The population is still extremely young, the share under 15 years being 43.9 percent (down marginally from 44.2 percent in 2002) and that under 17 years 50.1 percent. This population structure, combined with the ambition to achieve universal basic education of 11 years for all, will continue to place a heavy burden on the education system to fulfill ever increasing demand. Assuming the average national intercensal growth rate is both correct for all age groups, and remains constant, the education system will have to cater for a further 6.3 million by 2025 on the sole basis of demographics, of which 4.7 million will be basic education pupils (See Table 1.2).

Table 1.2: Projected School-Aged Population, by Formal Education Level, 2012-2025

Millions of Inhabitants

	2012	2014	2016	2020	2025
Basic Education (5-15 Years)	*13.04*	*13.75*	*14.50*	*16.13*	*18.41*
Preprimary (5 Years)	1.37	1.45	1.53	1.70	1.94
Primary (6-11 Years)	7.33	7.73	8.15	9.06	10.35
O-Level (12-15 Years)	4.34	4.58	4.83	5.37	6.13
A-Level (16-17 Years)	1.75	1.85	1.95	2.17	2.47
Higher (18-20 Years) *	2.87	3.02	3.19	3.55	4.05
Total School-Aged Population	17.66	18.63	19.64	21.84	24.94

Source: PHC, 2012 for single-age demographic data and authors' projections.

Note: As this table presents a projection, it makes sense to use the single ages that apply to the new CBE structure of the education system. * To estimate the higher education-aged population, an average duration of 3 years is used.

The population growth rate is due to a combination of high fertility and declining mortality levels. The average fertility rate remains high, at 5.4 live births per woman, whereas infant mortality has declined substantially, from a rate of 115 deaths per 1,000 live births in 1988 to 45 in 2012. The maternal mortality rate has also decreased, from 578 deaths per 100,000 live births in 2004/05, to now stand at 432 deaths, while life expectancy at birth has improved markedly, from 50 years in 1988 to 61 years today (PHC, 2012a). The gender balance of the population is 51.3 percent female and 48.7 percent male.

Although urbanization continues apace, the population is still predominantly rural: 70.9 percent live in rural areas, against just 29.1 percent in urban areas. Furthermore, territorial distribution is extremely uneven, population density varying from 12 inhabitants per km² in the Katavi Region to more than 3,000 inhabitants per km² in the Dar es Salaam area. The most sparsely populated central and western areas of the country represent a particular challenge to the even development of the education system, as the distance to schools is too great, especially for young children.

Socioeconomic Factors

Despite recent improvements, poverty, especially among the rural population, HIV&AIDS and orphanhood levels continue to constitute significant barriers to education access for specific population groups.

Poverty levels have steadily improved in recent years, but remain significant. The share of the population living below the *basic needs* poverty line was estimated at 28.2 percent in 2011/12 (down from 39 percent in 1992 and 33 percent in 2007). Extreme poverty, defined by living below the *food* poverty line, affects 9.7 percent. In part reflecting this, Tanzania's Human Development Index has improved over the past five years, from 0.500 in 2010 to 0.521 in 2014. Nevertheless, this

still only translates into a ranking of 151 out of 188 countries, and is categorized as a low human development level.[1]

Poverty rates are however higher in rural areas, of 33.3 percent and 11.3 percent (living below the basic needs and food poverty lines, respectively), where 84.1 percent of the poor live. Indeed, the World Bank's 2012 Tanzania Economic Update stresses that strong economic growth has "continued to elude rural households ... who continue to survive in appalling conditions. Facilitating the inclusion of rural households into the country's growth process should be at the core of the policy debate in Tanzania" (World Bank, 2012).

Whereas poverty is the factor deemed to have the greatest impact on demand for education, because of the direct, indirect and opportunity costs of schooling, HIV and AIDS impact both supply and demand. Orphans and vulnerable children, with families affected by the disease, are particularly prone to be out of school, and education staff attrition rates rise. In Tanzania mainland, according to the HIV and AIDS population surveys (THIS and THMIS), HIV prevalence is declining. The rate in the general population for adults aged 15 to 49 years has dropped from 7.0 percent in 2003/04 to 5.7 percent in 2007/08 and 5.1 percent in 2011/12. Prevalence is higher among women (6.2 percent) than men (3.8 percent), higher in urban areas, and varies by region, from 14.8 percent in Njombe region to 1.5 percent in Manyara region (TACAIDS, 2013).

A number of further socioeconomic factors that have a direct impact on the education sector and system are worthy of a brief reminder here:

- The low level of birth registration has a direct impact on being able to determine precisely if children are schooled at the appropriate age, as well as to identify the characteristics of those who are not enrolled. On the mainland, only 13.3 percent have a birth certificate, and a further 5.5 percent have a birth notification.
- The level of orphanood, which has remained fairly stable over the past five years, is significant, with over 1.6 million children aged 0 to 17 years having lost one or both their parents.
- Inward migration, resulting from political and armed conflict in neighboring countries such as the Democratic Republic of Congo and Burundi, place further strain on the education system, particularly in border regions and the main cities. An estimated 1.5 percent of the total population, or 656,223 inhabitants, are not Tanzanian citizens (PHC, 2012).
- There are over 123 ethnic groups and tribal languages spoken in Tanzania. Kiswahili is the official national language, and that of instruction for preprimary and primary grades, whereas English is the teaching language used in lower and upper secondary and higher education. This implies that most children are not taught in their mother tongue.

[1] http://hdr.undp.org/en/composite/trends, accessed 24 February 2016.

Macroeconomic and Fiscal Contexts

An impressive level of sustained economic growth and sensible and effective fiscal policies have translated into an increasingly controlled fiscal deficit and offer the prospect of raising expenditure in public services, as well as potentially reducing the dependency on foreign aid.

Over the past five years, the Tanzanian economy has sustained the impressive level of economic growth witnessed since the turn of the millennium. Total GDP has increased from 43,836 billion T Sh in 2010 to an estimated 57,060 billion T Sh in 2014, in constant 2010 prices (See Table 1.3). This is equivalent to average annual growth of 6.81 percent. Despite persistently high inflation, it is forecast that growth will be sustained at this level over the next five years, as long as the country is not impacted by external shocks, including commodity and food price fluctuations (World Bank, 2012).

Table 1.3: Gross Domestic Product, 2010-12 and Estimates/Projections

Billion T Sh, Million T Sh and Percent

	2010	2011	2012	2013*	2014*	2015*	2020*
Total GDP (Billion T Sh)							
Current Prices	43,836	52,763	61,434	70,953	79,442	89,351	156,251
Constant 2010 Prices	43,836	47,301	49,733	53,345	57,060	60,980	85,282
Annual Growth	6.36%	7.90%	5.14%	7.26%	6.97%	6.87%	6.92%
GDP per Capita (Million T Sh)							
Current Prices	1,023	1,202	1,367	1,548	1,700	1,874	2,968
Constant 2010 Prices	1,023	1,078	1,107	1,164	1,221	1,279	1,620
Annual Growth	3.76%	5.33%	2.69%	5.16%	4.87%	4.77%	4.83%

Source: NBS, in IMF World Economic Outlook database, updated September 2015, and authors' calculations.
Note: * Last actual data are for 2012; thereafter the data are estimates and projections.

This economic performance has further translated into a significant improvement in GDP per capita, despite demographic pressure. Over the 2010-14 period, GDP per capita has increased from 1.02 million T Sh to 1.22 million T Sh in constant 2010 prices, which is equivalent to average annual growth of 4.5 percent. Despite the progress this represents, at an equivalent to US$ 739, GDP per capita is still lower than the African low-income countries' average.

Tanzania has a weak domestic private sector with a few large firms concentrated in trading, manufacturing and agro-processing, and a considerable informal sector working predominantly in agriculture and manufacturing. A small number of lead local and international firms account for over half of exports, which are relatively well diversified; and small and medium-sized enterprises (SMEs) make a substantial contribution to manufactured products.

Despite this context, the government manages to mobilize an ever increasing level of resources from national income. Domestic revenue has virtually quadrupled over the past decade in nominal terms,

and has grown steadily from 14.1 percent of GDP in 2006/07 to 16.4 percent in 2010/11 and 17.6 percent in 2011/12. According to IMF estimates, government revenue is set to continue to grow in coming years, and is projected to reach 19.5 percent of GDP by fiscal year 2017/18.

This strong fiscal performance is attributed to effective tax collection and the government's efforts to restrain non-priority expenditure. Indeed, tax revenues are estimated to have doubled over the past five years, to exceed 11 billion T Sh in 2014/15 (See Table 1.4). Recurrent expenditure, on the other hand, has grown by 71 percent over the same period. Although development expenditure is estimated to have expanded two-fold, to address existing infrastructure gaps nationwide, approximately half is of foreign origin.

As a result, the fiscal deficit appears to be gradually brought under control, at a manageable level. Although in nominal terms it has been fluctuating around the 5 billion T Sh mark in recent years, national economic growth means that it has dropped from a high of 10.6 percent of GDP in 2010/11 to an estimated 8.3 percent of GDP in 2014/15, and could attain the level of just 7.0 percent of GDP by 2017/18.

Table 1.4: Government Revenue, Expenditure and Deficit, 2006/07-2011/12 and Estimates/Projections

Billion T Sh and Percent

	2006/07	**2010/11**	**2011/12**	**2012/13***	**2013/14***	**2014/15***	**2017/18***
DOMESTIC REVENUE	*2,739*	*5,739*	*7,221*	*8,443*	*10,197*	*12,200*	*17,739*
Tax Revenue	2,529	5,296	6,480	7,730	9,410	11,099	16,159
Non-Tax Revenue	210	285	545	492	519	723	1,037
Revenues from LGAs	N/A	158	196	221	268	378	542
% of GDP	14.1%	16.4%	17.6%	17.5%	18.4%	19.3%	19.5%
TOTAL EXPENDITURE	*4,475*	*9,439*	*10,765*	*13,543*	*14,926*	*17,463*	*24,124*
Recurrent Expenditure	3,137	6,690	6,990	9,444	10,267	11,951	16,889
Development Expenditure	1,337	2,749	3,775	4,099	4,659	5,511	7,234
Local Funds	503	985	1,872	1,914	2,600	2,887	3,919
Foreign Funds	834	1,764	1,902	2,185	2,059	2,624	3,316
% of GDP	—	27.0%	26.2%	28.0%	26.9%	27.6%	26.6%
DEFICIT	*-1,736*	*-3,700*	*-3,544*	*-5,100*	*-4,729*	*-5,263*	*-6,385*
% of GDP	—	-10.6%	-8.6%	-10.5%	-8.5%	-8.3%	-7.0%
FINANCING							
Grants	—	1,627	1,855	1,728	1,832	2,133	2,724
External Sources	1,689	1,077	1,735	2,579	3,247	2,870	3,066
Internal Sources	46	1,244	335	703	-351	260	594
% on External Sources	—	68.5%	91.5%	86.0%	107.4%	95.1%	90.7%

Source: Ministry of Finance, Bank of Tanzania and IMF projections, in IMF, 2014.
Note: * Last actual data are for 2011/12; data thereafter are estimates and projections.

Nevertheless, dependency on international aid has evolved little since 2010. On the basis of the amounts received in foreign contributions to development expenditure, project and programme grants and loans, external inflows of funds are equivalent to 41 percent of national income.

Policy Framework

The education sector benefits from a detailed policy framework, that amply underlines the importance of and the role for the sector within national development priorities, sets sector-wide vision and strategy, and defines and details development plans for most sub-sectors. However, this context also requires the strengthening of sector dialogue.

Tanzania has enjoyed political stability since it gained its independence in the 1960s, which has allowed for a degree of continuity and coherence in the organization of the state. The democracy is maturing, as evidenced by the current constitutional reform process and the smooth and peaceful recent elections. The country retains strong national unity with an engaged civil society and nascent private sector. Such stability contributes enormously to the government's ability to focus on national development issues.

The National Development Vision for 2025, launched in 1999, is currently the guiding framework for economic and social development. The three main objectives are: (i) achieving a quality and good life for all; (ii) good governance and the rule of law; and (iii) building a strong and resilient economy that can effectively withstand global competition. Education and training are at the heart of the Development Vision, which underlines that a well-educated and learning society is one of the five main national attributes to strive towards. It assigns the following specific goals to the education sector: (i) universal primary education; (ii) the eradication of illiteracy; and (iii) tertiary education and training that provides the critical mass of high quality human resources required to effectively respond to and master development challenges at all levels (URT, 1999).

The current main framework for the implementation of the Development Vision is the second five-year national strategy for growth and poverty reduction - 2011/12-2015/16, *Unleashing Tanzania's Latent Growth Potentials*.[2] In addition to this, in order to intensify and focus efforts aligned with the national ambition to transition from a low to a middle-income economy, the Big Results Now (BRN) initiative was launched in January 2013, focusing on six critical sectors. Education features prominently as a core ingredient, and so a Big Results Now in Education Initiative (BRNEd) was spawned, aiming to fast-track the improvement of the quality of basic education service delivery.

[2] Although the first five-year National Strategy for Growth and Reduction of Poverty, known as MKUKUTA I, covering the 2005-10 period failed to adequately prioritize development issues and define specific strategic interventions, it generated a strong agenda aiming at sustained broad-based growth whilst emphasizing equity and good governance. The MKUKUTA II strategy builds on the progress achieved and provides recommendations to overcome the challenges identified.

BRNEd was been designed with the specific objective of producing a tangible increase in learning outcomes at primary and lower-secondary levels in the short-run (BRN, 2013).

The key sector-wide policy documents that currently translate this vision into more concrete plans are:[3]

- The Education Sector Development Programme (ESDP), 2008–17: The ESDP outlines the overall strategy for the education sector. The framework is part of the systemic public sector reforms supporting the implementation of MKUKUTA. Inter alia, it aims to transform the education sector into an efficient, effective and outcome based system (URT, 2008).
- The Education and Training Policy (ETP), 2014: The ETP formalizes the transition to free and compulsory basic education of 11 years, including one year of mandatory preprimary education (for children aged 4-5 years), six years of primary (to be started at the age of six years) and four years of lower secondary, O-Level education (MoEVT, 2014c).

However, given the scope and complexity of the education sector, it being impossible to address all challenges simultaneously, the government resolved to develop a series of comprehensive and complementary sub-sector plans, to be rolled out under the ESDP umbrella in a progressive approach:

- The Primary Education Development Programmes, of which the existing one covering the 2012-16 period is the third (PEDP III), that eliminated tuition fees and expanded schools throughout the country, winning a Millennium Development Goal Award in 2010;
- The Secondary Education Development Programmes, of which the current one, for 2010-15, is the second (SEDP II), designed specifically to expand access to secondary for the large cohorts of children leaving primary schools;
- The Higher Education Development Programme, 2010-15 (HEDP);
- The Technical and Vocational Education and Training Development Programme, 2013/14-2017/18 (TVETDP);
- The Folk Education Development Programme II, 2016/17-2025/26; and
- The Adult and Non-Formal Education Development Plan, 2012/13-2016/17, to provide adult, non-formal and continuing education programmes to those who did not fully benefit from formal education (MoEVT, 2012).

In addition to these plans, a number of cross-cutting strategies have been developed to address specific issues or beneficiary requirements:

- The language policy, outlined in the ETP, 2014 aims to ensure that Kiswahili and English in particular are effectively and efficiently taught at all levels of education and training to enhance learner competence and improve learning abilities, although detailed strategies and implementation guidelines are yet to be issued.

[3] These build on earlier key sector policies and reforms, such as the Education and Training Policy (1995), the Technical Education and Training Policy (1996), the National Higher Education Policy (1999) and the Information, Communication and Technology for Basic Education Policy (2007), among others.

- The National Strategy on Inclusive Education, 2009-17 aims to enhance educational services for children with special needs, by adopting an inclusive approach to policy-making and service delivery planning, ensuring teaching and learning are accessible to all, in particular by developing specific staff capabilities, providing pedagogical support, promoting community participation and ownership of education, and facilitating the use of sign language and Braille.

Furthermore, reflecting the growing concern to improve system-wide quality, many of these policies provide guidelines to: (i) increase the participatory involvement of the private sector and communities; (ii) expand the resource base for education financing; (iii) improve management and administration; (iv) devolve powers, roles and functions from the central government to local government authorities (LGAs) at the regional and district levels; (v) improve monitoring, accreditation and quality control organs; (vi) reduce the gap between the formal and non-formal education systems; and (vii) develop an education culture that is focused on self-employment and job creation.

This very intricate policy framework requires substantial sector dialogue and coordination to ensure coherence among all sub-sectors and of the ESDP, overall. Although the ESDP is the overarching program, the coherence/linkages with sub-sector programs and institutional arrangements need to be strengthened to ensure dialogue is more effective.

International and Regional Reforms and Policies

National education policies and strategies have of course in part been shaped by Tanzania's international commitments. Inter alia, the country is a signatory to: (i) the 1997 Southern African Development Community (SADC) Protocol on Education and Training; (ii) the 2000 Dakar Framework for Action on Education for All; (iii) the 2007 Perth Declaration on Science and Technology Education; and more recently (iv) the global Education 2030 agenda, agreed at Incheon, in South Korea in May 2015.

Chapter 2: Enrollment

After a brief presentation of the structure of the education system in mainland Tanzania, highlighting the key changes that have occurred over the past five years, this chapter analyses the expansion of schooling and the structure of student flows in detail, to assess Tanzania's progress in access to different education levels and subsectors since the 2011 ESA. It also reviews the role of the private sector in the provision of education, and examines the scale and nature of out-of-school, as well as the main characteristics of the children concerned.

The Structure of the Tanzanian Education System

This section provides a brief overview of the structure of the education system today, highlighting the changes that have occurred over the past five years.[4] Tanzania's education system is broadly organized into four streams, although there is naturally some overlap:

- General formal education, that comprises preprimary through to university higher education;
- Teacher education, that primarily provides pre-service and in-service training for preprimary, primary and secondary teachers in general formal education;
- Technical and vocational education and training (TVET), that includes several formal and nonformal alternatives, available to primary school leavers and above; and
- Adult and nonformal education, which in addition to short vocational courses, provides youth and adults with a number of options for alternative learning, to mainstream back into formal education, and literacy programmes.

General Formal Education

The general education component of formal education in Tanzania is currently being restructured to offer 11 years of compulsory basic education, as set out by the ETP, 2014. The current organization reflects a 2–7–4–2–3+ structure,[5] where only primary is free and compulsory. Under the new system, that will be fully effective by 2020, for the cohort of children having started primary in 2013, a single year of preprimary school will be compulsory, the primary cycle will be reduced to six years, and the lower secondary cycle will also become compulsory. The modified organization will therefore reflect a 1–6–4–2–3+ structure.

[4] A flow-chart presentation of the structure of the education system as it stood in 2011 is provided in Annex X.

[5] Two years of preprimary, seven years of primary (Standards I to VII, for children aged 7 to 13 years), four years of lower secondary (O-Level Forms 1 to 4, for children aged 14 to 17 years), two years of upper secondary (A-Level Forms 5 and 6, for youth aged 18 to 19 years) and three or more years of higher education.

Currently, pupil learning is assessed mid-way through primary with the Standard IV examination, and their progress through the formal education system is determined by their performance at: (i) the Primary School Leaving Examination (PSLE), at the end of Standard VII, for access to lower secondary; (ii) the Certificate of Secondary Education Examination (CSEE), taken at the end of Form 4, for access to upper secondary; and (iii) the Advanced Certificate of Secondary Education Examination (ACSEE), at the end of Form 6, for access to higher and tertiary education.

Teacher Education

Teacher education and training has undergone a series of transformations in government efforts to retain teachers in the system, improve qualifications and the quality of the teaching-learning process (Ssereo, 2015a). In principle, a pre-service teaching certificate is required to teach preprimary and primary and a teaching diploma to teach O-Level. The duration of training for these courses was harmonized in 2015, and increased to three years in a teacher training college, on full-time basis (up from one year for the certificate and two years for the diploma). All trainees must at least be CSEE graduates. At A-Level, teachers are required to hold a university degree in the relevant subject.

In-service training is provided through several mechanisms: (i) short-term training seminars and workshops (on an ad hoc, staff development type basis) are provided or supported by various partners, including development partners and NGOs; and (ii) the Open University of Tanzania has been involved in an upgrading program accredited by the Tanzania Council of Universities (TCU) for certificate-holding teachers wishing to improve their knowledge and pedagogical skills to diploma level.

Technical and Vocational Education and Training (TVET)

TVET encompasses Technical Education and Training (TET) and Vocational Education and Training (VET) that are considered part of formal education, as well as folk education and the prevocational stream of integrated postprimary education (IPPE), in the nonformal sector:

- TET trains O-Level graduates and A-Level leavers in areas of higher technical specialization, for occupations classed above the skilled crafts (vocational), but below scientific or engineering professions (TWF, 2014). Training is validated by a certificate or diploma, according to the duration of the course followed (equivalent to Levels 4 to 7 of the Tanzania qualifications framework - TQF).
- VET prepares learners to practice a skilled occupation, in industry, agriculture or trade, through competence-based training. It is provided by vocational training centers (VTCs), under the authority of the Vocational Education and Training Authority (VETA), and some folk development colleges (See below). Primary leavers and lower secondary drop-outs are key target beneficiaries. Successful completion is validated by a competency certificate in the relevant trade (equivalent to Levels 2 to 4 of the TQF).

- Folk Education (FE) is nonformal education offered through community-based folk development colleges (FDCs), focused on employment, participation in community social and economic affairs and self-reliance. The programme is open-access, for learners of any age or level of academic achievement, offering short (up to 90 days), long (up to two years) and outreach courses. The 55 FDCs are mostly in rural or semi-rural areas.
- IPPE offers a pre-vocational stream for learners to acquire skills for self-employment or employment, or to pursue VET. The programme overlaps with FDCs in the provision of non-certified vocational training, but there is currently ample room for both initiatives given the high potential demand from youth seeking to acquire marketable skills.

Adult and Nonformal Education

In addition to the vocational courses outlined above, the main nonformal education programmes aim to provide out-of-school children with alternative or second-chance avenues of learning, as well as the option of mainstreaming back into general or technical and vocational education streams. They are Complementary Basic Education and Training (COBET), Open and distance learning (ODL) and the academic stream of IPPE.

- COBET offers two courses: (i) a two-year Cohort I course, for children aged 11 to 13 years, to resume primary in Standard IV or V; and (ii) a three-year Cohort II course, preparing youth aged 14 to 17 years for the PSLE and potential mainstreaming into O-Level Form 1 or VET.
- ODL offers distance-based or evening-class nonformal secondary education, and is run by the Institute of Adult Education (IAE). Learners may prepare and sit the O-Level (CSEE) and A-Level (ACSEE) examinations, to then pursue formal education if successful. No prior level of academic achievement is required.
- IPPE's academic stream provides primary leavers having passed the PSLE but failed to obtain a place in lower secondary with an alternative option to prepare and sit the CSEE, and pursue A-Level secondary if successful. The project is a pilot implemented by LGAs. Again, there is some overlap, here with ODL, but demand from potential candidates is sufficient to justify both, and the method of delivery is class-based in this instance.

The main adult education programme is the Integrated Community-Based Adult Education (ICBAE), which caters for people aged 19 years and above, and consists in basic and advanced literacy training. In addition to offering instruction in Kiswahili, ICBAE also enrolls learners in extension activities, income generation, life skills and vocational skills. A further programme, *Yes I Can*, modeled on the Cuban-designed *Yo sí puedo* was introduced in 2008 as part of the ICBAE initiative, focusing on basic literacy skills through the use of TV/video.

Institutional Arrangements

Institutional responsibilities have traditionally been shared among three ministerial bodies, the Ministry of Education and Vocational Training (MoEVT), the Prime Minister's Office for Regional Administration and Local Government (PMO-RALG) and the Ministry of Community Development, Gender and Children (MCDGC). Certain roles have been reassigned in recent years, according to Government Notice No.5 (1) of 13 February 2008 and Government Notice No. 494 of 17 December, 2010. The key changes, and resulting distribution of responsibilities, are outlined briefly below.

PMO-RALG has been given a more pivotal role since it inherited of the administration of secondary education from MoEVT in 2008, making it wholly accountable for the local implementation of basic education. Following this, in 2011 its organizational structure was reviewed, creating the Basic Education Coordination Division to coordinate the delivery, management and administration of preprimary, primary and secondary education (URT, 2011). PMO-RALG created a new department of NFE in July 2015, to provide oversight of LGA implementation of activities.

The role of MoEVT was adjusted accordingly, to focus on policy and planning, monitoring and evaluation and quality assurance, not least through school inspectorates, for basic education. It has retained responsibility for TVET, higher education and teacher education. It is furthermore primarily responsible for adult and nonformal education, providing general oversight to the ICBAE, *Yes I Can*, IPPE and COBET programs, in addition to their supporting institutions.

MCDGC continues to be in charge of folk education, delivered through folk development colleges, and community development training institutes, all of which are managed by the Department of Community Development.

Trends in Access and Participation

After the remarkable progress achieved during the 2005-10 period, recent enrollment trends are cause for concern. Although significant growth is apparent in TVET and higher education, general education numbers and coverage are waning (particularly for primary and O-Level, alarmingly), and adult and nonformal education coverage continues to decline.

A review of raw data (the enrollment of students by school level) is the first step to perform when analyzing a school system. Table 2.1 presents a general overview of enrollment trends over the 2005-13 period, by education subsector.

Table 2.1: Enrollment and Average Annual Growth in Enrollment, by Level, 2005-13

Number of Pupils/Students/Learners and Percent

	2005	2009	2010	2011	2012	2013	2014 #	Average Annual Growth Rate (%)	
								2005-09	2009-13
General Formal Education	***8,744,229***	***10,919,406***	***11,102,420***	***11,356,779***	***11,263,381***	***11,266,610***	***11,431,107***	***5.7%***	***0.8%***
Preprimary Education	638,591	896,146	925,465	1,069,208	1,039,729	1,026,466	1,046,369	8.8%	3.5%
Primary Education	7,541,208	8,441,553	8,419,305	8,363,386	8,247,172	8,231,913	8,222,667	2.9%	-0.6%
Lower Secondary (O-Level)	489,942	1,401,559	1,566,685	1,711,109	1,728,534	1,728,534	1,870,280	30.1%	5.4%
Upper Secondary (A-Level)	34,383	64,843	72,014	73,438	81,462	75,522	77,069	17.2%	3.9%
Higher Education *	40,105	115,305	118,951	139,638	166,484	204,175	214,722	30.2%	15.4%
Teacher Education	**28,149**	**35,371**	**36,648**	**37,698**	**43,258**	**35,645 *****	**34,826**	**5.9%**	**0.2% *****
TVET	***93,664***	***122,529***	***—***	***—***	***—***	***277,157***	—	***6.9%***	***22.6%***
Vocational Education & Training	*57,078*	*72,938*	*102,217*	*121,348*	*145,511*	*164,077*	—	*6.3%*	*22.5%*
VTC	52,765	68,230	—	—	137,242	156,250	—	6.6%	23.0%
FDC	4,313	4,708	—	—	8,269	7,827	—	2.2%	13.6%
Technical Education	*36,586 **	*49,591*	—	—	—	*113,080*	*116,160*	*7.9% **	*22.9%*
Nonhigher Technical	20,094 **	28,760	—	—	—	91,041	96,817	9.4% **	33.4%
Higher Technical	16,492 **	20,831	—	—	—	22,039	19,343	6.0% **	1.4%
Adult & Nonformal Education	***—***	***1,363,493***	***—***	***—***	***—***	***908,808***	—		***-9.6%***
ICBAE	—	1,230,971	923,273	1,046,843	907,771	845,380	786,602	—	-9.0%
COBET	*357,490*	*82,989*	*72,369*	*81,960*	*76,867*	*54,029*	*51,328*	*-30.6%*	*-10.2%*
Cohort I	192,787	53,093	—	—	—	38,032	36,131	-27.6%	-8.0%
Cohort II	164,703	29,896	—	—	—	15,997	15,197	-34.7%	-14.5%
ODL	—	49,533	—	—	—	9,399	—	—	-34.0%

Source: UNESCO, 2011, BEST, 2013 and 2014, and authors' calculations.

Note: # Although data for 2014 are provided where available, at the time of writing the BEST 2014 database had not been fully consolidated or checked for consistency; 2013 data are therefore used to compute growth trends. * For higher education, 2009 data are for the academic year 2008/09, and so on. ** For technical education, 2005 data are from 2006 and so average annual growth for the initial period refers to 2006-09. *** Only 106 of 126 teacher colleges submitted data.

General Formal Education[6]

Enrollment

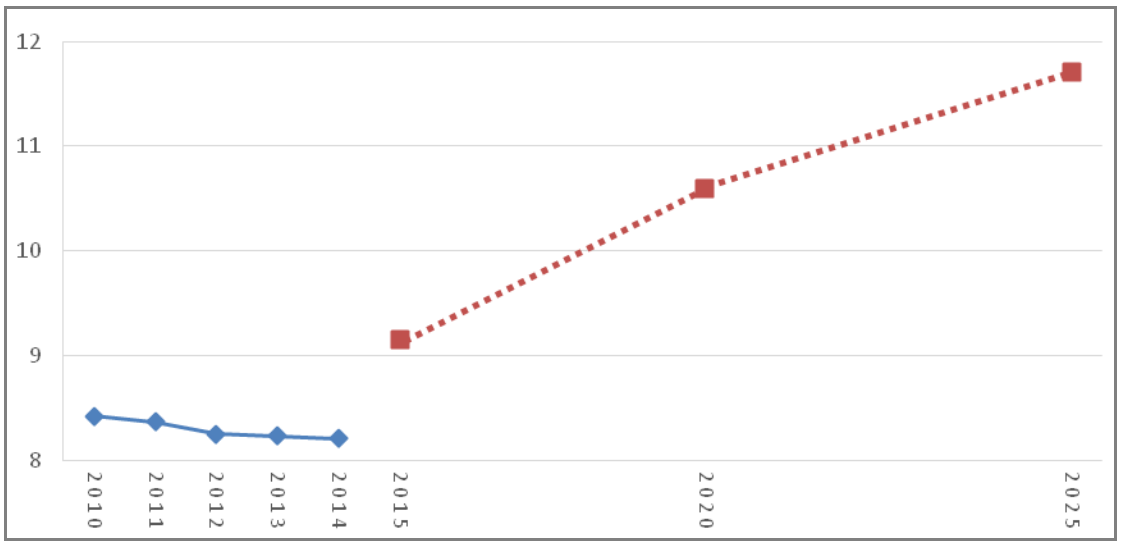
In 2013, general formal education represented over 90 percent of all enrollment, despite a significant slow-down in the overall rate of growth, from an average annual rate of 5.7 percent over the 2005-09 period, to just 0.8 percent over the 2009-13 period. This reduction in the rate of expansion is noted for all subsectors, from preprimary to higher education. Although for most education levels growth remains positive and significant, primary education, responsible for the greater share of general education numbers, has contracted.

Preprimary education was followed by over a million children in 2013, approximately 130,000 more than in 2009, representing a further 14.5 percent. However, this further growth was achieved up until 2011, as the trend noted over the 2005-09 period (about 9 percent average annual growth) was sustained. Indeed, enrollment numbers have been on a gradual decline since 2011. Nevertheless, considering that just one year of preprimary will be compulsory under the new basic education policy, for five year-olds, current enrollment suggests that there is capacity for 73 percent of this age group.

A reversal in the growth of the **primary** sector appears to have started earlier still. The number of pupils enrolled in 2013 was 8.23 million, having declined marginally but steadily since 2009 when it stood at over 8.44 million. This negative growth, equivalent to an average annual rate of -0.6 percent, contrasts starkly with that of the earlier 2005-09 period, when it averaged 2.9 percent per year.

Figure 2.1: Trends in Primary School Enrolment, 2010-14 and Projections, 2015-25

Millions of Pupils



Source: Agwanda and Amani, 2014.

[6] For available data on special needs education see Box 6.1.

The situation is all the more startling when placed in the context of the projected growth in primary enrollment derived both from demographic growth and the achievement of the universal primary education (UPE) goal and ambition. Figure 2.1 clearly illustrates the contrast between recent trends (in blue) and projected future requirements (in dotted red).

O-Level secondary is the subsector having witnessed the greatest expansion in real terms, having taken on a further 327,000 pupils since 2009, to reach 1.73 million. It is nevertheless the level where growth has dropped the most, to an average annual rate of 5.4 percent for 2009-13. This is testimony to the boom it underwent over 2005-09, taking on almost a million further pupils, at an average annual rate of growth of 30.1 percent.

At under 80,000 pupils today, **A-Level secondary** retains a comparatively modest size. Whereas growth over 2005-09 averaged 17.2 percent a year, and numbers virtually doubled, since 2009, as for O-Level secondary, growth has softened considerably, to reach an annual average of just 3.9 percent. In fact, after a more significant increase over 2009-12, enrollment peaked in 2012 at 81,500 pupils, before suffering a considerable loss in numbers in 2013. This tendency may have been reverted in 2014.

Higher education remains the general and formal education subsector with the greatest rate of expansion, despite this dynamic having effectively slowed by half in recent times (average annual growth was 15.4 percent for 2009-13, compared 30.2 percent for 2005-09). In real terms, this translates into universities and university colleges taking on more than 20,000 extra students year-on-year, with total enrollment now largely exceeding 200,000.

Coverage

This section is mainly based on the analysis of the gross enrollment ratio (GER), that compares total enrollment to the population of official school age for each cycle, and the net enrollment ratio (NER), that compares the number of enrolled children of official school age to their weight in the overall population. The first provides a broad measure of system capacity, regardless of early or late entry phenomena or repetition, whereas the second focuses specifically illustrates the proportion of children that are schooled at the required age.

Table 2.2: Gross and Net Enrollment Rates, by Level, and Change, 2005-13

Percent, Percentage Points and Number of Students per 100,000 Inhabitants

	2005		2009		2013		GER Change	
	GER	NER	GER	NER	GER	NER	2005-09	2009-13
Preprimary	29.3%	25.7%	36.6%	37.2%	36.3%	35.5%	+7.3pp	-0.3pp
Primary	113.1%	94.8%	112.4%	95.9%	96.1%	89.7%	-0.7pp	-16.3pp
O-Level	15.2%	10.3%	38.6%	29.1%	45.5%	33.7%	+23.4pp	+6.9pp
A-Level	2.3%	0.6%	3.9%	1.5%	4.2%	1.8%	+1.6pp	+0.3pp
Higher *	174 #	—	335 #	—	522 #	—	+161 #	+187 #

Source: UNESCO, 2011, BEST, 2013 and authors' calculations

Note: * For higher education, 2005 data are for the academic year 2004/05, and so on; enrollment includes university, university college and technical higher. # number of students per 100,000 inhabitants.

The overall slower, or indeed negative, growth in enrollment in preprimary and primary education over the 2009-13 period, when compared to the demographic base for each cycle, naturally translates into lower schooling coverage for these levels, particularly considering the sustained population growth.

Although the **preprimary** gross enrollment rate (GER) reached 44 percent in 2011, it has since dropped back to 37 percent, a level that is in fact lower than it was in 2009, falling well short of the 50 percent target. The difference with the net enrollment ratio is less than one percentage point, indicating that the vast majority of children following preprimary education are now of the required age, representing a significant improvement since 2005.

These rates suggest that capacity at this level is still poor, despite the fact that the share of government primary schools offering the preprimary curriculum as set out in the ETP of 1995, increased from 79 percent in 2009 to XX percent in 20XX. In 2013, just 59.3 percent of new entrants to primary Standard I had received some preprimary education (BEST, 2013). Together, these figures all underline the significant expansion that this subsector must still undergo before Tanzania achieves universal coverage of 11 years of basic education, including one year of preprimary. In addition, the focus on care and teaching at this level needs to be improved to maximize the positive impact on early childhood development and primary education preparedness, which will require an appropriate new curriculum.

The **primary** GER has dropped most significantly, by over 16 percentage points over the past 5 years, bringing it down to 96 percent. Admittedly, the full magnitude of this drop need not be cause for immediate concern, in as much as the level of coverage in 2009 was above 112 percent, reflecting a proportion of early or late entry to the cycle. However the NER has also dropped over the period, from 96 percent in 2009 to 90 percent in 2013. This unfortunately signifies a reversal in the country's drive towards universal primary education (UPE), for which the mainland was appraised to be on track to achieve by 2015 (UNESCO, 2011).

The causes of this drop in primary-level coverage will require further analysis, not only because of the importance of the UPE goal, but because the level of the GER in 2009 suggests that system capacity is currently sufficient to provide access to the full cycle to all primary school-aged children, following the introduction of the fee-free primary education policy in 2002 and the extensive classroom construction that followed. Furthermore, there has been a marked recent improvement in the share of pupils enrolled that comply with the official school age, from 85 percent in 2009 to over 93 percent in 2013.

At the **secondary** level, the slower growth in numbers enrolled noted above clearly translates into similarly slower growth in coverage, although this has continued to improve. This is particularly true for O-Level, where the GER has risen from 38.6 percent in 2009 to 45.5 percent in 2013, gaining 7 percentage points (against a gain of 23 points over the 2005-09 period). This growth can be interpreted as the consequence of earlier growth in the coverage of primary, and the SEDP policy to ensure each ward has a secondary school.

The policy has not yet had the expected impact on A-Level secondary coverage however, that remains modest at just 4.2 percent. Although the overall growth represents just 0.3 percentage points (against 1.6 points for the earlier period), this nevertheless translates into an expansion of total coverage equivalent to 6 percent.

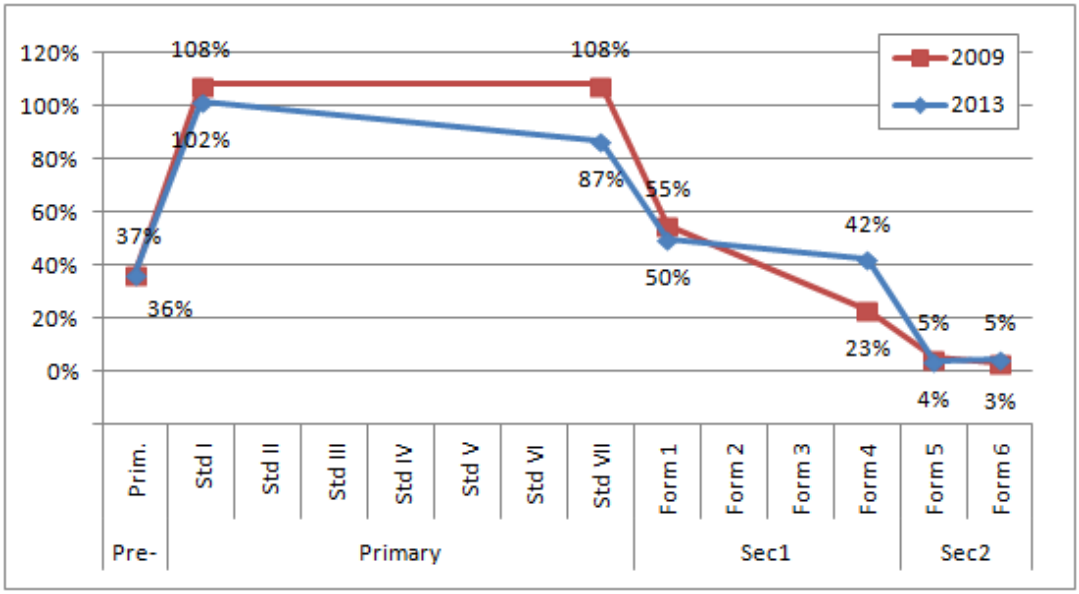
At the secondary level, NERs are considerably lower than GERs, reflecting the fact that repetition throughout primary, and potentially temporary suspension of schooling, compound the effects of late entry. At O-Level it is estimated that 74 percent of pupils are of the official age, a proportion that drops to just 43 percent at A-Level.

Schooling Profiles

The following figure presents a more graphical view of basic education enrollment, based on the access and completion rates for each cycle, for 2009 and 2013. As such, it provides a comparative overview of the contemporary level of coverage for each subsector, as well as an illustration of their evolution over the period.

Figure 2.2: Transversal Schooling Profiles, 2009 and 2013

Percent



Source: UNESCO, 2011, BEST, 2013 and authors' calculations.
Note: For pre-primary, the GER is used; all other cycles show the gross intake rate and completion rate.

The key points that the figure underlines are:

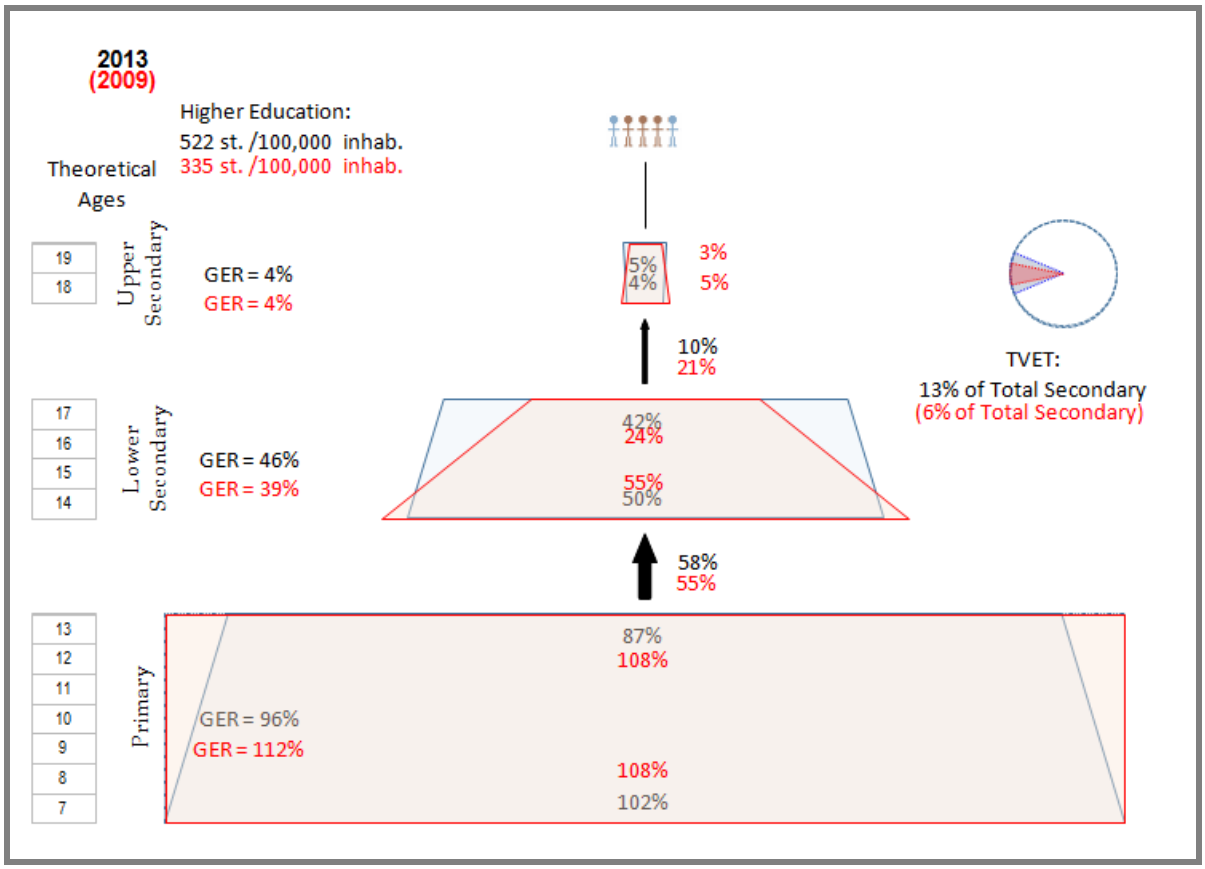
- Access to preprimary education (illustrated here by the GER) stands at approximately the same level in 2013 as it did in 2009.
- The drop in the coverage of primary noted earlier is due in part to a slightly lower intake rate (of 102 percent in 2013, against 108 percent in 2009), but is significantly more related to retention and drop-out issues. Indeed, the primary completion rate has dropped significantly, and to a far greater degree, from 108 percent in 2009 to 87 percent in 2013.

- For those pupils that do complete primary, the transition to O-Level secondary has in fact improved, as is materialized in the figure by the flatter slope of the 2013 curve, compared to that of 2013. The transition rate is estimated at 58 percent in 2013, up from 51 percent in 2009.
- Although access to O-Level has in fact dropped slightly, from 55 percent to 50 percent over the period, retention has improved to such an extent that the completion rate has substantially improved, to 42 percent.
- This improved O-Level coverage has not however been mirrored at A-Level, where both access and completion rates have remained close to 4 percent over the period. This in turn has impacted the transition rate from O-Level to A-Level, that has dropped from about 22 percent to 9 percent.

This general picture is further illustrated by the education pyramids below, again for 2009 and 2013, where the sizes of the superposed trapezoidal shapes in blue and red describe schooling coverage at each successive education level for those respective years.

Figure 2.3: Education Pyramids, 2009 and 2013

Percent and Students per 100,000 Inhabitants



Source: UNESCO, 2011, BEST, 2013 and authors' calculations. Elaborated by the Pôle de Dakar/IIEP UNESCO.
Note: For pre-primary, the GER is used; all other cycles show the gross intake rate and completion rate. For higher education, data are for academic years 2008/09 and 2012/13; enrollment includes university, university college and technical higher.

Higher Education

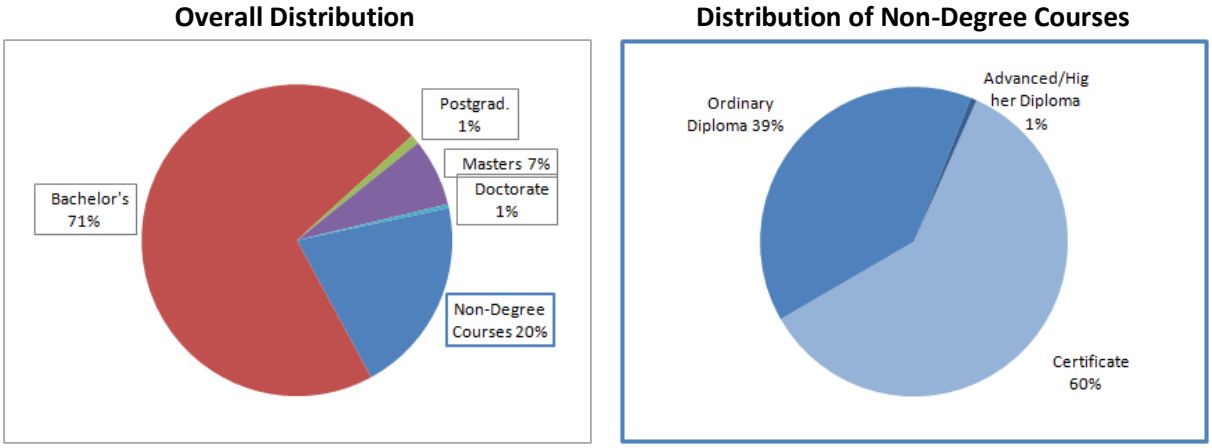
Despite the lower annual growth rate noted for the 2009-13 period (See Table 2.1 above), the coverage of university and university college higher education, compared to the total population, has in fact increased by a greater degree than over the previous period (See Table 2.2 above). Whereas in 2009 enrollment stood at 335 students per 100,000 inhabitants (an increase of 161 students per 100,000 inhabitants over 2005), by 2013 it was 522 students per 100,000 inhabitants (an increase of 187 students per 100,000 inhabitants over 2009).

The distribution of students by type and level of course followed is presented in Figure2.4 below. This shows that close to 80 percent of students follow degree courses, among which a vast majority at Bachelor's level, that represents 71 percent of all university education for academic year 2012/13. Of the 20 percent that follow non-degree courses, 60 percent study for a certificate, and a further 39 percent for the ordinary diploma. Masters courses are therefore the main postgraduate option, accounting for over 80 percent of all postgraduate university courses, although they only represent 7 percent of university higher education as a whole.

The main shift in this distribution since 2009 shows a gradual drop in the average level of qualifications sought, as degree courses have lost a 10 percent share of total enrollment to non-degree courses. More precisely, the share of Bachelor degree students has dropped by 10 percent, while those of certificate and ordinary diploma students have each gained 5 percent.

Figure 2.4: Distribution of University Enrollment, by Type of Course, 2012/13

Percent



Source: BEST, 2013 and authors' calculations.

Teacher Education

Enrollment growth in teacher education was relatively strong over the 2005-09 period, averaging 5.9 percent a year, and reaching a total of 35.4 thousand teacher trainees (See earlier Table 2.1). This trend was sustained until 2012, when numbers peaked at 43.3 thousand. This growth points to the continued success of the public-private partnership in teacher training. Indeed, while the number of government colleges has been stable, at 34, since 2000, the number of registered nongovernmental

colleges has continued to increase progressively, from 7 in 2000, to 43 in 2009, to reach 72 in 2013. However, although it is not possible to precisely determine the level of enrollment in 2013, it would appear that numbers have dropped significantly.[7]

On the basis of available data, the distribution of teacher training college (TTC) enrollment provided in Table 2.3 below highlights the following characteristics:

- A vast majority of teacher training is provided pre-service, close to 97 percent.
- Two thirds of trainees prepare the certificate, to teach primary classes, the remaining third preparing the diploma, to teach secondary.
- In 2013, 59 percent of trainees were in their second year, suggesting that there was indeed a drop in the trainee intake that year, and in year-on-year enrollment.
- A significant majority of those training to become secondary teachers study the arts (74 percent of diploma trainees), meaning that the shortage of science subject teachers (just 25 percent of diploma trainees) has not yet been resolved.
- Women are under-represented, as only 4 out of 10 trainees are female overall, and particularly in science subjects, where fewer than 3 out of 10 trainees are female.

Table 2.3: Distribution of Teacher Education Enrollment, by Level, Type of Training, Type of College, Year of Study, Area of Study and Gender, 2013

Percent

	Certificate	Diploma	Total
Pre-Service	64.5%	32.3%	96.8%
In-Service	0.4%	2.8%	3.2%
Total	64.9%	35.1%	100.0%

	Govt.	Non-Govt.	Total
1st Year	27.6%	13.1%	40.8%
2nd Year	39.9%	19.3%	59.2%
Total	67.5%	32.5%	100.0%

	Male	Female	Total
Arts	15.4%	10.5%	25.9%
Commerce	0.2%	0.1%	0.3%
Domestic Science	0.0%	0.0%	0.0%
Grade A	35.7%	28.3%	63.9%
Science	6.3%	2.4%	8.8%
Special Certificate	0.0%	0.0%	0.1%
Special Education	0.7%	0.4%	1.1%
Total	58.3%	41.7%	100.0%

Technical and Vocational Education and Training

Technical and vocational education and training is the subsector that has witnessed greatest growth in real terms over the 2009-13 period (See earlier Table 2.1). For all streams combined, numbers have more than doubled, from 123 thousand to 277 thousand. This translates into extraordinary average annual growth, close to 23 percent, and a significant increase in the expansion dynamic compared to the previous period, when growth averaged 7 percent per year. The technical and vocational streams have expanded at similarly high rates, of 22.9 percent and 22.6 percent respectively.

[7] Just 106 of a total of 126 teacher training colleges have submitted 2013 data to date. Although enrollment figures are therefore underestimated, it is not possible to determine to what extent, as the colleges not having submitted data may also be less significant in terms of enrollment.

Vocational education and training (VET) accounts for 164 thousand learners, up from 72 thousand in 2009. This stream represented 64 percent of all nonhigher TVET in 2013, down slightly from 71 percent in 2009. The vast majority of learners follow vocational training center (VTC) courses. The number of VTCs dropped to 689 in 2013, down from 889 in 2008. Although they are present in all regions, supply is highly variable, with Dar es Salaam, Arusha, Kilimandjaro, Tanga and Mbeya accounting for over half.

Folk development colleges (FDC), that witnessed little growth over the 2005-09 period, have nevertheless almost doubled their intake over 2009-13, to about 8 thousand learners. However, this level of enrollment is disappointing, representing just a third of the target number of 23,600 for 2012. Including short and outreach courses, total participation was 42 thousand, against a target of 93 thousand (Robinson, 2015). There are now 55 Folk Development Colleges, two more than in 2009, mostly in rural or semi-rural areas, 25 of which offer accredited VET courses. The change from Competency-Based Education and Training (CBET) in one subject/skill, taught in Kiswahili, to Competency-Based Assessment (CBA), requiring learners to take 10 further subjects, in English, to obtain a certificate, although ambitious, has made it almost impossible for learners without secondary to achieve the necessary level, thus limiting access to the FDC courses.

Technical education effectively includes all postsecondary, non-university and tertiary education institutions. There are 323 registered technical education institutions in 2013 (up from 170 in 2007), 229 of which are owned by over 22 government ministries, departments and agencies (MDAs); the remaining 94 are owned by private, community and faith-based organizations. Quality control and assurance is undertaken by the National Council for Technical Education (NACTE).

In technical education, that now provides for 113 thousand learners, most of the growth over the 2009-13 period has occurred at the nonhigher level, that has grown at an intensified rate, from 29 thousand to 91 thousand, whereas higher technical education has expanded only marginally, and comparatively slower than during the 2005-09 period, to cater for 22 thousand learners in 2013.

The distribution of enrollment by field of study shows that *Business Administration* courses, provided in both vocational and technical streams, are the most popular, representing over 20 percent of all learners in 2013 (See Table 2.4). *Automotive* vocational courses come a close second. *Planning and Welfare* (10 percent), *ICT* (9 percent), *General Subjects* (8 percent) and *Hospitality and Tourism* (7 percent) are all subjects of interest to significant numbers (approximately 20 thousand learners or above). On the other hand, it is surprising that *Agriculture* does not attract more interest (just 5 percent of overall TVET numbers), considering that it is currently the prevailing economic sector; and that subjects like *Engineering and Other Sciences*, *Mechanical* and *Mining* are not more widespread, considering Tanzania's ambition of transitioning to an industrial middle-income country.

Table 2.4: TVET Distribution of Enrollment, by Stream and Field of Study, 2013

Number of Learners and Percent

	Vocational		Technical		All TVET
	Number	%	Number	%	%
Agriculture	4,783	2.9%	9,328	8.2%	5.1%
Automotive	53,024	32.3%	n/a	n/a	19.1%
Business Administration	10,557	6.4%	46,321	41.0%	20.5%
Clothing and Textile	7,154	4.4%	n/a	n/a	2.6%
Construction	8,281	5.0%	n/a	n/a	3.0%
Electrical	9,938	6.1%	n/a	n/a	3.6%
Engineering and Other Sciences	n/a	n/a	16,038	14.2%	5.8%
General Subjects	22,456	13.7%	—	—	8.1%
Health and Allied Sciences	n/a	n/a	13,638	12.1%	4.9%
Hospitality and Tourism	18,499	11.3%	n/a	n/a	6.7%
ICT	24,196	14.7%	n/a	n/a	8.7%
Laboratory Technology	124	0.1%	n/a	n/a	0.0%
Mechanical	2,562	1.6%	n/a	n/a	0.9%
Mining	2,297	1.4%	n/a	n/a	0.8%
Pedagogy/Androgogy/ToT	26	0.0%	n/a	n/a	0.0%
Planning and Welfare	n/a	n/a	27,755	24.5%	10.0%
Printing	180	0.1%	n/a	n/a	0.1%
Total	164,077	100.0%	113,080	100.0%	100.0%

Source: BEST, 2013 and 2014, and authors' calculations.

Coverage in TVET, considering that it represents an alternative avenue of learning to compulsory basic or further formal general education, is usually measured by two indicators: (i) the share nonhigher TVET represents of total secondary education (general and TVET combined); and (ii) the number of learners per 100,000 in habitants.

At the nonhigher level, both measures indicate that coverage has virtually doubled over the 2009-13 period (See Table 2.4). TVET's share of total secondary now represents 12.6 percent, almost double its share in 2009. This is a very significant increase considering the growth in general secondary education over the period. It also suggests that there is still significant room for further expansion, given the existing skills gap in Tanzania (See Chapter 7). Compared to the total population, nonhigher technical and vocational streams have in fact more than doubled, from 250 learners per 100,000 inhabitants in 2009 to 569 learners per 100,000 inhabitants in 2013.

Table 2.5: Nonhigher TVET Coverage and Change, 2009-13

Percent and Number of Learners per 100,000 Inhabitants

	2009	2013	Change 2009-13
% of Total Secondary	6.5%	12.6%	94.8%
Learners / 100,000 Inhabitants	250	569	127.8%

Source: UNESCO, 2011, BEST, 2013 and authors' calculations.

At the higher level, the number of learners has changed very little, from 51 learners per 100,000 inhabitants to 49 learners per 100,000 inhabitants. This also shows that technical education's

contribution to global higher education coverage is under 10 percent (university coverage being 552 students per 100,000 inhabitants in 2013 – See above section).

Despite the considerable growth in TVET, both in real terms and in terms of coverage, access is still deemed inadequate. The capacity of the TVET system to absorb students from the school system is low. Figures obtained from VETA indicate that only 5,000 youth were admitted to VETA centers for long courses in 2014/15, out of some 19,000 applicants. Furthermore, the ability of TVET institutions to admit trainees from disadvantaged groups (the poor, people with disabilities, etc.) is particularly weak. In addition, the relevance of the skills offered through training is inadequate (Dubois and Athumane, 2016).

Adult and Nonformal Education

The 2011 Education Sector Analysis (UNESCO, 2011), based primarily on 2009 data, noted that "adult and nonformal education programs are limited: literacy programmes cover just a quarter of the target population, and COBET programmes only cater for a fraction of out-of-school children." Over the past five years, the situation has not improved. Overall numbers enrolled have indeed dropped by a third since then, from 1.4 million to 0.9 million (not including FDC courses - See Table 2.1 above).

Much of this drop can be attributed to Integrated Community-Based Adult Education (ICBAE), where numbers have dwindled from 1.2 million in 2009 to around 0.8 million in 2013. This is of particular concern considering that the number of illiterate men and women aged 15 years and above has been estimated to have reached about 8 million in 2012, and be still growing (GMR, 2015). Even on the basis of official adult literacy rates and population estimates for 2012, it would appear that the ICBAE programme has at best reached less than 20 percent of its potential beneficiaries (Robinson, 2015).

Compulsory Basic Education and Training (COBET) is also failing to cater for its increasing number of target beneficiaries, numbers having dropped to 54 thousand in 2013, from a high 357 thousand in 2005. Much of this drop is not recent however, as numbers had already reached 83 thousand in 2009. Although this drop is not as steep as projected in the previous ESDP, which placed target enrollment at 10,000 learners in 2012, this aim was also based on much higher enrollment in the interim period, to mainstream most out-of-school children back into formal education in the shortest possible timeframe, in line with the purported temporary nature of the programme. As the following section on out-of-school children will underline, this has not occurred.

Trends in Open Distance Learning (ODL) are perhaps the most surprising however, considering the comparative ease of access (no admissions requirements, distance-based) to its courses: enrollment has dropped by over 80 percent over the 2009-13 period, from about 50 thousand to about 9 thousand learners.

Other nonformal programmes such as the Integrated Post-Primary Education (IPPE) and *Yes I Can*, are still marginal in terms of enrollment. IPPE is currently provided in 12 districts, for 2,441 learners

in December 2014. Further expansion of this small programme hinges on developing capacities within the LGAs responsible for its implementation, and the concomitant increase in funding. *Yes I Can* served 3,450 adult learners in 2014, an insignificant fraction of the cumulative target of 3.3 million learners set by MoEVT in 2008, for 2013, calling into question the feasibility of the planned scale-up to reach all non-literate adults (Robinson, 2015).

Private Sector

As the government continues to provide the lion's share of preprimary and primary education, its investment in the expansion of secondary has reduced the share of private education provision at that level. The private sector is on the other hand responsible for an ever increasing share of higher education, TVET and teacher training.

A vast majority of general nonhigher education is provided by government schools, representing 94.5 percent of preprimary, 97.6 percent of primary, 83.9 percent of O-Level and 77.1 percent of A-Level secondary enrollment (See Table 2.6 below):

- Although the nongovernmental provision of preprimary more than doubled over 2005-09, since 2009 growth has slowed considerably, presumably due to the increasing number of primary schools offering preprimary education, in line with the subsector policy.
- The share of nongovernmental provision of primary education, although increasing steadily, remains negligible, at just 2.4 percent in 2013. It is nevertheless noteworthy that the drop in primary enrollment noted over 2009-13, of 2.5 percent overall, is due entirely to the lower numbers in government schools, which have dropped by 3.4 percent. Nongovernment enrollment has increased by 54 percent over the period.
- At O-Level, the downward trend in nongovernmental schooling noted over 2005-09 (from 31 percent to 11 percent), attributed to the government's expansion of the subsector according to the SEDP, has since reverted, with 16 percent of enrollment being attributed to nongovernmental schools in 2013.
- A-Level nongovernmental enrollment has dropped steadily over the 2005-13 period, from 47 percent to 23 percent.

Teacher training and higher education both demonstrate a general upward trend in nongovernmental provision. For the former, enrollment in private institutions reached 32 percent of the total in 2013, representing a three-fold increase on 2005. For the latter, nongovernmental enrollment reached 37 percent, a two-fold increase over the period. Furthermore, it is to be noted that the financing of governmental institutions in these subsectors increasingly relies on cost-sharing and a system of student grants (UNESCO, 2011).

In TVET, the role of the nongovernmental sector has particularly grown in recent times. For technical education, such enrollment has increased by almost 50 percent, to reach 24 percent in 2013.

Although data on learners is not available for vocational education, the share of private providers provides some approximation. This has more than doubled since 2009, to represent over half of all folk and vocational centers in 2013. Indeed, all folk development courses are government run, and those delivered through vocational centers are increasingly private, reflecting the MCDGC's policy of diversification to promote the subsector.

Table 2.6: Share of the Nongovernmental Sector in Education, 2009-13

Percentage of Enrollment or Institutions

	Unit	2005	2009	2013
Preprimary	(Pupils)	2.3%	5.0%	5.5%
Primary	(Pupils)	0.9%	1.5%	2.4%
O-Level	(Pupils)	31.2%	10.8%	16.1%
A-Level	(Pupils)	47.2%	32.3%	22.9%
Higher	(Students)	19.4% *	28.2%	37.1%
Teacher Education	(Trainees)	9.3% *	38.6%	32.5%
Technical Education	(Learners)	15.5% *	16.2% **	24.1%
Vocational Education #	(Institutions)	n/a	22.2% ***	50.7% ##

Source: UNESCO, 2011, BEST, 2013 and 2014, and authors' calculations.

Note: * Data are for 2006. ** Data are for 2008. *** Data are for 2009/10. # For vocational education, nongovernmental providers include civil society and faith-based organizations, and private companies and individuals (conversely, government providers include central government, local government and VETA). ## Data are for 2012/13.

Out-of-School Children

Despite the government's efforts to address the issue of out-of-school children and the initial success of the COBET programme, the number and share of OOSC have both increased startlingly. Almost 2 million children of primary school age were estimated to be out of school in 2012, or 23 percent, as well as a further 1.5 million children of O-Level age, or 41 percent.

In a context of the pursuit of universal basic education, it can be helpful to adopt a complementary approach to the analysis of enrollment, which effectively measures progress in schooling coverage, by estimating the further progress still to be achieved. Estimations of out-of-school children (OOSC) are fairly technical, and due to the wide-spread existence of late entry, particularly in Sub-Saharan Africa, which is further compounded by repetition, cannot be approximated simply by considering the extent to which the net enrollment rate falls short of 100 percent. For this reason, OOSC rates relate to the children of a given age range, corresponding to a particular cycle, rather than to the cycle itself. The out-of-school estimations presented in this section are based on the detailed analysis of household survey data, providing the enrollment status of children by age, and taking into

account the key dimensions of OOSC, that are those who have never attended, those who have dropped out and also those at risk of dropout.

In 2012, 62 percent of preprimary school-aged children, 23 percent of primary school-aged children and 41 percent of O-Level secondary school-aged children were out of school. Translating these OOSC rates into numbers, 1.7 million preprimary-aged, 1.9 million primary-aged and 1.5 million O-Level-aged children are yet to gain access to formal basic education, equivalent to a total of 5.1 million children. For 2015, the total number for Tanzania mainland is projected to have reached over 5.6 million children (See Table 2.7).

For children of primary school age, the evolution since 2006 is startling. Despite Tanzania's considerable efforts and progress achieved towards Education for All, the number of OOSC of primary age has more than doubled over 2006-12, as the rate has increased from 13.4 percent to 23.5 percent.

Table 2.7: Out-of-School Children in Basic Education, by Levels' Official Age-Groups, 2012

Number, Percent and Ratio

	Preprimary (5-6 Years)	**Primary (7-13 Years)**		**O-Level (14-17 Years)**
		2006	**2012**	
OOSC Numbers	1,694,600	925,300	1,933,780	1,498,740
OOSC Rate	*62.1%*	*13.4%*	*23.5%*	*41.5%*
Dropped out	0.7%	1.6%	3.2%	30.9%
Never attended	61.4%	11.8%	20.2%	10.5%
Q1 (Poorest)	63.0%	20.0%	28.2%	49.0%
Q5 (Wealthiest)	30.5%	5.7%	11.7%	33.7%
Q1/Q5 Ratio	2.1	3.5	2.4	1.4
OOSC Distribution				
Male	—	59.9%	53.2%	48.6%
Female	—	40.1%	46.8%	51.4%
Urban	—	8.6%	9.0%	22.4%
Rural	—	91.4%	91.0%	77.6%
2005 Projection	1,862,471	2,115,820		1,654,748

Source: UNESCO, 2011; MOEVT/UNICEF, 2016 estimations based on 2012 Census and 2011/12 HBS data; and authors' calculations.

A review of some of the key characteristics of OOSC presented in Table 2.7 above reveals the following findings:

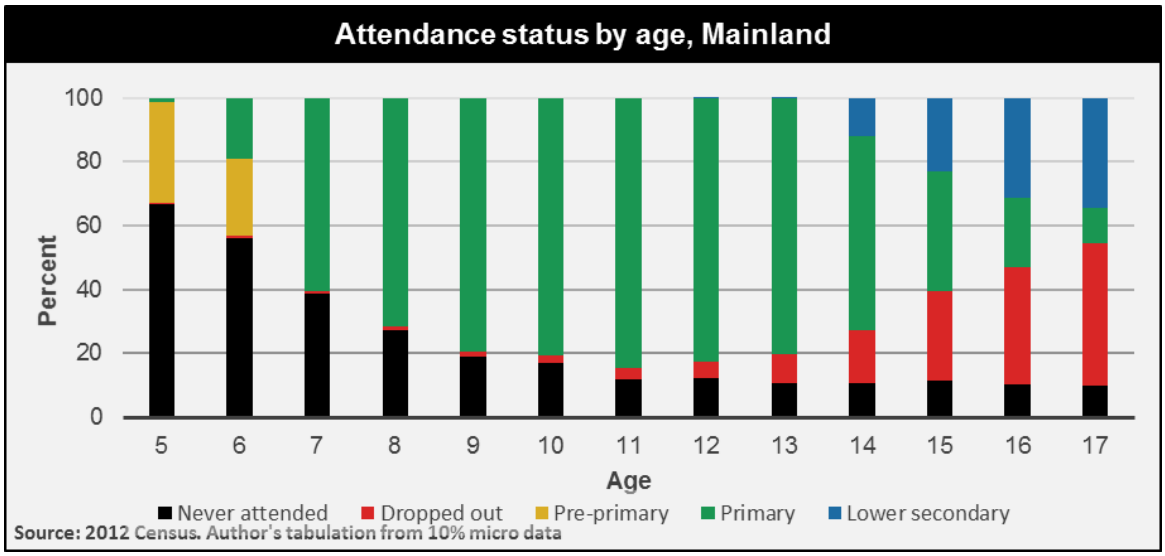
- At the preprimary level, the share of drop-out-related OOSC is insignificant, and at the primary level also, a great majority of OOSC numbers are constituted by those who have never attended school. This share has in fact dropped over 2006-12, from 88 percent to 86 percent, as the proportion of drop-out related OOSC has increased concomitantly.

- These respective proportions gradually invert, naturally, for children of higher age groups, so that just 10 percent of children of O-Level secondary school-age have never attended school, but 31 percent have dropped out.
- A greater share of OOSC of primary school age are boys, although the gap has closed over 2006-12, from 60 percent to 53 percent. For children of O-Level school-age, the opposite applies, although to a lesser degree: 51 percent are girls.
- The urban/rural imbalance is highly discriminating, and particularly for children of primary school-age: just 9 percent of this group of OOSC live in urban areas; 91 percent live in rural contexts, a proportion that has not changed over time. For OOSC of O-Level age the disparity is slighter but nevertheless marked: 78 percent are rural (and just 22 percent urban).
- OOSC rates are comparatively higher for families with low income levels. For children of preprimary age, the OOSC rate drops from 63 percent for the lowest income quintile (Q1) to 30 percent for the highest quintile (Q5); the rate for Q1 children is double that of Q5 children.
- The income-related bias in the rate for primary school aged OOSC, although the highest of all age groups considered, has however become more modest. Whereas in 2006, the OOSC rate for Q1 was 3.5 times higher than that for Q5, come 2012 it was only 2.4 times higher. For O-Level aged children, the gap is relatively smaller, the OOSC rate for Q1 children being just 1.4 times that of children from the wealthiest families.

Furthermore, there are important variations in the OOSC rate between regions. The probability of being out of school ranges from 6.4 percent in Kilimanjaro to 44.3 percent in Tabora. Thus there is a concentration of out-of-school children in certain areas: half of all OOSC live in less than 10 of the country's 25 regions (MOEVT/UNICEF, 2016).

Figure 2.5: Attendance Status of Basic Education Aged Children, by Age, 2012

Percent



Source: MOEVT/UNICEF, 2016.

The distribution of children of basic education age according to their school attendance status provided in Figure 2.5 helps to underline the scope and effect of the late-entry phenomenon. It suggests that a considerable share of children only start primary school once aged 8 to 11 years, and that the impact of this is still apparent well into O-Level secondary. Indeed, more children aged 14 and 15 years attend primary than attend O-Level, and even significant proportions of children aged 16 and 17 years are still in primary school. The Tanzania Out-of-School Profile estimates that 36 percent of children in primary school are over-age, a share that reaches 47 percent in O-Level secondary (MOEVT/UNICEF, 2016).

Figure 2.5 also underlines the high share of children who have never attended school, and the fact that it is persistent across individual ages: 20 percent of primary and 10 percent of O-Level secondary aged children had never attended school in 2012. This suggests that without significant improvements in basic education coverage, 10 percent of youth will never have attended school, for the coming decade or longer. Drop-out however becomes a more significant cause of out-of-school for children aged 13 years and above, rising exponentially. For children aged 15 years, a third of those who were enrolled at some point, had dropped-out.

The apparent contradiction in implied coverage levels with BEST data, that provides a NER for primary in 2013 of 90 percent, can in fact be sensibly explained. In addition to the high dropout rate and late-entry, a qualitative field study determined that a significant proportion of children who registered for school, and are hence computed in enrollment rates, in fact ceased to attend after a short period of time (MOEVT/UNICEF, 2016).

In addition to the characteristics already outlined above (rurality and poverty, mainly), the main factors contributing to the probability of school non-attendance identified by the 2011 ESA were distance to school and the fact that the head of household is illiterate.[8] The 2016 OOSC Profile confirms the former as being a key problem, and further identifies a number of demand-side issues related to the "lack of aspiring, performing, and convenient schooling," such as the uninteresting or irrelevant nature of curriculum content, or failure at exams. These issues are discussed in greater detail in Box 6.2.

In as much as the COBET programme was specifically designed to mainstream OOSC back into formal education, a brief analysis of its success is also relevant here. Its low level of coverage of the out-of-school population of primary and O-Level secondary age is in itself significant: with under 80 thousand participants in 2012, compared to 3.4 million OOSC of eligible age, it is effectively only providing a second chance of education to 2.2 percent of its target beneficiary population. Furthermore, completion rates appear to be low: just 11 percent to 12 percent of all enrolled pupils sat their final exam in 2013, whereas approximately 33 percent should do so in any given year, considering the length of the courses offered. However, the mainstreaming rate is high: 100 percent of Cohort I pupils return to general primary; of Cohort II participants, 10.3 percent return to general secondary and 63.2 percent go on to follow vocational training (26.5 percent did not continue with either form of education or training).

[8] 2011 ESA, using data from the Household and Budget Survey of 2007.

Conclusion

Overall, the picture provided by the analysis of this chapter is twofold.

On the one hand, declining trends in basic education coverage suggest that Tanzania mainland has witnessed a stark reversal in its dynamic over the past five years, from being apparently on-track to achieve EFA (at the primary level at least) by 2015 at the beginning of the period, to facing the prospect of slipping gradually but relentlessly further from this goal, today. Despite this, school-life expectancy, which is the average number of years of general preprimary to A-Level education a Tanzanian child can expect to follow, has improved marginally, from 8.8 years in 2009 (UNESCO, 2011) to 9.2 years in 2013 (authors' calculations based on BEST, 2013). This is significant, as the figure constitutes an average for all children, enrolled or not.

On the other, the continued strong expansion of TVET and higher education are encouraging in the light of the national objective to transition to an industrial middle-income economy, and the increased demand for high-level skilled human resources this implies.

Naturally, both of these situations raise a number of issues with respect to the equity, relevance and quality of education at all levels, that will be studied in further chapters of this report.

Chapter 3: Internal Efficiency

This chapter reviews some key measures of the level of internal efficiency of the education system, that both help to explain the student flows highlighted in Chapter 2, and provide some perspective on where education policy could focus to improve them, to generate resource gains that could be reinvested in improving access or quality. The key sources of internal inefficiency reviewed here are repetition and dropout, which are then synthesized into internal efficiency coefficients.

Although repetition has been reduced to an almost insignificant level, rising dropout rates mean that just 60 percent of pupils who start primary can expect to complete it, and just 50 percent at O-Level. Compounded with low transition rates, and although internal efficiency at A-Level has improved to a relatively acceptable level, this means that only 1.5 percent of pupils enrolled in Standard I can currently expect to reach Form 6.

Repetition

The downward trend in primary level repetition noted for the period up to 2009 (UNESCO, 2011) has been consolidated over the 2009-13 period, as the share of repeaters for the cycle as a whole, estimated at 2.4 percent in 2009, had reached the almost insignificant average level of 0.7 percent in 2013. This is attributed in great part to the increasingly strict application of the policy of automatic promotion throughout the primary grades, and the abolition in 2009 of repetition following failure in the Standard IV examination, in particular.

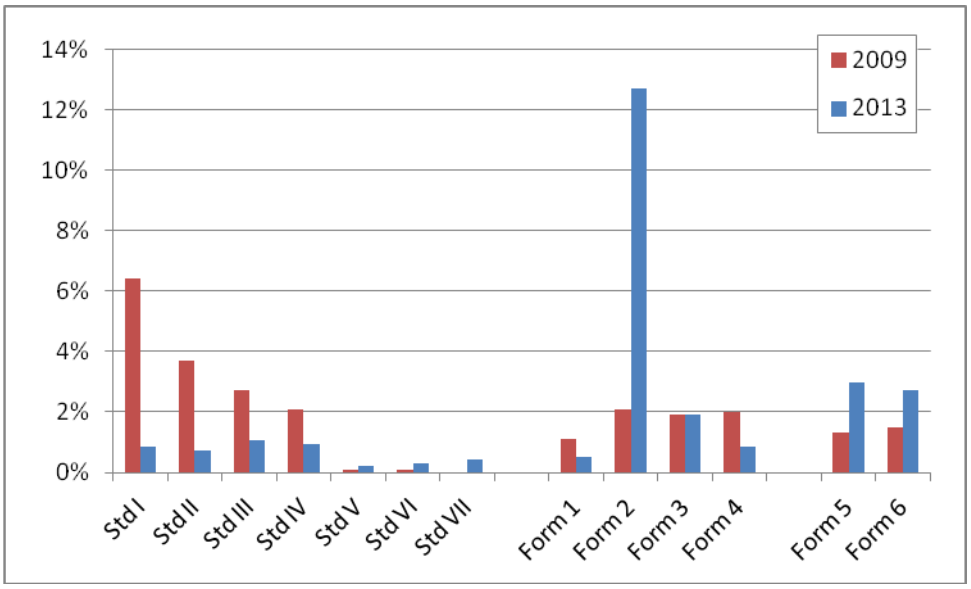
A closer look however highlights two different trends within the cycle over time (See Figure 3.1):

- The repetition levels in Standards I to IV have dropped significantly, from above 2 percent in 2009 (and over 6 percent in Standard I), to close to just 1 percent.
- Repetition in Standards V to VII however, that was insignificant in 2009, has risen, albeit marginally and to a level that is still very acceptable, of 0.3 percent on average.

This latter evolution is related to the school performance ranking system introduced under BRNEd, that encourages schools to ensure Standard VII pupils are fit to succeed at the PSLE examination, albeit at the cost of them repeating earlier grades.

Figure 3.1: Percentage of Repeaters, by Grade, 2009 and 2013

Percent



Source: UNESCO, 2011, BEST, 2013 and authors' calculations.

The difference between repetition levels in the first four grades of primary and the later three grades is probably explained by the fact that, although failure in the Standard IV examination is no longer cause for leaving school, pupils with the greatest learning difficulties have a greater tendency to drop out in the earlier grades of the cycle.

Overall, repetition in O-Level secondary appears to have followed a similar downward trend to that of primary. Leaving aside the high level noted for Form 2 in 2013 (of 12.7 percent), O-Level repetition has dropped from an average of 1.7 percent in 2009 to 0.9 percent in 2013. However in taking this outlier into account, repetition for the cycle has in fact tripled over the period, to 4.9 percent.

This high level of repetition in Form 2 in 2013 is explained by concern about the Form 4 CSEE pass rate, which was particularly low that year. In the absence of an examination to assess pupil performance at the end of Form 3, schools were encouraged to take preventive steps at the end of Form 2, making pupils repeat (previously, even failure at the Form 2 examination lead to automatic promotion, accompanied with remedial classes. The percentage of repeaters dropped back in line with its average rate the following year, due to a change in the marking system, from Divisions to a grade point average system.

Even considering higher estimates of the share of repeaters, such as those published by the UNESCO Institute for Statistics,[9] repetition levels in primary and lower secondary education in Tanzania are low when considered in international context. Indeed, the percentage of repeaters in 2013 was 8.7

[9] The share of repeaters for the United Republic of Tanzania is estimated at 3.5 percent for primary, and 4.9 percent for lower secondary (UIS Data Centre, accessed 10 March 2016).

percent for Sub-Saharan Africa and 9.9 percent for low income countries, for primary, and 11.9 percent and 7.9 percent respectively, for lower secondary.

At A-Level secondary the trend contrasts starkly with the earlier cycles, the percentage of repeaters having doubled over the 2009-13 period, from 1.4 percent to 2.9 percent. Considering that the rate is very similar for both grades, and that the phenomenon is therefore apparently not linked to success at the ASCEE examination, the causes for this increase may be related to the quality of teaching.

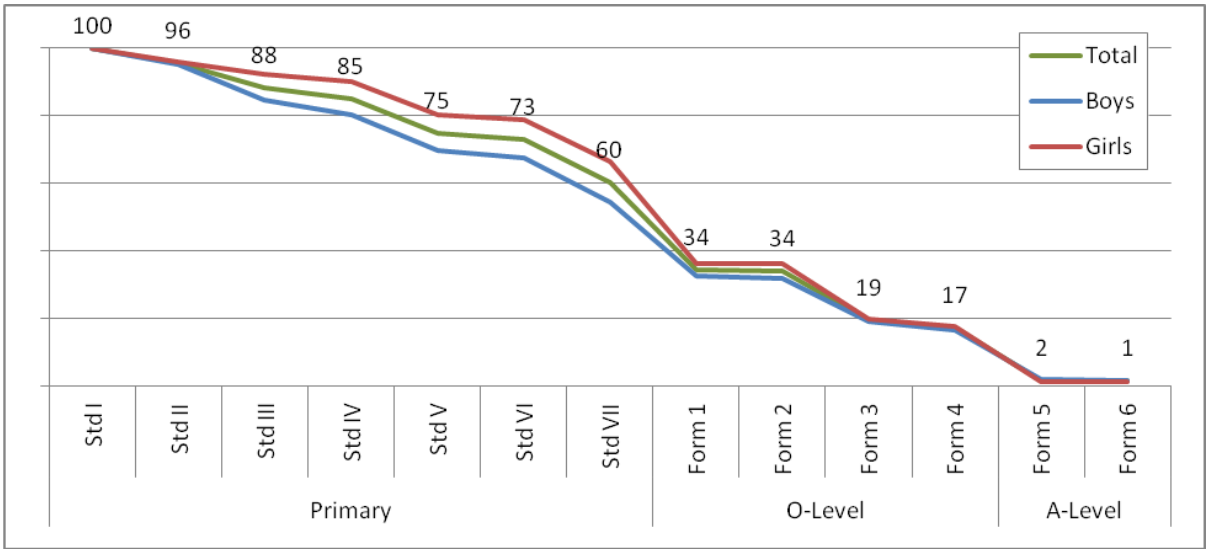
Overall, considering the questionable benefits of repetition for learning outcomes and schooling careers, and particularly placed in international context, levels of repetition in Tanzania appear to be very moderate and well controlled.

Retention and Dropout

Although the retention rates derived from the transversal schooling profile seem reasonable (See Chapter 2), estimated at 85 percent or above, the approach used in their computation, comparing the access rates to the first and last grade of each cycle, for the same year, is approximate. The analysis of enrollment data over two successive years provides a more accurate portrayal, through the estimation of effective promotion and survival rates. On the basis of current effective promotion rates from one grade in 2012 to the next in 2013, Figure 3.2 provides a projection of the expected retention of a cohort of 100 pupils that start primary today, through to the end of A-Level secondary.

Figure 3.2: Pseudo-Longitudinal Retention Profile, by Gender, 2013

Number of Pupils (From a Cohort of 100)



Source: BEST, 2013 and authors' calculations.

Note: The numbers displayed in the figure are for total pupils.

Just 60 children who enroll in Standard I are expected to reach the end the cycle in seven years time, should schooling conditions remain constant. Of those, just 34 would progress to O-Level, and half would complete basic education, 17 pupils. On average, less than 2 pupils of the cohort would reach A-Level Form 6, or 1.5 percent. Figure 3.2 shows that the projected retention of girls is significantly higher than that of boys between primary Standard II and secondary Form 2. It remains higher, although only by a fraction, until Form 4. Come A-Level however, girls' retention would fall below that of boys, and just 1.2 percent of those girls that started primary would finish secondary, against 1.7 percent of boys.

This global picture of fairly weak retention throughout general education points to a consequential dropout issue. Indeed, the average annual dropout rate throughout primary grades Standard I to Standard VI is 7.3 percent and that for O-Level secondary grades Form 1 to Form 3 is 12.6 percent.[10]

Although the estimations of the rates themselves differ from source to source, all historical estimates concord in that basic education dropout rates have risen considerably over the past five years. The average yearly primary dropout rate has increased by about a third since 2009, whereas the average rate for O-Level has virtually tripled. It is this significant rise in dropout rates that explains the difference in the retention rates respectively derived from the transversal schooling profile (85 percent for primary) and the pseudo-longitudinal retention profile (60 percent for primary).

Such averages understate the full scale of the issue, however, as Table 2.1 shows. Should retention not improve, total dropout throughout the primary cycle would border 40 percent, and total dropout throughout O-Level secondary would border 50 percent. A-Level secondary faces much less of a retention issue, which is generally attributed to the strict admissions criteria, meaning that the privileged few who are able to pursue schooling to this level are less likely to leave before completing the cycle.

The higher proportions of children who drop out of school in Standard IV (11.1 percent) and Standard VI (17.3 percent) contribute disproportionately to the globally low level of survival throughout the primary cycle, and as such merit special attention. As exposed above, the introduction of a school performance ranking system under the BRNEd programme is deemed to explain these particularly high levels. The pressure to achieve good pass rates at the PSLE means that schools encourage the weaker pupils, identified at the Standard IV examination, and in the course of Standard VI, not to pursue their education.

[10] In the absence of specific figures for the number of pupils that dropout each year, the method of calculation of dropout rates is not reliable for the last grade of each cycle, as it is based in part on enrollment in the first grade of the following cycle, and therefore compounds dropout with transition, which is affected by success/failure in end of cycle examinations.

Table 2.1: Survival and Dropout Rates, by Cycle and Grade, 2013

Percent

	Survival Rates		Dropout Rates	
	Cumulative	By Cycle	By Grade	Cumulative by Cycle
Primary				
Std I	100.0%	100.0%	3.6%	3.6%
Std II	95.6%	95.6%	6.8%	10.9%
Std III	88.4%	88.4%	2.7%	13.9%
Std IV	85.0%	85.0%	11.1%	24.3%
Std V	74.8%	74.8%	2.1%	26.7%
Std VI	73.1%	73.1%	17.3%	39.5%
Std VII	60.2%	60.2%	—	—
O-Level				
Form 1	34.3%	100.0%	0.8%	0.8%
Form 2	33.9%	98.7%	26.5%	27.3%
Form 3	19.4%	56.4%	10.5%	49.0%
Form 4	17.1%	49.8%	—	—
A-Level				
Form 5	1.6%	100.0%	5.6%	5.6%
Form 6	1.5%	91.5%	—	—

Source: BEST, 2013 and authors' calculations.

Although a pass at the Standard IV examination is no longer required to proceed to Standard V, failure at this examination may also constitute significant discouragement to the pursuit of education. In the case of Standard VI dropout, children who do not expect to pursue their education at O-Level, due to their self-perceived academic ability, opportunity costs related in part to being over-age, or because of the comparatively few places available, may in fact decide to leave school at the end of Standard VI, deeming unnecessary to spend a further year in school to prepare an exam that they do not need, or expect to pass.

Internal Efficiency Coefficients

Having reviewed the impact of repetition and dropout on average schooling careers and survival throughout general education, the computation of internal efficiency coefficients (IEC) enables a broad appraisal of the burden each represents for education financing. The coefficients, for each cycle, measure the share of resources devoted to the schooling of those children who complete the cycle without repeating, a situation that approximates perfect internal efficiency. If this applied to all children, the coefficient would have a value of 1.

The IECs presented in Table 2.1 indicate that the levels of internal efficiency for primary and O-Level secondary are low. The coefficients of 0.73 and 0.62 imply that 27 percent and 38 percent of resources are devoted to the schooling of children who dropout before the end of the cycle, or to repetition, for each cycle respectively. Furthermore, internal efficiency has clearly deteriorated in recent times. In fact, the level of *in*efficiency has more than doubled at the primary level (it

represented just 12 percent in 2007, with an IEC of 0.88), and doubled at O-Level (where it represented 19 percent in 2009, with an IEC of 0.81).

Table 2.1: Partial and Global Internal Efficiency Coefficients, and Average Number of Pupil-Years Invested by Graduate, by Gender and Cycle, 2013

Percent and Number of Years

	2009	2013		
		Total	Boys	Girls
Primary				
IEC	0.88 *	0.73	0.69	0.77
IEC-Dropout	0.92 *	0.73	0.69	0.77
IEC-Repetition	0.96 *	0.99	0.99	0.99
Average Years/Graduate	—	9.6	10.2	9.1
O-Level				
IEC	0.81	0.62	0.63	0.60
IEC-Dropout	0.82	0.65	0.67	0.64
IEC-Repetition	0.98	0.95	0.95	0.95
Average Years/Graduate	—	6.5	6.3	6.6
A-Level				
IEC	0.72	0.93	0.91	0.98
IEC-Dropout	0.73	0.96	0.93	1.00
IEC-Repetition	0.99	0.97	0.97	0.97
Average Years/Graduate	—	2.2	2.2	2.0

Source: UNESCO, 2011, BEST, 2013 and 2014, and authors' calculations.
Note: * For primary, the early IECs are for 2007.

Overall internal efficiency at A-Level is considerably better. With a coefficient of 0.93, just 7 percent of resources are spent on dropout and repetition. For this cycle, unlike the earlier ones, the evolution has been extremely favorable, as the level of inefficiency is just a quarter of its 2009 level, estimated at 28 percent (IEC of 0.72).

The partial coefficients, for dropout and repetition, describe the theoretical level of efficiency that would exist without repetition, and without dropout, respectively. Table 2.1 reflects the earlier findings of this chapter. Overall, most of the inefficiency that currently prevails in the Tanzanian education system is related to dropout. The IEC-Repetition values, simulating the level of efficiency without dropout, are very close to the ideal value of 1, for all cycles. This implies that repetition-related inefficiency is minimal. Conversely, the IEC-Dropout values are very close to the overall IEC values.

In terms of gender, it is worthy of note that what repetition-related inefficiency exists, is equally attributable to girls and boys. Dropout-related inefficiency on the other hand, varies by gender and by cycle. At primary the retention of girls is more efficient (IEC-Dropout of 0.77, against 0.69 for boys), as is the case at A-Level (IEC-Dropout of 1.00, against 0.93 for boys). At O-Level, the inverse is true, with girls contributing more to dropout-related inefficiency (IEC-Dropout of 0.64) than boys (IEC-Dropout of 0.67).

Conclusion

As a final measure of internal efficiency, the repetition, dropout and survival data presented in this chapter can be synthesized into the average investment required to produce a cycle-graduate, measured in the number of pupil-years. For primary, 9.7 pupil-years are invested per pupil attaining Standard VII on average, which is 38 percent more than the 7 years theoretically required. At O-Level, 6.5 pupil-years are currently invested per pupil reaching Form 4, which is 57 percent more than the 4 year theoretical duration of the cycle.

These figures underline the scope of savings that the Tanzanian education system could potentially achieve by improving internal efficiency, and reducing dropout in particular, resources that could effectively be devoted to providing access to education to a greater number of children, or invested in improving the quality of teaching.

Chapter 4: Education Cost and Financing

This chapter aims to illustrate recent trends in education financing in mainland Tanzania, in relation to the total government budget and GDP, but also in the light of sector financing targets. It will further provide some insight into how expenditure is distributed, at the central and decentralized levels, by and within recurrent and development budgets, and by subsector. Current unit costs have been estimated to further illustrate how policy priorities have evolved in recent years, and some of the specific issues raised by higher education financing, and student loans in particular, are examined.

It is to be noted that education budget data in Tanzania is particularly complex to review, and that as a result the scope to present updated information of a nature similar to that of the 2011 ESA is limited in this chapter.[11] The adoption of a more functional budget classification would help to better determine the allocations effectively required according to needs and priorities, determine real costs per pupil, increase transparency and accountability, and ultimately, improve performance.

Education Financing

Education financing has declined in recent years in relation to total public expenditure and falls significantly short of national targets. Although a positive trend is noted in the decentralization of the education budget, execution rates are weak, donor dependency is high, and the budget shares devoted to capital expenditure and nonsalary recurrent expenditure are low.

In nominal terms the education budget has grown constantly over the 2008/09-2012/13 period, from 1,430 billion T Sh to 2,890 billion T Sh, representing an increase of over 100 percent. This translates into an average annual growth rate of 19.2 percent, which vastly outstrips the rate of inflation (See Table 4.1). In 2012/13, education financing rose markedly in relation to total public expenditure, to 19.1 percent. In relation to GDP, the education budget reached a high of 6.5 percent in 2012/13, up from 5.8 percent in 2008/09.

[11] Public funding for the education sector is spread across a number of votes, including MDAs whose mandate is not solely education (MCDGC, PMO-RALG and the Public Service Commission, for instance) as well as LDAs and regions. The difference between disaggregated development/capital, and current/recurrent budgets and expenditure is not always clear. The exact nature of expenditure rarely enables to differentiate between pedagogical/administrative and salary/nonsalary spending, or to precisely determine the distribution of spending among subsectors. Access to regional budget allocation formulas is limited.

Table 4.1: Education Sector Budget and Expenditure, 2005/06-2013/14

Billions of Current T Sh and Percent

	2005/06	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14 (Budget)
Total Government Budget	4,176	7,216	9,514	11,610	13,526	15,120	18,249
Education Sector Budget							
Billion T Sh	670	1,430	1,744	2,045	2,283	2,890	3,172
% of Total	16.0%	19.8%	18.3%	17.6%	16.9%	19.1%	17.4%
% of GDP	4.2%	5.8%	6.2%	6.3%	5.8%	6.5%	6.2%
Education Expenditure							
% of Total Expenditure	18.1%	18.0%	17.1%	18.7%	18.3%	21.0%	19.6%
% of GDP	4.6%	4.6%	4.6%	5.3%	4.8%	5.1%	5.9%

Source: BEST, 2014 for budget data; Ministry of Finance and World Bank estimates for expenditure data.

This level of allocation seems relatively high for a low income country, and makes the education sector the greatest single recipient of the national budget, suggesting that the sector benefits from a high degree of political commitment as a development priority.

The sector's share of the total government budget has witnessed significant variations however. From its high of 19.8 percent in 2008/09, it dropped gradually to reach just 16.9 percent in 2010/11. In nominal terms, the year-on-year increase has varied between 12 percent (between 2010/11 and 2011/12), and 27 percent (between 2011/12 and 2012/13). Considering this, the average education share of the total budget for the 2008/09-2012/13 period is 18.4 percent. Furthermore, both the 2013/14 budget and 2014/15 projections would place the education budget closer to 17 percent of the total.

In comparison to **national financing targets**, this is significantly lower than the 22 percent average projected in the ESDP for the 2008-17 period, despite the key macroeconomic hypotheses having been met (in terms of both GDP growth and domestic revenue). That target will now be impossible to even approach within the set timeframe.

Similarly, financing for education as a BRN national key result area is falling markedly short of projections, despite the rising overall share of the budget allocated to MKUKUTA and FYDP priority programs and projects, that was expected to reach 73 percent in 2013/14, up from 71 percent in 2012/13. Of the overall budget for the BRN education action plan for 2013/14-2015/16 of 693 billion T Sh, 194 billion T Sh were scheduled for execution in 2013/14. The budget gap for this year is 88 billion T Sh, representing 45 percent underfunding (PER, 2013).

When compared to GDP, the comparatively high 2012/13 share of the education budget is also set to drop in coming years, and is also to be placed in the further perspective of effective expenditure, which represented just 5.1 percent of GDP.

The aforementioned variability in education financing, and failure to meet the sector financing targets outlined in key national development strategies, cast some doubt about both the level and

sustainability of the government's commitment to make the medium-term trade-offs required to ensure education produces the results required for the country to meet its development ambitions.

Furthermore, trends suggest that the education budget, and the development budget in particular, have suffered from a low level of execution in recent years (Hakielimu, 2013). **Budget execution** in the education sector has recently improved however. In 2012/13, 94 percent of approved funds of the centralized budget were disbursed (97 percent of the recurrent and 80 percent of the development budgets). This is a substantial improvement on 2011/12, when only 79 percent of approved funds (96 percent of the recurrent, but just 25 percent of the development budgets) were released (PER, 2013). Overall execution rates vary from 84 percent for TVET and adult and nonformal education to 98 percent for higher education, although the spread is greater for the development budget. For the latter, the level of absorption of just 44 percent for secondary education raises concerns about the implementation capacity of construction activities required for the expansion of the sector (PER, 2013).

The low level of execution in the development budget has been related to the high level of **donor dependency** for capital spending. Hakielimu, a nongovernmental member of the Policy Forum Budget Working Group, found that in 2013/14, MoEVT only spent 14 billion of its total development budget of 72.5 billion T Sh, or 19 percent. This would be related to the weak disbursement of funds by donors, who had committed to contribute 53.7 billion to the budget (representing 74 percent) but only provided 8.3 billion, or 15 percent (Hakielimu, 2014a).

NGO contributions to education financing are thought to be considerable, in infrastructure development, teacher training, or the provision of teaching and learning materials, but are not precisely known. An information system is required to properly factor in the level and nature of their support.

Allocations to local government authorities (LGAs) have intensified, as a growing share of the education budget is decentralized, from 56 percent of total expenditure in 2008/09, to 66 percent in 2012/13 (See Table 4.2 below). Furthermore, they are expected to rise further, to 70 percent in 2013/14, driven by the increased wage bill and development spending (PER, 2013). This underlines the continued commitment to improve access to and the quality of primary and secondary education at the district level. Indeed, the share of the budget LGAs receive for education is considerably higher than average, estimated at 26 percent for all sectors combined in 2012/13. However, effective disbursements are uneven, by both nature and by district. For instance, only 68 percent of development and non-salary activity fund allocations were released to LGAs by the Treasury in 2012/13. Disparities in the district-level transfer of funds are also high, contributing to uneven levels of performance in service delivery and a sense of inequity (See Chapter 6).

Current expenditure has continued to represent a vast majority of the education budget over the 2009-13 period. Although a relative decline its share of the total occurred until 2011/12, from 93 percent in 2008/09 to 89 percent, it rose steeply in 2012/13, to 97 percent.

Table 4.2: Education Sector Budget Distribution, by Nature and Award, 2008/09-2012/13

Percent

	2008/09	2009/10	2010/11	2011/12	2012/13
Current Expenditure	*92.8%*	*91.7%*	*89.7%*	*89.4%*	*96.6%*
Personnel	67.2%	55.7%	56.0%	61.7%	3.0%
Education Materials	6.6%	13.1%	11.7%	0.0%	0.0%
Other Goods/Services	15.1%	17.0%	17.9%	24.8%	4.1%
Maintenance	0.9%	2.4%	1.6%	0.4%	0.1%
Current Transfers	3.0%	3.5%	2.5%	2.6%	89.5%
Capital Expenditure	*7.2%*	*8.3%*	*10.3%*	*10.6%*	*3.4%*
Infrastructure	3.9%	6.9%	7.6%	9.0%	2.6%
Equipment	0.8%	0.5%	0.6%	0.5%	0.3%
Other	2.5%	0.9%	2.1%	1.1%	0.6%
Total	100.0%	100.0%	100.0%	100.0%	100.0%
MDA	44.10%	36.9%	37.6%	38.4%	33.9%
LGA	55.90%	63.1%	62.4%	61.6%	66.1%
Total	100.00%	100.0%	100.0%	100.0%	100.0%

Source: Treasury, 2009, 2010, 2011 and 2012, and authors' estimates.

As is customary in education, most current expenditure is devoted to **personnel costs**. Overall for the sector, personnel expenses have varied between 56 percent and 67 percent of the total budget over the period, and stood at 62 percent in 2011/12, at 5 percentage points lower than in 2008/09 (the undetermined nature of current transfers in 2012/13, that include personnel expenditure, mean it is impossible to estimate the amount or share of such costs for that fiscal year). For primary and secondary, the share of the budget devoted to personnel is much higher, estimated at 85 percent (Sumra and Katabaro, 2014).

Personnel expenses are set to rise again in 2013/14, to about 64 percent of the overall education budget, pushing up recurrent expenditure. This is due to an increase in the wage bill resulting from the government's decision to: (i) raise civil servants' minimum wage in July 2013, to improve motivation for better quality in public service delivery while keeping up with the rising cost of living; and to (ii) increase recruitment in the education sector, of secondary and primary school teachers in particular, in line with the BRN goals (PER, 2013).

In this context, and although appropriate personnel incentives are key to improving the quality of education service delivery, it is important to consider the balance between the wage bill and other components of the budget, such as non-salary recurrent expenditure and development spending. Indeed, PE represented 69 percent of the total recurrent budget in 2012/13.

Although the budget data made available for this report do not enable a detailed analysis of **non-salary recurrent expenditure** that is equally important to improve quality, they do clearly indicate spending levels for education materials, a key input. From under 7 percent of the overall education budget in 2008/09, the allocation rose to an average of 12 percent for the following two years, in a favorable trend. However no budget was allocated for this spending item in either 2011/12 or 2012/13, period during which the share for goods and services generally decreased, from almost 30 percent to just 4 percent.

Perhaps more importantly still, **capital expenditure** is generally considered to be of a particularly low level, particularly considering the imperative to expand infrastructure to meet the demand resulting from demographic growth and the expansion of lower secondary to provide sufficient capacity in the context of compulsory basic education. The share of the budget devoted to capital expenses stood at 7 percent in 2008/09, and has only barely risen since, to an average of 8 percent until 2012/13. However, being the converse of recurrent expenditure, whose trend was commented on above, data for the most recent year suggests a marked downturn, from a high of 10 percent of the total budget in 2011/12, to barely 3 percent in 2012/13.

Infrastructure construction and rehabilitation is currently a very low priority therefore, as the share of the total education budget devoted to this was just 2.6 percent in 2012/13, and estimated to have remained at that level in 2013/14 (PER, 2013).

Public Education Allocations by Subsector

Although trade-offs in subsector allocations have given greater weight to general formal nonhigher education, the budget distribution continues to appear imbalanced, favoring higher education at the expense of secondary, and failing to resolve underfunding issues in TVET and adult and nonformal education.

An examination of the breakdown of the budget by education subsector helps to establish to what extent the noted growth in sector financing has favored different levels, in relation to others. This in turn gives some insight into the priority given to each level and type of education by the government. The comparison of the different average annual growth rates in subsector budget allocations (in current terms) for the 2005/06-2008/09 and 2008/09-2013/14 periods highlights the following findings (See Table 4.3):

- The rate of budget expansion for the sector as a whole has slowed in recent years, from 28 percent per year over 2005-08 to 19 percent per year over 2008-13.
- This slow-down has affected some subsectors disproportionately: growth in secondary general and nonhigher technical education financing has dropped faster, but the greatest adjustment has been in higher education, for teacher education, university and technical.
- In fact, the technical higher education budget has even dropped slightly over the 2008-13 period, being the only subsector where this has occurred, apart from teacher education. For the latter, the low budget allocation in 2013/14 appears to have been an exception, as the constant growth noted since 2005/06 until then is expected to resume in 2014/15, on the basis of the budgeted allocations.

Table 4.3: Education Sector Budget and Average Annual Growth, by Level, 2005/06-2013/14

Billions of Current T Sh and Percent

	2005/06 (Actual)	2008/09 (Actual)	2010/11 (Actual)	2011/12 (Actual)	2012/13 (Actual)	2013/14 (Actual)	2014/15 (Budget) #	Average Annual Growth Rate (%)	
								2005-08	2008-13
General Formal Education	***526.23***	***1,105.20***	***1,969.70***	***2,179.28***	***2,760.78***	***2,675.94***	***3,138.41***	*28.1%*	*19.3%*
Preprimary and Primary Education	338.59	601.10	999.58	1,017.88	1,645.20	1,630.83	1,923.70	*21.1%*	*22.1%*
Secondary Education	68.48	183.65	427.91	523.25	519.85	504.09	612.75	*38.9%*	*22.4%*
Higher Education	119.16	320.45	542.20	638.15	595.73	541.01	601.96	*39.1%*	*11.0%*
Teacher Education	***9.47***	***33.72***	***34.36***	***43.04***	***52.79***	***12.71***	***71.78***	*52.7%*	*-17.7%*
Teachers Service Commission	—	3.67	4.41	4.76	4.60	7.09	7.76	—	*14.1%*
TVET	***76.23***	***164.55***	***190.92***	***192.08***	***75.21***	***430.13***	***251.91***	*29.2%*	*21.2%*
Vocational Education & Training	*30.02*	*45.72*	*18.74*	*53.23*	*62.96*	*92.16*	*38.98*	*15.1%*	*15.1%*
VTC	26.96	38.08	8.69	45.88	52.65	75.02	26.06	*12.2%*	*14.5%*
FDC	3.06	7.64	10.04	7.35	10.31	17.14	12.92	*35.7%*	*17.5%*
Technical Education	*46.21*	*118.83*	*172.18*	*138.85*	*12.25*	*337.96*	*212.93*	*37.0%*	*23.3%*
Nonhigher Technical	37.14	101.39	154.87	129.12	0.00	323.52	198.21	*39.8%*	*26.1%*
Higher Technical	9.07	17.44	17.31	9.73	12.25	14.44	14.71	*24.4%*	*-3.7%*
Adult & Nonformal Education	11.14	20.76	—	—	—	—	—	*23.1%*	—
Other Basic Education	—	—	0.98	0.82	2.76	2.86	1.90	—	—
TOTAL	625.20	1,324.94	2,195.96	2,415.21	2,891.54	3,121.63	3,464.00	*28.4%*	*18.7%*

Source: MoEVT, based on Ministry of Finance budget documents, and authors' calculations.

Note: MoEVT expenses for salary adjustment, inspectorate, the commissioner for education, administration and the UNESCO commission have been distributed among general formal education and teacher education, proportionally to their respective budget shares. # Although budget data for 2014/15 are provided, actual 2013/14 data are used to compute growth trends.

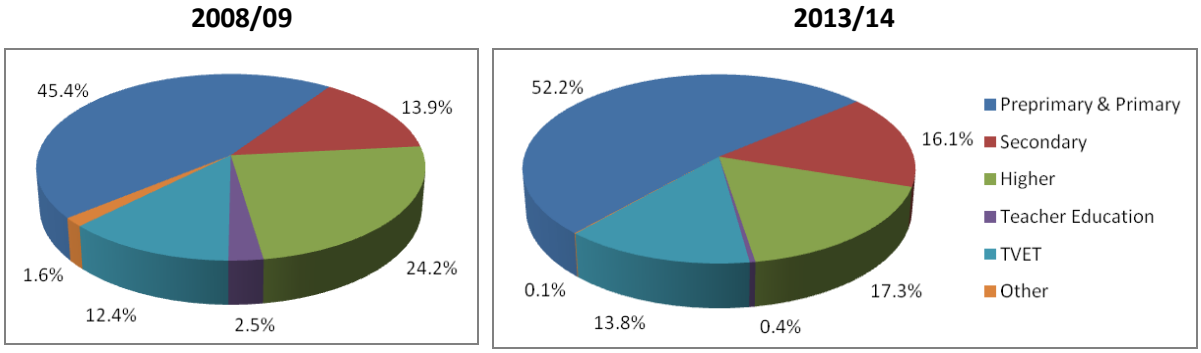
- Growth in education financing has only strengthened for two subsectors, preprimary and primary education (between which data do not enable to differentiate here) and VETA-managed vocational education and training.
- For the 2008-13 period, average annual growth has been above average for preprimary, primary, secondary and nonhigher technical education.
- Conversely, yearly growth has been below average for higher education (particularly technical, but not only) and vocational education and training (particularly folk education, but not only), over 2008-13.

These growth dynamics have of course resulted in some adjustments to the distribution of the education budget among subsectors over time (See Figure 4.1). In 2008/09, the preprimary and primary allocation represented 45 percent, that of secondary 14 percent and that of general higher education over 24 percent. The TVET allocation was significant, at over 12 percent, the remainder of the budget being split between teacher education and other subsectors, including adult and nonformal education.

The 2013/14 distribution indicates that the preprimary and primary levels now benefit from over half of expenditure (52 percent), in line with the international benchmark for low income countries that have yet to achieve universal primary education, widely known as the FTI benchmark. This is clearly a positive evolution, although in the context of the basic education policy, preprimary education is provided in primary schools, but capitation grants have not yet been adjusted accordingly, meaning that funding is scarce for this level.

Further favorable trade-offs are reflected by the secondary level's relative allocation, that has increased to 16 percent, and that of TVET, that has increased to 14 percent, both very much at the expense of university higher education, whose relative share of the budget has dropped to 17 percent.

Figure 4.1: Distribution of Education Sector Expenditure, by Subsector, 2008/09 and 2013/14
Percent



Source: Table 4.3 and authors' calculations.

Nevertheless, overall TVET funding is deemed inadequate, for a number of reasons (Dubois and Athumane, 2016):

- Due to the insufficient level of government funding, training centers' facilities are rapidly deteriorating and training materials and equipment are in too short supply, resulting in poor quality of training.
- The skills development levy aimed to compensate for this situation, representing a 5 percent tax on basic wages. The funds collected are meant to be equally shared between VETA, the Ministry of Labour and the Higher Education Student Loan Board. However, it would appear that no proper mechanisms have been established to effectively apportion the levy, or ensure its effective use.
- Accountability in subsector spending is weak at all levels: employers contributing to the levy fail to see that they derive any direct benefit from it, despite its high level relative to similar financing mechanisms in other countries; the disbursement of funds are not linked to the performance of training institutions; and there is no monitoring of the impact and relevance of training for the job market and the economy.

Although this distribution appears to be better balanced, the budget share allotted to higher education continues to seem overweighed, especially when compared to that of secondary (including both lower and upper secondary here), particularly in the current policy context of aiming to expand secondary coverage as Tanzania transitions towards an 11-year compulsory basic education cycle, including O-Level. It may also be considered inequitable, as much of the higher education expenditure covers loans to students from more affluent families, whereas household contributions to basic education are high.

A further equity concern is raised by the share of the total budget available to other subsectors (just 0.1 percent), as this includes adult and nonformal education. MoEVT has indicated that the share of its own budget (that represented 21.7 percent of the total education sector budget in 2013/14) allocated to adult and nonformal education rose from 0.54 percent in 2010/11 to 0.82 percent in 2012/13, before dropping back to 0.69 percent in 2013/14 (MoEVT, 2014d). These variable and "indisputably meager" funds (MoEVT, 2014a) are clearly insufficient to meet the challenges posed by the provision of literacy and other nonformal learning opportunities. Clearly, these ANFE allocations fall vastly short of the proposed international benchmark figure of at least 3 percent of the national education budget.

Finally, the relative budget share available to teacher education (just 0.4 percent) raises further questions about the commitment to improve the quality of basic education (although the share of the 2014/15 budget for teacher education is projected to rise back above 2 percent).

Public Unit Costs

Despite favorable budgetary readjustments, unit costs for technical and higher education appear to be disproportionately high, and those of secondary, vocational and adult and nonformal education all raise concerns about the feasibility of ensuring minimum quality standards.

Combined with trends in enrollment outlined in Chapter 2, the adjustment to the distribution of the education sector budget among subsectors has had an impact on public unit costs at each level (See Table 4.4):

- For the preprimary and primary levels combined, unit costs are estimated to have virtually doubled over the 2008-13 period in real terms from 63,000 T Sh in 2008/09 to 119,100 T Sh in 2013/14. This constitutes the greatest increase in per student spending of all subsectors.
- Although spending per pupil appears to have also increased significantly for secondary education (combining O-Level and A-Level), by 62 percent over the period, this translates into unit costs at this level representing just 1.8 times those of primary and preprimary, whereas they were 2.2 times higher at the beginning of the period.
- University higher education and technical (higher and nonhigher) education unit costs have remained fairly stable over the past five years, the former dropping by 6 percent, and the latter increasing by 3 percent.
- In the case of university higher education, this appears to confirm, as per the previous section, that greater equity is being sought in the allocation of education financing. Indeed, university unit costs were just 23 times higher than those of preprimary and primary in 2013/14 (and 179 percent of GDP per capita), against 47 times higher (equivalent to 440 percent of GDP per capita) in 2008/09.
- Unit costs in teacher education appear to have dropped significantly; however, as seen in Table 4.3 and commented above, this may not constitute a reliable trend.
- Vocational education (VTCs, not including FDCs) and adult and nonformal education per pupil spending both appear to have dropped markedly, by 77 percent and 85 percent respectively.

The global trends suggested by Table 4.4 confirm that comparative budget priority has been given to basic education over the period, although further analysis is required to determine the justification for increasing the concerned subsectors' allocations, in both real and relative terms, when enrollment has been declining.

At the secondary level, the noted growth in per pupil spending over the period might in fact conceal a more recent decline. The 2013 public expenditure review estimated that unit costs at this level had dropped by 40,000 T Sh year-on-year (PER, 2013). Their current level may be too modest to guarantee the desired improvement in quality at this level, and reflect a continued mismatch between the government's strategy to expand secondary access and budget trade-offs within the sector.

Table 4.4: Estimated Public Unit Costs, by Level, 2008/09 and 2013/14

Thousands of T Sh in Constant 2008/09 Prices and Percent

	2008/09 #			2013/14 #			% Change
	'000 T Sh	% GDP p.c.	Index *	'000 T Sh	% GDP p.c.	Index *	'000 T Sh
Preprimary & Primary	63.0	9.4%	1.0	119.1	7.7%	1.0	+89.0%
Secondary	135.7	20.1%	2.2	220.3	14.2%	1.8	+62.3%
Higher	2,936.8	440.4%	46.6	2,768.7	178.8%	23.2	-5.7%
Teacher Education	1,541.2	228.5%	24.5	347.1	22.4%	2.9	-77.5%
Vocational Training	1,464.6	236.7%	23.2	387.8	25.0%	3.3	-73.5%
Technical Education	2,525.3	378.7%	40.1	2,587.3	167.1%	21.7	+2.5%
Adult & Nonformal	13.7	2.0%	0.2	2.1	0.1%	…	-84.9%

Source: UNESCO, 2011 for 2008/09, Table 4.3 and BEST, 2013 for 2013/14, and authors' calculations.

Note: Unit costs are computed considering solely enrollment in government institutions. * The indexes presented are multiples of the pre-primary & primary public unit cost. # Due to the lack of data disaggregated by recurrent/capital budgets and by cycle, 2013/14 unit costs are based on the total education budget, whereas 2008/09 unit costs are based on recurrent expenditure only. Although this will result in a comparative overestimation of unit costs for 2013/14, this should be minimal considering the slim share of capital expenditure in the total education budget.

A more detailed perspective of the nature of per pupil spending throughout nonhigher formal education would be all the more enlightening, that several reports suggest that the effective amounts of capitation grants transferred to schools have fallen well short of targets (See Chapter 8).

Although current vocational education unit costs could well reflect the trade-off with basic education, given the priority set to expand access to 11 years of formal general schooling, the resulting level of investment appears to have dropped to a level whereby the quality of learning would be greatly jeopardized.

The decline in per pupil spending in adult and nonformal education could also reflect the trade-off with basic education, although the fact that the level of spending per learner for this subsector has been historically low, may not necessarily reflect a policy orientation at the central level. MoEVT's NFE allocations are sent as part of the primary education budget envelope to LGAs, who have some flexibility in how the funds are spent. This is one reason why NFE funding is so variable: several LGAs may devote the entire amount to primary schools. Again, the impact on quality is unavoidable, as many of the facilitators, formal sector teachers on detachment, are not paid the agreed fees and lose interest and motivation as a result (Robinson, 2015).

Finally, although unit costs in higher education have apparently been better controlled in recent years, even their current level continues to raise concerns in terms of equity. This is greatly related to the government financing of student loans through the Higher Education Student Loan Board (HESLB), that have historically failed to target students based on their need, or to effectively recover the amounts lent, therefore requiring a sustained high level of investment.

Box 3.1: Household Contributions to Education

The 2011 education sector analysis estimated that household contributions to education varied from 16,100 T Sh per year for primary pupils (equivalent to 26.4 percent of public recurrent expenditure) to 29,400 T Sh on average for secondary pupils (21.0 percent of public recurrent expenditure) and 72,000 T Sh for post-secondary students (53.3 percent of public recurrent expenditure, excluding HESLB loans), in 2008/09.

Although more recent data on household education financing is not immediately available, it has been estimated that families now contribute up to 42,000 T Sh per primary pupil per year. In addition to the usual costs (three uniforms, school supplies, transport, meals, exam fees, etc.), families are sometimes expected to cover expenses such as the purchase or repair of furniture, security on school premises, the construction and/or maintenance of facilities, remedial classes, or textbooks.

Parents of children with special needs bear a higher burden still, potentially having to cover the additional cost of disability equipment or special learning materials.

Higher Education Financing

The mechanism established to share the cost of higher education with beneficiaries through student loans highlights the inequitable character of education financing. The subsector continues to benefit from a share of the budget that is disproportionate in relation to the number and socioeconomic status of its student enrollment, in significant part to finance potentially unrequired student loans, few of which are ever recovered.

The higher education system in Tanzania historically distributed HE grants to student, up until 1994/95.[12] This system was gradually phased out, up until 2004/05, when the HESLB was created to administer the replacement system of student loans. This new system aimed to shift much of HE financing onto students and their families, considering that a majority of those who reach this level of education are from affluent backgrounds, and government resources are required to finance other streams with both greater and more equitable coverage, and higher social returns. Student loans are intended to cover tuition fees, field practical research, transport, meals and accommodation, for any student in a public or private accredited higher learning institution, as well as for some academic staff wishing to upgrade their skills.

By way of illustration, in 2013/14, the loans disbursed covered: (i) 52,316 beneficiaries across 30 public higher education institutions, including 14 universities and university colleges, representing

[12] Unless otherwise stated, this section relies on the content of "Financing of Higher Education in Tanzania," a detailed presentation given by A. Bangu, Director of Planning, Research and ICT, HESLB (HESLB, 2015).

177 billion T Sh; (ii) 44,093 beneficiaries across 31 private universities and university colleges, representing a further 151 billion T Sh; (iii) 786 overseas beneficiaries (6.3 billion T Sh); and (iv) 183 postgraduate beneficiaries (1.5 billion T Sh). Just 1,741 students benefited from grants that year, representing 4.8 billion T Sh.

Table 4.5 below shows the trend in higher education's share of the education sector budget and the proportion devoted to student loans. It highlights a first dimension of the inequitable character of higher education financing. As discussed above, the HE share of the education budget is high. Considering all university and technical tertiary streams here, it has historically been close to a third of the total education sector budget, and stood at 28 percent in 2013/14. This share is to be placed in the perspective of the total share of enrollment the same streams represent, that was just 2.5 percent in 2013 (See Table 2.1).

Of this share, student loans are meant to contribute substantially to sector financing, on a cost-sharing basis with families. However, as the table shows, the share of sector financing they represent has only been greater than half in 2012/13, and stood at 37 percent in 2013/14. This implies that the public financing currently directly covers about two-thirds of the cost of higher education.

Table 4.5: Total Higher Education Budget and Share of Student Loans, 2005/06-2013/14

Billions of Current T Sh and Percent

	Total Education Budget	Higher Education Budget *		Student Loans	
	Billion T Sh	Billion T Sh	% of Total	Billion T Sh	% of HE Budget
2005/06	625.20	165.37	26.5%	56.11	33.9%
2008/09	1,324.94	439.28	33.2%	139.09	31.7%
2010/11	2,195.96	714.38	32.5%	224.94	31.5%
2011/12	2,415.21	777.00	32.2%	318.40	41.0%
2012/13	2,891.54	607.98	21.0%	315.84	51.9%
2013/14	3,121.63	878.98	28.2%	328.31	37.4%

Source: MoEVT, based on Ministry of Finance budget documents, and authors' calculations.

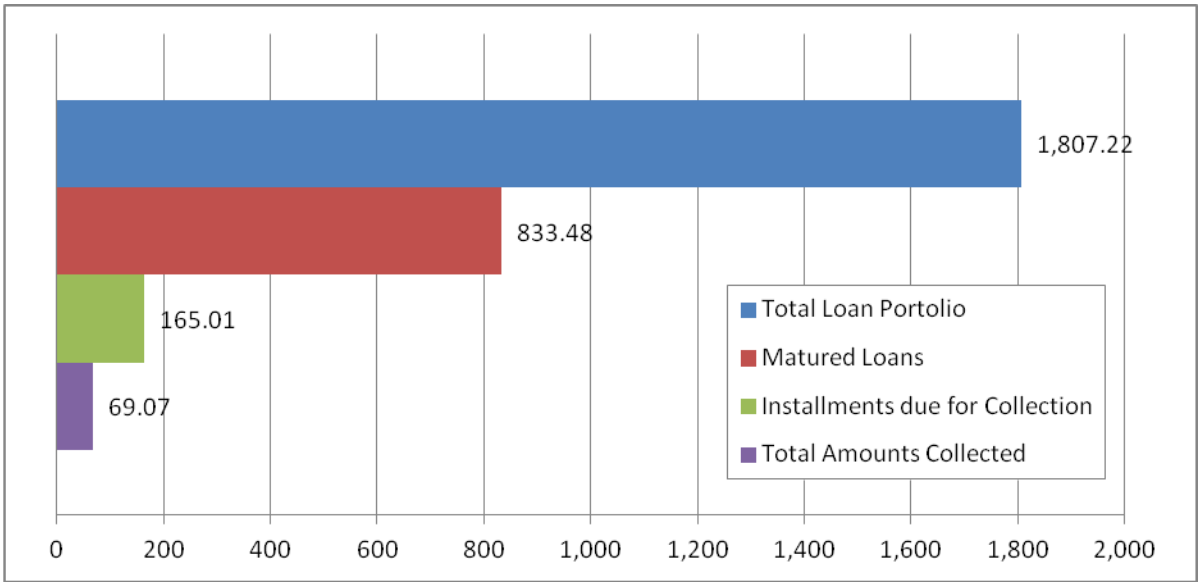
Note: * The total higher education budget here includes university and university college higher education, technical higher education and other tertiary, as all students in these streams could be eligible for a loan. A share of MoEVT expenses for salary adjustment, inspectorate, the commissioner for education, administration and the UNESCO commission have been attributed to university higher education, proportionate to its share of the MoEVT budget.

In fact, further review of the situation reveals that even this is an understatement of the reality. Indeed, the level of collection of the loans issued over the years is chronically low, leading to question whether even the share of the budget supported by loans is truly borne by families. And this in turn, is compounded by the share of HE students that benefit from loans, that averaged 62 percent over the 2008-11 period.

Figure 4.2 shows that the total amount of student loans disbursed since 2005 amounts to 1,807 billion T Sh. Of these loans, under half have matured (833 billion T Sh), but the amount of instalments due for collection is just 165 billion T Sh (or 9 percent of the portfolio) and to date, just

3.8 percent of the total amounts disbursed have been recovered (69 billion T Sh). This seems extremely low.

Figure 4.2: Total Higher Education Student Loan Portfolio, and Cumulated Collection, March 2015
Billions of T Sh



Source: HESLB, 2015.

Nevertheless, it must also be underlined that the performance of the HESLB in recovering due instalments is markedly improving. Although the annual collection targets still appear to be fairly modest, a majority of loan recipients whose collection is due are located (84 percent) and the effective recovery of loans due is much closer to the targets set since the reform (94 percent), than before (59 percent). This translates into a marked improvement in the collection/disbursement ratio. Whereas in 2008/09, the amounts collected represented just 0.8 percent of those disbursed, this relative measure has increased gradually but steadily, to reach 5.5 percent in 2013/14.

This is apparently the result of a number of changes that are being made to the governance of the loan mechanism, in particular in terms of loan eligibility and recovery.

Eligibility criteria have been redefined so that loans can better target students in financial need. Where as previously a given set of family/parent/household and pupil characteristics were considered to determine eligibility, applications are now to be assessed on the basis of a means-testing approach, that also determines the amount of loan a given applicant may be entitled to. This is based on the share of the cost of secondary education that was supported by the applicant and their available financial resources, and adjusted according to their vulnerability status. Particular adjustments are considered for applicants in situations of: (i) poverty, where family income is below the threshold of the national minimum wage; (ii) orphanhood, or single-parenthood; (iii) applicant/ parental disability; and (iv) belonging to marginalized/disadvantaged groups.

There is also greater focus on recovery terms, conditions and mechanisms, which have become clearer and stricter. These specify that repayment must start one year after successful completion of studies, regardless of beneficiaries employment status; impose an annual retention fee of 6 percent of the loan value for loans issued since 2011/12; set a statutory repayment rate based on 8 percent of income or of the basic wage; contemplate monthly deductions from beneficiaries payslips; and include penalties for beneficiaries who default on repayments, including a 10 percent fee on the outstanding amount and submission of default information to the Credit Reference Bureau.

In addition to these terms, the Directorate of Loan Repayment and Recovery has been restructured to increase the number of loan repayment staff and train them in loan recovery strategies to strengthen their skills, and a communication campaign has been launched through printed and electronic media to enhance public awareness of the repayment obligation, to overcome a still widespread perception that the loans are still grants.

Nevertheless, certain challenges are still to be addressed before the sustainable financial management of the mechanism is assured. Not least is the resistance of beneficiary families to the very policy of sharing the cost of higher education. This complicates the recovery mechanisms, which in a context of budgetary cuts to the subsector, has created an imbalance between available resources and the demand for loans. From the beneficiaries' perspective, this has impacted both the ease of accessing a loan and reduced the average amount, which has been further amputated of the retention fee, whereas tuition fees continue to increase.

Conclusion

the education sector in Tanzania faces serious challenges which need urgent attention. A few to consider are: the increasing number of teachers' grievances, delays and inadequacy in disbursing capitation grants to schools, lack of funds earmarked for pre-primary education, budget constraints for schools' inspection department, lack of transparency and accountability in the education budget, and inadequate investments (Hakielimu, 2014a).

The Government should consider revising the structure of budget allocations to higher education in order to allow the recruitment of more qualified teachers. More data are required to analyze the allocation of Higher education resources between teaching activities and research activities, and between salary expenditures and other non-salary recurrent expenditures.

Chapter 5: Quality and Learning Outcomes

The impressive expansion of access to education in Sub-Saharan Africa over the 2000-15 period of Education for All has often required a level of investment in infrastructure and staff recruitment that has involved a trade-off in terms of the investment in quality. As was noted in the 2011 ESA, Tanzania is no exception. As quality has many possible determinants, relating to school, class, teacher and pupil characteristics, and covering everything from inputs to pedagogical processes, not to mention pupils' initial level of subject mastery, the measure of learning outcomes provides an accessible perspective of the effective combined result of the relevant factors. It also provides some insight into the human capital that is being built for national development.

The assessment of learning outcomes in this chapter, by level and subject, is based on the following available sources of information: (i) adult literacy rates; (ii) national assessments of primary level achievements in English, Kiswahili and numeracy; (iii) examination pass rates at the primary and lower and upper secondary levels; and (iv) graduation rates in vocational education and training.

Adult Literacy

Although adult literacy has improved steadily over the past decade and the gender gap is closing, the current rate of 78 percent remains relatively low in both absolute terms and in relation to targets, improvements have fallen short of reducing the number of illiterate adults, still estimated at 5.4 million, and huge scale of urban/rural disparities appears to be structural.

Literacy rates can provide an interesting historical perspective on the sustainability of education system outcomes. As no recent data on literacy levels per highest educational level attained are available, this section will simply review historical trends in the adult literacy rate, for the mainland Tanzanian population aged 15 years or above. Several sources are offered, as different approaches to measure literacy are used, and results can vary in consequence.

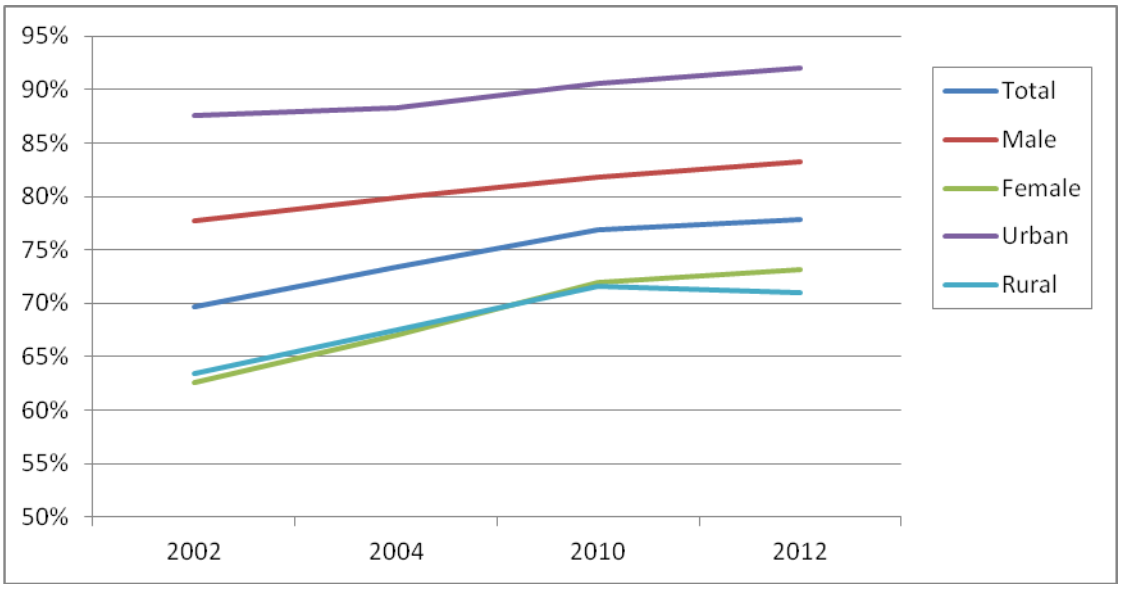
The 2010 Demographic and Health Survey of 2010 defined people as literate if they had some form of postprimary education or training, or were able to read all or part of a sentence in Kiswahili, English, or both, during a quick test (DHS, 2011). It determined that 76.9 percent of the adult population was literate, on average, with the rate being higher for men (81.8 percent) than for women (71.9 percent). This represented a slight improvement on the earlier 2004-05 DHS, which estimated that 73.5 percent of adults were literate (80 percent of men, and 67 percent of women). Literacy rates are significantly higher in urban (90.6 percent) than in rural areas (71.7 percent).

The 2012 Population and Housing Census, that defines the adult literacy rate as the share of the adult population who claims to be able to read and write a text in Kiswahili, English, or Arabic, reached very similar conclusions. The overall literacy rate for Tanzania mainland was computed at 77.9 percent, up from 69.7 percent in 2002 (PHC, 2012). Again, a greater share of men (83.2 percent) than of women (73.1 percent) are literate, and the rate is higher in urban (92 percent) than in rural areas (71 percent).

Variations by region are significant, ranging from 59.0 percent in Tabora to 96.1 percent in Dar es Salaam (PHC, 2012). The literacy rate is also relatively high in Kilimanjaro region (92 percent), and above 80 percent in the further regions of Ruvuma (84 percent), Mara and Mbeya (81 percent), Iringa and Njombe (82 percent) and Tanga (80 percent).

The key findings outlined are presented in Figure 5.1 below. Although the approaches used by the DHS and PHC to measure literacy vary, implying that a precise comparison is improper, the figure does nevertheless both suggest a certain degree of coherence in the respective rates, and thus enables to illustrate historical trends.

Figure 5.1: Adult Literacy Rate, by Gender and Area of Residence, 2002, 2004, 2010 and 2012
Percent



Source: PHC, 2002 and 2012; DHS 2005 and 2011, and authors' computations.
Note: The literacy rate is for the population of mainland Tanzania aged 15 years and above. The rates for 2002 have been recomputed for this age group on the basis of the distribution of the population by age, to ensure minimum comparability, as the PHC 2002 report presents findings for the age group of 10 years and above.

Figure 5.1 suggests the following:

- The adult literacy rate has gradually and steadily improved over the 10 year period considered, but still remains fairly low today, at approximately 78 percent.

- The gap between male and female literacy is significant, but appears to be closing in, from approximately 15 percentage points in 2002 (in favour of men) to approximately 10 percentage points in 2012.
- The starkest disparity is in the literacy rates by area of residence. Although the gap between the rates for the urban and rural populations dropped from about 25 percentage points in 2002 to about 20 percentage points in 2004, it has remained of that magnitude since.
- Literacy rates have improved consistently for all of the groups considered, with the exception of the rural population since 2010, for whom the rate appears to have stagnated. The marginal drop, of less than 1 percentage point, may not be significant.

It is further worthy of note that Kiswahili is the language a great majority of the population is literate in (PHC, 2012). Among the population aged 5 years or above, of those who were literate, 81 percent were literate in Kiswahili only and a further 17 percent were also literate in English. Overall then, 98 percent of the literate population masters Kiswahili. A minority were literate in English only (under 2 percent), and a barely significant share (0.3 percent) were literate in another language.

In the absence of a competency-based assessment of literacy levels, it is difficult to precisely determine the exact level of literacy and how this has evolved. Nevertheless, both sources used here coincide in that the adult literacy rate is rising, in pursuit of a positive trend noted over the past 35 years. Indeed, the rate for the population aged 10 years and above stood at 51.5 percent in 1978 and 61.2 percent in 1988 (PHC, 2002). This progress falls considerably short of the EFA Goal 4 however, of improving the adult literacy rate by up to 50 percent, as progress would appear to be in the range of 10-15 percent. Furthermore, given the growing population of Tanzania, the absolute number of illiterate adults is estimated to have remained fairly stable over the 2002-12 period, at around 5.4 million.

ICBAE

Although it is impossible to determine the respective contributions of expanded general education and specific literacy programmes to improving the adult literacy rate, a brief examination of the quality of the Integrated Community-Based Adult Education (ICBAE) programme is appropriate here, particularly considering the scale of its coverage.[13]

MoEVT carried out an Adult Literacy Survey in 2013 in seven sample districts, assessing enrolled learners on a three-point scale (MoEVT 2014b). The results indicate that ICBAE learning outcomes are ambivalent: just 32 were found to be able to "read, write and compute simple arithmetic correctly," whereas 29 percent could do so with difficulty; the majority, 39 percent, could not perform the set tasks at all. The survey adduces the following reasons for this situation: (i) a shortage of facilitators; (ii) the profile of facilitators, many being untrained volunteers and just 22

[13] The sum of ICBAE annual enrollment figures over the 2009-14 period reaches 5.7 million. Given that the same participants may enroll for several successive years, the total number of beneficiaries would be much lower. Nevertheless, the programme has been estimated to reach 20 percent of its target population (See Chapter 2).

percent holding an education certificate; and (iii) the lack of access to appropriate reading, teaching and learning materials, be it in class or at home.

General Education Learning Achievements

Existing assessment mechanisms do not provide a comprehensive picture of learning outcomes, but the findings from recent studies show that quality in basic education is poor. A majority of students do not acquire fundamental competencies in Kiswahili, English and numeracy during the early grades of primary, and over 4 in 10 candidates fail the primary leaving examination. Although pass rates at the lower secondary leaving examination are better, subject success rates are disappointing, particularly in math, and performance gaps by gender are considerable.

UWEZO

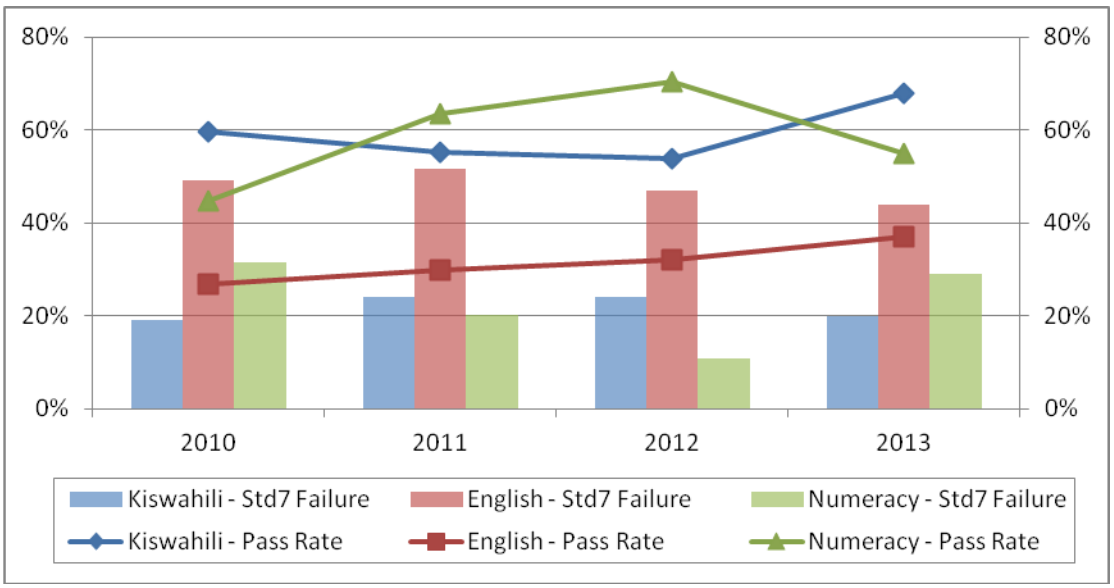
The national Uwezo learning assessments, conducted in Tanzania since 2010, appraise primary pupils at different grades' competency in performing tasks that are covered in the Standard II curriculum. This section focuses on the average pass rates of pupils enrolled in Standards III to VII, to evaluate learning levels. By Standard III, children are expected to have the Standard II level literacy and numeracy skills, and by Standard VII, children are expected to have no difficulty at all in performing Standard II level tasks.

The majority of students in primary education do not acquire the basic competencies in English, Kiswahili or mathematics at their respective class levels. In 2013, the average pass rates, for pupils enrolled in Standards III to VII, at tests of Standard II level, were just 68 percent in Kiswahili, 55 percent in numeracy and barely 37 percent in English, where performance is by far the worst (See the lines in Figure 5.2).

Performance over the four successive annual assessments show variable trends by subject. Whereas the pass rate in English has improved steadily since 2010, from 27 percent in 2010, that of Kiswahili witnessed a significant improvement between 2012 and 2013, having been fairly stable previously around the 55 percent mark, and that of numeracy, conversely, dropped significantly in 2013, from a high of 70 percent in 2012, discounting earlier improvements.

Figure 5.2: Average Pass Rates in Standard II Level Uwezo Tests Sat by Standards III to VII Pupils, and Standard VII Failure Rate, by Subject, 2010-13

Percent



Source: Uwezo, 2010, 2011, 2012 and 2013, and authors' computations.

These average pass rates however, low as they are, conceal a more startling reality still. The pass rates for Standard III pupils were just 45 percent in Kiswahili, 31 percent in numeracy and 19 percent in English. Performance logically improves for pupils who are in the later grades of the primary cycle, to reach their best level for Standard VII pupils. Figure 5.2 also shows, in bars, the percentage of pupils in the last grade of primary who fail the Standard II level tests. It reveals that in 2013, after receiving at least seven years of primary education, 20 percent could not read a simple story in Kiswahili, 29 percent could not solve a basic multiplication, and 44 percent could not read a simple story in English.

The situation with respect to English is particularly alarming, as the percentage of Standard VII pupils who fail the literacy test is in fact greater than the percentage of all pupils in Standard III or above who succeed. This clearly forebodes serious learning difficulties at the next level, where English is the language of instruction.

Finally, considering that pupils are supposed to acquire literacy and numeracy skills in all three subjects, the Uwezo learning assessments computed the average pass rate for each district. In 2013, only 35 districts achieved an average pass rate over 50 percent (the highest being 74 percent in Mbeya Urban), and among the remaining 96, the pass rate was below 25 percent in 10 districts. This signals that in approximately three quarters of the mainland districts, less than half of Standard III to Standard VII pupils acquire the basic competencies set out in the Standard II curriculum, on average. This is however an improvement over 2012, when just 27 districts achieved an average pass rate of 50 percent or above, the highest being 67 percent in Temeke, Dar es Salaam.

EGRA/EGMA

In July 2013, a National Baseline Assessment for the 3Rs (Reading, Writing and Arithmetic) was launched, using Early Grade Reading Assessment (EGRA), Early Grade Mathematics Assessment (EGMA) and Snapshot of School Management Effectiveness (SSME) approaches, to measure and enable the future monitoring of early grade pupils' achievements in foundational skills (USAID, 2014).

The findings of the EGRA study confirm those of the Uwezo tests, underlining the generally poor level of performance in early primary, and particularly in English:

- At the oral reading fluency subtask in Kiswahili, although 40 percent of the students could not read a single word correctly, the mean accuracy score was 62 percent. Results at the same subtask in English were considerably poorer, the mean accuracy score being just 28 percent.
- In Kiswahili the average level of reading fluency was approximately 18 correct words per minute, against just 9 correct words per minute in English.
- At the reading comprehension subtask, which relies to a great extent on reading fluency, 40 percent of the students were unable to answer a single question correctly in Kiswahili, but 94 percent failed to correctly answer a single question in English. In Kiswahili, just 8 percent of Standard II pupils achieved an acceptable level, being able to answer 80 percent of the questions correctly.
- The listening comprehension subtask suggests that pupils' oral language skills are stronger, and good enough to comprehend a grade-level text: 96 percent answered one or more of the questions correctly, with a mean score of 60 percent of correct answers.

The EGMA study further corroborates the results of the Uwezo numeracy test, reaching the following findings:

- At the Level 1 addition and subtraction subtasks, pupils scored nearly 60 percent, or better, on average. Their performance was better at additions than at subtractions: nearly 22 percent of pupils were unable to correctly solve a single subtraction, the easiest of which was "4 – 1 = ?".
- At Level 2, nearly 58 percent of pupils were unable to correctly solve a single subtraction, the easiest being "18 – 4 = ?".

The study identifies a wide range of factors that contribute to underperformance. Of particular interest are classroom practices. Teachers are found to be inadequately trained in specific approaches to teaching early grade reading, writing and arithmetic, and the amount of practice pupils are offered in class is deemed insufficient. In the literacy tests, this is compounded by the low level of access to appropriate learning materials, a relative shortage of textbooks, a general lack of school libraries, and the fact that reading aloud and/or being read to at home is not wide-spread. In numeracy, the different success rates in the procedural and conceptual subtasks suggest that pupils are expected to know the answers to problems, and that teaching focuses on the memorization of facts, rules, and procedures rather than problem-solving strategies. A positive relation was also

established between head teachers' expectations of their pupils and performance. Finally, as has been determined by numerous studies, the greater relative wealth of pupils is associated with better results.

Overall, the combined results of the UWEZO and EGRA/EGMA assessments highlight general difficulties in reading fluency and comprehension, where performance in Kiswahili is poor, but results in English are twice as weak, and pupils have particular difficulty in all but the most straightforward numeracy exercises.

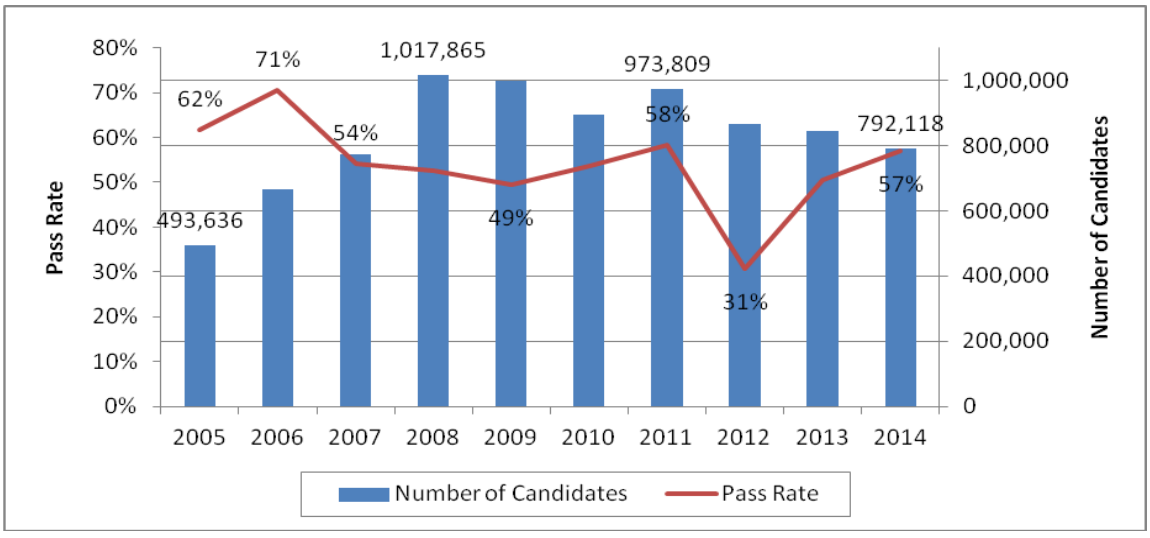
These results clearly point to the great scope to improve the general level of teaching quality in the early grades of primary. Children are not reaching the expected level of learning, and this would appear to be related more to the way they are taught than the content they are expected to learn, with too much focus on memorization, and too little on engaging with understanding. This has been highlighted in the BRN-Ed programme, which includes a National Key Results Area focusing on the improvement of pupils mastery of the 3Rs in Standards I and II through the implementation of skills assessments and the training of teachers (BRN, 2013).

PSLE

The national primary school leaving examination (PSLE) is sat by Standard VII pupils, to validate their completion of the primary cycle. After significant growth in participation between 2005 and 2008-09, when the number of candidates doubled to peak at close to 1 million, participation has since witnessed a global downward trend, albeit with the exception of in 2011, with under 800,000 pupils sitting the examination in 2014 (See Figure 5.3).

Figure 5.3: PSLE Candidates and Average Pass Rate, 2005-14

Number of Candidates and Percent



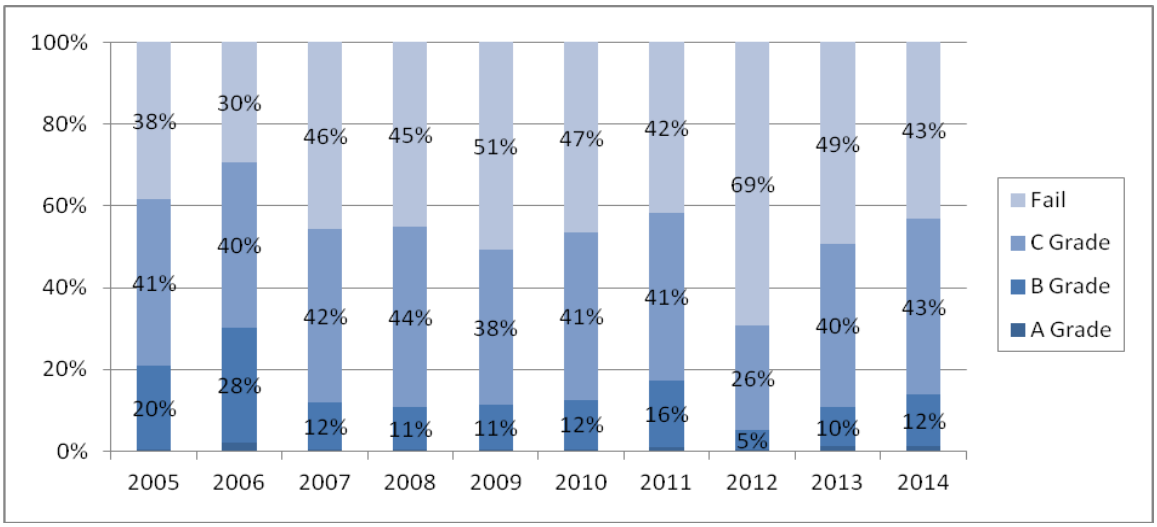
Source: BEST, 2014.

The pass rate has remained fairly stable over the 2009-14 period, fluctuating between 50 percent and 60 percent, with the exception of 2012, when it dropped abruptly to just 31 percent. This initially suggests that just over half (57 percent in 2014) of those pupils reaching the end of the primary cycle have acquired the foundation skills and knowledge expected of them at this level, and required for them to successfully proceed to O-Level secondary. This level of success is also falling well short of the BRN-Ed National Key Results Areas target pass rate, of 80 percent (BRN, 2013).

It is to be noted however that beyond its function of assessing learning outcomes, the PSLE is also used to regulate the size of the cohorts continuing their education to O-Level secondary. The greatest number of pupils to succeed at the PSLE in any given year was in 2011, when over 567,000 pupils achieved a pass. After the significant drop in 2012, to just 266,000 pupils passing, the number increased to 451,000 in 2014. It is therefore helpful to gain further perspective of the distribution of PSLE candidates according to the quality of the grades they achieve (See Figure 5.4).

Figure 5.4: Distribution of PSLE Results, by Grade, 2005-14

Percent



Source: Sumra and Katabaro, and BEST, 2014.

The figure highlights the following findings:

- The level of the vast majority of those pupils who pass the exam is mediocre, about 75 percent receiving a C grade, on average. This share has remained fairly constant over the period, representing approximately 40 percent of all candidates.
- The share of good pupils, receiving either an A or a B grade has been very volatile, ranging from a high 30 percent in 2006 to a low 5 percent in 2012. Since then it has risen to 14 percent, in 2014.
- The share of very good pupils receiving an A grade is slim, having remained below 1 percent over the 2007-12 period, but has recently risen, to reach 1.3 percent in 2014.

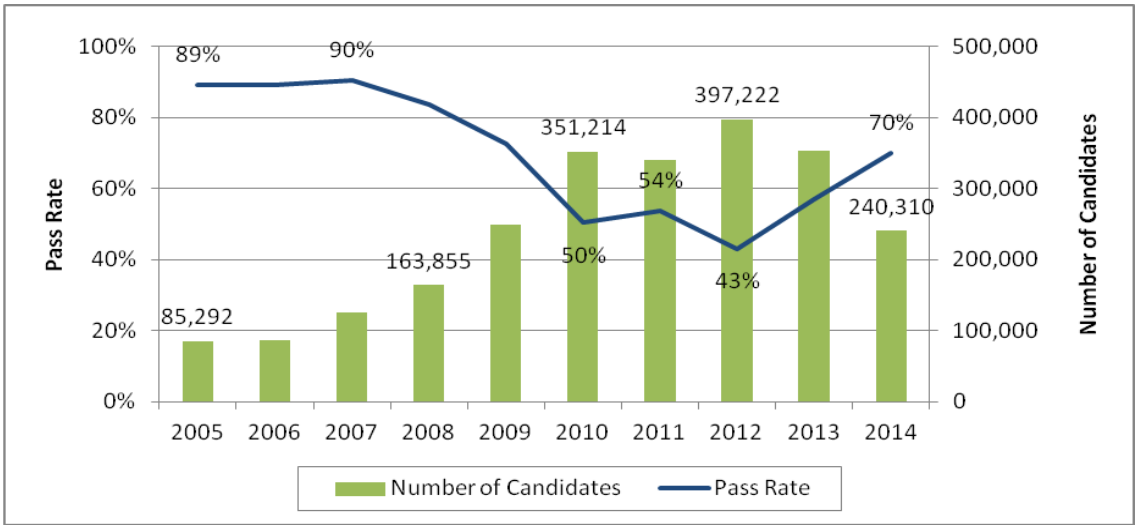
Overall, the impression is that quality in primary education is elusive. It would be easy to conclude that 4 in 10 pupils who sit the PSLE finish primary as illiterate, and the average level of performance of those who do pass the exam is poor. Although the above trends suggest a gradual improvement in the quality of teaching and learning since 2012, that year epitomized poor performance in many respects, and performance levels in 2014 are still marginally lower than they were in 2011.

CSEE

The Certificate of Secondary Education Examination (CSEE) is administered at the end of O-Level secondary. Candidates sit between seven and ten subjects. The CSEE is open to private candidates that register directly at the central level, but the data presented in this section does not include them. The number of school candidates sitting the exam witnessed an exponential increase over the 2005-10 period, after the implementation of the first SEDP, from 85,000 to 351,000. Over the past five years, participation levels have been variable, and in 2014 fell back to their level of 2009, with just 240,000 candidates presenting the exam (See Figure 5.5).

Figure 5.5: CSEE School Candidates and Average Pass Rate, 2005-14

Number of Candidates and Percent



Source: BEST, 2014.

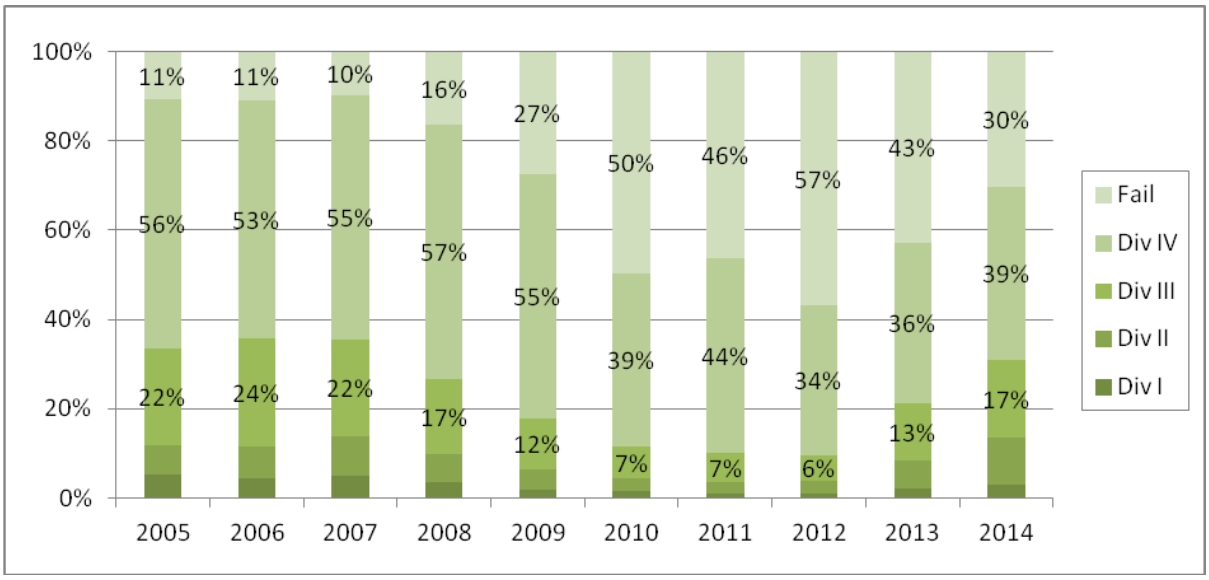
The average pass rate has followed a trend that is almost precisely the opposite: it dropped from 89 percent in 2005 to a low 50 percent in 2010, and has fluctuated since. It has however improved since 2012 when it hit an all-time low of 43 percent, to 70 percent in 2014. The fact that the pass rate systematically drops when the number of candidates rises, and improves when the number of candidates drops, suggests that in years where participation is lower, only the best pupils are encouraged to sit the exam. This insight might in particular explain both the fall in numbers and the rise in the success rate since 2012, as schools feel compelled to restrict access to the CSEE to the most capable pupils, in order to improve their ranking.

As with the PSLE, the CSEE is also used to regulate pupil flows to the next cycle, A-Level. The distribution of results may therefore provide more reliable information on pupil performance than the average pass rate. Figure 5.6 highlights similar trends to those noted for the PSLE:

- The vast majority of those who pass the exam obtain a Division IV, which is the pass grade. They have represented at least 60 percent of all passes over the 2005-14 period, and closer to 80 percent between 2009 and 2012.
- The share of candidates achieving good results (a Division I to III), is therefore minimal. It also deteriorated considerably between 2007 (36 percent) and 2012 (under 10 percent), although an improvement has been noted since, as 31 percent of candidates achieved a good result in 2014. This in fact represents the best distribution of outcomes among those who passed the exam of the entire period considered here, with over 40 percent of passes achieving a Division I to III.
- A slim share of all candidates obtain excellent results. Those achieving a Division I have ranged between about 5 percent, over 2005-07 and close to 1 percent, in 2011 and 2012. Just 3 percent of candidates obtained this result in 2014.

Figure 5.6: Distribution of CSEE Results, by Division, 2005-14

Percent



Source: BEST, 2014.

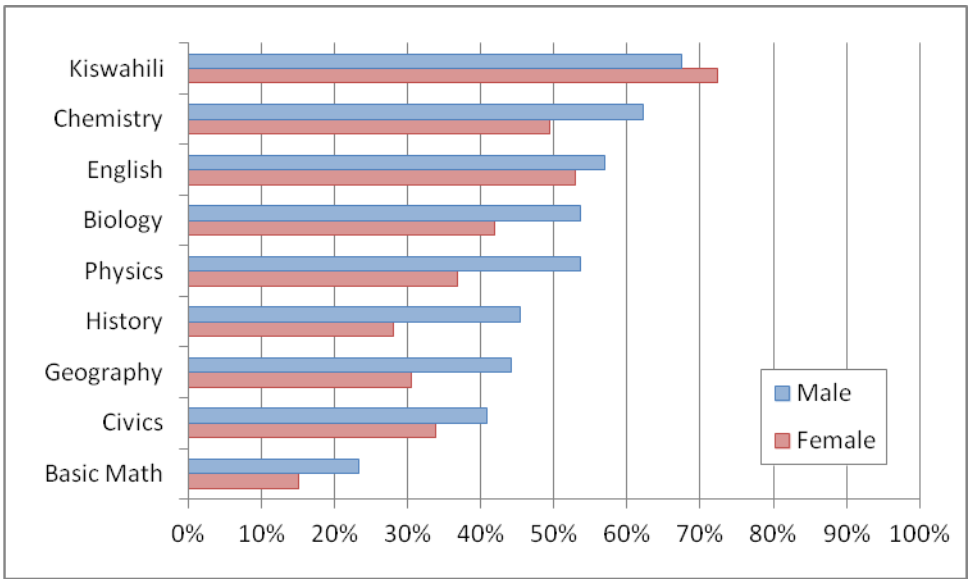
A review of data for 2013 and 2014 by gender reveals that, although the pass rate for boys is only marginally higher than that of girls (71 percent and 69 percent respectively in 2014), the distribution of performance is significantly different. Greater proportions of boys achieve each of the Divisions I to III than girls (overall, 35 percent and 25 percent respectively, in 2014), whereas the share of girls whose performance is average (Division IV) is greater than that of boys.

The pass rates by subject reveal the areas where learning is most and least effective. Kiswahili is overwhelmingly the subject in which performance is the best, with an average pass rate of 70 percent (See Figure 5.7). English and Chemistry are the only two other subjects where more pupils pass than fail, on average, although by a slim margin. Basic Mathematics is the subject where performance is the poorest, with a pass rate of just 19 percent. Considering this, it is surprising that success levels in the other sciences, Physics (47 percent), Biology (48 percent) and Chemistry (57 percent) are in fact comparatively good, standing above the average subject pass rate of 45 percent.

Boys outperform girls in all subjects but Kiswahili, where a slightly higher share of girls passes the exam: 72 percent, against 67 percent of boys. The gender gap is similarly slight in English, although in favour of boys. In Basic Mathematics, Geography, History and Physics, the pass rate of boys is approximately 1.5 times higher than that of girls, and in Biology and Chemistry, it is about 30 percent higher.

Figure 5.7: Pass Rates in CSEE Subjects, by Gender, 2014

Percent



Source: BEST, 2014.

Considering the generally low level of pupils' learning outcomes throughout basic education, it seems urgent to recognize and address the causes of low quality. Where doubt persists about the precise determinants, the implementation of a continuous assessment mechanism would at least help to identify weak pupils, subject areas and grades, and offer targeted remediation before the difficulties are compounded to the extent that they lead to dropout or school failure.

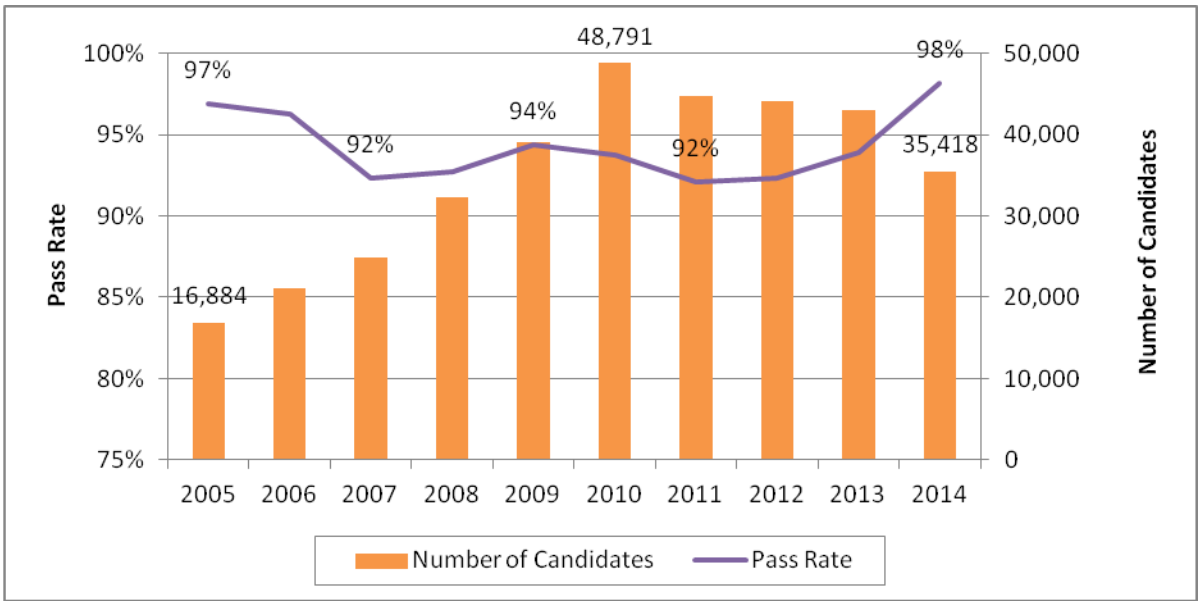
ACSEE

The Advanced Certificate of Secondary Education Examination (ACSEE) is sat at the end of the upper secondary A-Level cycle, mainly to qualify candidates for higher university education. After a

threefold increase in participation in this exam over the 2005-10 period, to reach a high of almost 49,000 candidates, the number of school candidates has since gradually dropped, to about 35,400 (See Figure 5.8). This drop in participation is all the more significant as A-Level enrollment grew by 7 percent between 2010 and 2014, and higher university enrollment continues to expand.

Figure 5.8: ACSEE School Candidates and Average Pass Rate, 2005-14

Number of Candidates and Percent



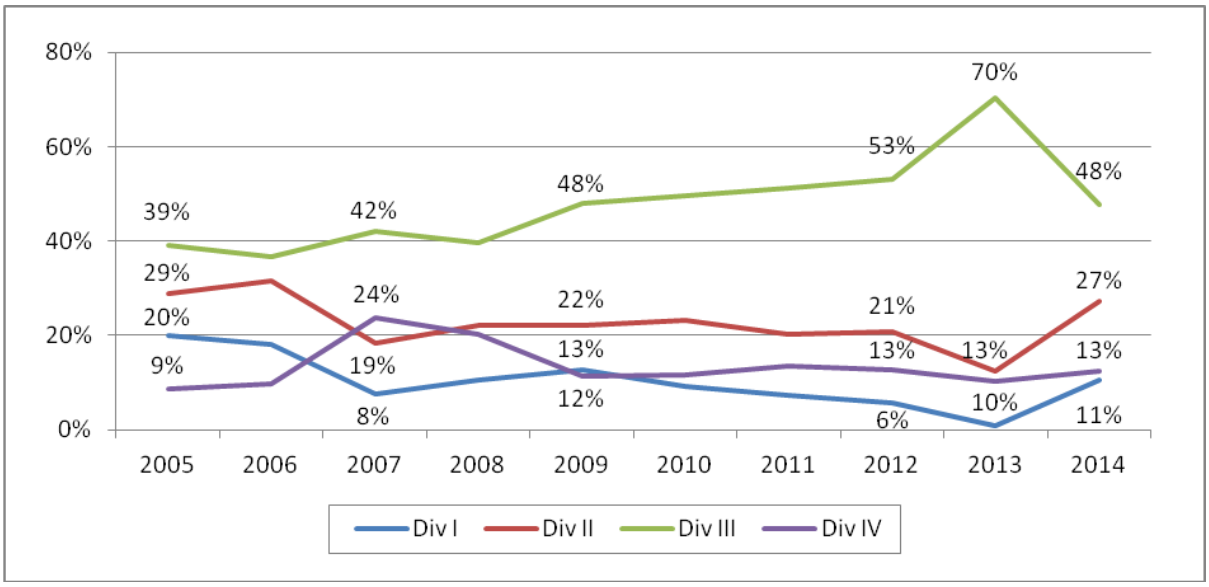
Source: BEST, 2014.

ACSEE pass rates are both generally high and relatively stable over time, having evolved within the 92 percent to 98 percent bracket over the 2005-14 period. Significantly, no drop in candidates' performance was noted in 2012 as for the PSLE and the CSEE, pass rates having been on an upward trend since 2011, and reaching their highest peak in 2014 (98 percent success rate). This globally good performance is generally attributed to the fact that only the most academically-minded, fortunate and highly motivated students reach A-Level in the first place.

Furthermore, the vast majority of candidates obtain reasonable results (See Figure 5.9). The combined share of those achieving a Division I to III grade has historically fluctuated around the 80 percent mark, and stood at 86 percent in 2014. However, the share of candidates achieving good results (Divisions I and II) has shown a general declining trend since 2005/06, from close to 50 percent, to just 13 percent in 2013, just as the share of those achieving average outcomes has increased concomitantly, from 48 percent in 2005 to over 80 percent in 2013. Although these trends may have been reversed in 2014, the general picture provided is one of deteriorating quality.

Figure 5.9: Distribution of ACSEE Results, by Division, 2005-14

Percent



Source: BEST, 2014.

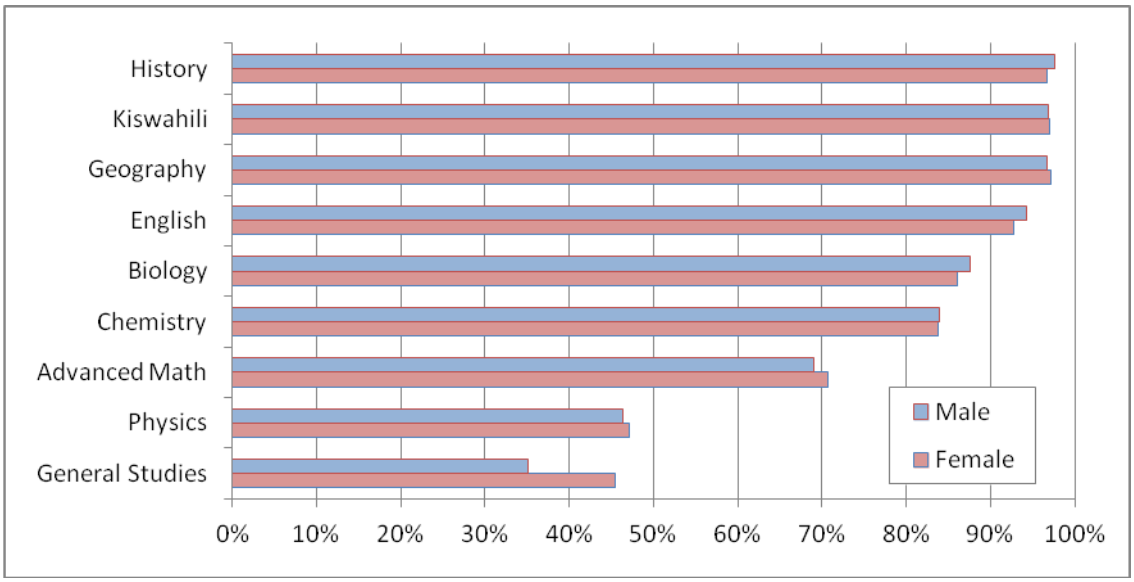
This overall high level of performance at the ACSEE examination, both in terms of the success rate and the distribution of candidates according to their results, is of course reflected in generally high pass rates in individual subjects (See Figure 5.10). The average subject pass rate is 79 percent in 2013 for the ACSEE, against 45 percent for the CSEE. In History, Kiswahili, Geography and English, over 90 percent of candidates were successful, and over 85 percent of candidates passed two further subjects. The least success was noted in General Studies, with just 38 percent passing.

The comparison of Figure 5.10 with Figure 5.7 (CSEE subject pass rates by gender) calls for the following further remarks:

- With the exception of General Studies, where the success rate of girls is 10 percentage points higher than that of boys, gender disparities are barely significant. In all other subjects they represent less than 2 percentage points, and no particular pattern is apparent: girls outperform boys in four subjects, including Kiswahili and Math, and boys outperform girls in the four remaining subjects, including English and Biology.
- The comparative ranking of subject success rates has evolved substantially. Whereas at the CSEE, Chemistry and Biology ranked among the four top subjects, and History and Geography were among the weaker subjects, with success rates well below average, at the ACSEE this situation is reversed. Pass rates for History and Geography are on par with that of Kiswahili, at 97 percent, whereas performance in Chemistry and Biology has weakened, comparatively. Although Math is still not one of the strongest subjects at the ACSEE, it is worthy of note that the pass rate is considerably improved at this level (70 percent, against 20 percent at the CSEE).

Figure 5.10: Pass Rates in ACSEE Subjects, by Gender, 2013

Percent



Source: BEST, 2013.

Although these findings suggest that the higher quality of learning outcomes at A-Level may in great part be due to pupil characteristics, and in particular their initial level of learning and knowledge, the variable levels of performance in certain subjects throughout secondary education indicate that teaching effectiveness is heterogeneous, between subjects and cycles. The two subjects that appear to require particular attention are physics and math, in as much as comparatively weak learning in these subjects at O-Level is not compensated for during A-Level, and success in the former may to a large extent rely on pupils' levels of competence in the latter.

Curriculum Issues and Challenges

In the context of the preparation of this ESA, a study was carried out in collaboration with UNESCO's International Bureau for Education, to appraise the key issues and challenges relating to the curriculum in mainland Tanzania (Ssereo, 2015). It specifically reviewed four key areas, being education policy, curriculum orientation, curriculum profile, and learner experiences of the curriculum. The key findings and recommendations are briefly presented in this section.

The basis of the school curriculum is the Education and Training Policy (ETP), which clearly defines focus in terms of the acquisition of useful knowledge and skills, for self-reliance, further education and training, employment, productivity and ultimately, economic development.

The Tanzania Institute of Education (TIE) holds responsibility for the design, development, monitoring and evaluation of the curricula for preprimary, primary, secondary and teacher education. In fact, several other institutions (NACTE, NECTA, MoEVT Inspectorate and the Agency for Development of Education Management) are directly involved in different aspects, such as design

and development, teacher qualification and training, assessment and inspection. There are several other uncoordinated interventions by various education partners, such as the training of Standard I and II teachers in curriculum implementation using non-TIE materials by EQUIP, or the development of a teacher education curriculum by NACTE in parallel to the accreditation and regulation of teacher college diploma-level training.

A similar situation is found in terms of the development, production and distribution of pedagogical materials and textbooks, that are technically the responsibility of TIE, but have been partially assumed by/delegated to several other actors, due to financial and logistical constraints.

Over 2005-07 the curriculum orientation for primary, secondary and TVET changed, as competency-based approaches were adopted to enhance the focus on learners, while the curricula of higher education and teacher education remained subject-based.

These different policy and institutional arrangements, and their implementation, have highlighted a number of issues and challenges:

- The education system currently lacks a holistic curriculum vision, formalized in a single curriculum framework, to ensure internal coherence between the different sub-sectors' components. This is particularly important to further develop learners' horizontal and vertical mobility within and among different streams, and in the context of the transition to compulsory basic education. This lack of vision is compounded by the fact that curricula are developed by subject specialists, who are not curriculum professionals, and the limited scope for structured consultations and the mobilization of research in curriculum innovation, which impact on the relevance of content.
- The translation of the curriculum into pedagogical and learning materials is very imperfect, due to the great number of players involved in the process and the weak level of coordination between pedagogical and administrative action plans and institutions, which lead to further dispersal of already limited resources. As a result, textbooks are often not aligned with curriculum content or prescribed teaching approaches, and are belatedly available in insufficient numbers.
- Upgrading teachers' competencies to effectively adapt to the new curriculum content and approaches requires significant investment in the reorientation of teacher training programmes, through teacher colleges and universities. This is a lengthy process, and efforts have not reached universities yet. Great disparities in teachers' levels of professional development persist, that translate into classroom practices remaining focused on memorization, despite the prescribed transition to competency-based approaches. The findings from the Tanzania 2012 Service Delivery Indicators study show that only 42 percent of teachers (75 percent in math, and 11 percent in language) master the curriculum they teach (World Bank, 2012a).
- The inequities and disparities in implementing the curriculum orientation are difficult to precisely identify due to the slow adaptation of effective monitoring practices. On the one hand, the supervision of teaching practices in class, to be carried out by school inspections, is limited, and little feedback is provided to TIE or the schools or teachers themselves, as a basis to improve performance. On the other, the structure of examinations in basic

education has yet to be adapted to the competency-based approach, which would involve a continuous (formative) assessment component (TIE recommends 40 percent), rather than the current end of cycle PSLE and CSEE examinations.

Box 5.1: Teacher Absenteeism

A World Bank study found that on any given day, 23 percent of teachers (20 percent in rural and 36 percent in urban areas) were not in school. The study further indicates that absence from the classroom, even when teachers were in school, was more pronounced (53 percent). The two measures combined, estimate that pupils were taught for only 2 hours 04 minutes of the required 5 hours 12 minutes, on average per day (World Bank, 2012a). This means that effective teaching time-on-task is barely 40 percent, or that 60 percent of the curriculum is not covered.

A Tamasha study found that in schools with higher pupil-teacher ratios, students had fewer classes (Tamasha, 2012, cited in Sumra and Katabaro, 2014). This is particularly true in secondary schools where it is not easy for teachers to teach subjects outside their areas of specialization. The study found that on average students were taught 2.5 classes (periods) on the day of the survey.

On the basis of these findings, some key recommendations were formulated in the report to improve educational quality:

(i) Enhance the existing vision of the curriculum, to become more holistic, qualitative and inclusive, including not only products (what to learn) but also processes (how to teach).
(ii) Develop a more systemic approach to curriculum development, to ensure better alignment between education outcomes and national aspirations, encompass the full range of educational parameters (foundations, contents, sequencing, conditions, methods, results, management, evaluation of teaching and learning, etc.) and provide coherence between interdependent ministerial bodies (policy-making, educational planning, curriculum design, service delivery, student assessment, inspectorate, etc.)
(iii) Assess and streamline the mandates, roles and responsibilities of TIE, NACTE and ADEM, and strengthen the coordination role of the Commissioner for Education within the Ministry.
(iv) Develop and implement a national qualification framework, a unique curriculum framework and unique core curriculum, to promote consistency between different stages (from early childhood to tertiary and lifelong learning) and streams of education (general, TVET, nonformal, informal, etc.).
(v) Increase the attention given to teacher preparation, training and continuous professional development to ensure that the curriculum is understood and effectively taught by qualified and motivated staff, grounded in subject knowledge, using appropriate pedagogical approaches, and aware of learner characteristics and the social and cultural context.
(vi) Allocate adequate resources to build capacities in curriculum development, planning, implementation and assessment, at the central, decentralized and school levels, through the

masters in curriculum design and development programme jointly implemented by OUT, TIE and UNESCO.

(vii) Ensure that learners' experience of the curriculum is not tarnished by the quality of their physical environment, including school infrastructure and learning materials, modes of school and class organization, or teachers' behaviour towards them, including both personal care and professional concern; and that learners are further supported by positive attitudes towards education on behalf of parents and the community.

Technical and Vocational Learning Outcomes

For TVET, the available data at the time of writing provides some limited perspective on the quality of learning. The overall graduation rate in government and nongovernmental technical education should be considered in the light of the duration of each of the courses/awards offered. Although a global year-on-year drop is noted, from 30 percent in 2012/13 to 24 percent in 2013/14, further historical data is required to be able to deduce a historical trend (See Table 5.1). At any rate, the graduation rate for the postgraduate diploma seems to suggest that teaching at this award level is of an acceptable standard, whereas concerns are raised by the low level of graduation of masters, postgraduate certificate, bachelors' degree and ordinary diploma candidates, especially in 2013/14.

Table 5.1: Government and Nongovernment Technical Education Graduation, by Award, 2012/13 and 2013/14

Number of Learners and Percent

	Enrollment		Graduates		Graduation Rate	
	2012/13	**2013/14**	**2012/13**	**2013/14**	**2012/13**	**2013/14**
Certificate	55,652	60,555	18,484	17,739	33.2%	29.3%
Ordinary Diploma	35,389	36,262	8,975	7,682	25.4%	21.2%
Advanced Diploma	1,297	2,880	1,845	913	142.3%	31.7%
Bachelors' Degree	10,460	7,344	2,926	1,305	28.0%	17.8%
Postgrad. Certificate	7,410	7,522	453	76	6.1%	1.0%
Postgrad. Diploma	1,360	1,134	499	612	36.7%	54.0%
Masters	1,512	463	476	6	31.5%	1.3%
Doctorate	—	—	58	33	—	—
TOTAL	**113,080**	**116,160**	**33,716**	**28,366**	**29.8%**	**24.4%**

Source: BEST, 2013 and 2014.

In vocational education and training, the share of graduates witnessed a substantial drop in 2009 and 2010, from 85 percent in 2009 to about 75 percent (See Figure 5.11). In 2011 however the success rate improved to about 91 percent, and has since remained relatively stable at this level. The gender gap that was apparent in 2008-09, with girls' pass rates falling 15 percentage points short of boys', was briefly and slightly inverted in 2010, before becoming virtually insignificant. Since 2011, no particular gap in performance by gender is noticeable.

Figure 5.11: VET Trainee Graduation Rate, 2008-13

Percent



Source: BEST, 2013 and 2014.

Pass rates by subject are fairly homogenous, lying within 10 percentage points of the average for all subjects except Laboratory Technology in 2013/14, and Clothing & Textiles and Construction in 2012/13. Year-on-year improvements are noted in all subject areas, except for Agriculture & Food Processing and Laboratory Technology.

Further Thoughts

The quality of nonformal education is more complex to assess. However, it is thought to be low, given that budget resources are devoted overwhelmingly to formal primary education, meaning that there is a severe shortage of teachers/facilitators/tutors, who are often untrained or voluntary, as well as teaching and learning materials.

In terms of the quality of the alternative instruction that COBET delivers, it suffers from low support in some districts, as budget resources are devoted overwhelmingly to formal primary education. Again, teachers are often untrained or voluntary – indicating that the vulnerable nature of children who have dropped out of school is not given any special attention. It is also worrying that some COBET learning materials are incompatible with the curriculum of primary schooling into which learners are to be mainstreamed (MoEVT 2012).

At the higher education level, a number of initiatives are underway, aimed at improving the quality of learning outcomes:

- Student Loan Programme (including a book allowance)
- Managed Libraries

- e-learning: Digital Learning Resources (DLR) and Open and Distance Learning (ODL)
- University Teaching and Learning Improvement Programmes (UTLIP) for lecturers

Building a national student learning assessment system is crucial in the current context of curricula changes and decentralization, to track learning outcomes by subject on a student by student basis and link data to past performance and to school/class inputs, thus facilitating the management of education quality.

Setting clear benchmarks for early grade core learning outcomes (especially in math and literacy) will help teachers and parents to monitor pupils' progress and weaknesses, and enable timely remedial measures.

The transition to English as the main teaching language in secondary education should be reviewed, to ensure that students master the language adequately by the level they are expected to use it to learn.

Chapter 6: Equity

The imperative of equity in education, aiming to provide all children with as equal chances of schooling as possible, is based on the dual concern for social justice and economic efficiency. Not only does education provide individuals with economic and social wellbeing in adulthood, that all citizens are entitled to, but equitable schooling opportunities are positively related to economic efficiency, by allowing the most capable individuals, regardless of their individual characteristics, to access the top levels of education.

Currently available data will allow a brief review of equity in education from the perspectives of gender, regional disparities and the allocation of education resources. The primary focus will be on access and participation, although some consideration will also be given to learning outcomes.

Gender Disparities in Education Coverage

Although more girls complete primary than boys, they are increasingly under-represented at later levels, particularly in government schools, as well as in teacher training and technical and vocational education.

General Formal Education Coverage

This first section will consider disparities in the access of girls and boys to general education, their progression through the different cycles, and their participation in several other education streams such as adult and nonformal education and TVET, where data allows.

Gender parity is most easily appraised by the calculation of an index that compares a given indicator of participation for girls with the same indicator for boys. Due to inevitable variations in individuals' participation in education over time, for a plethora of reasons that may bear no relation to systemic or policy considerations, parity is usually considered to be achieved when the index falls within the 0.95 to 1.05 range. An enrollment gender parity index (GPI) value of 0.90 indicates that 9 girls are enrolled for every 10 boys, whereas a GPI of 1.10 indicates that 11 girls are enrolled for every 10 boys. Where the parity index is computed on rates, the respective weights of girls and boys in the appropriate population group are effectively taken into account.

The profile of gender parity in participation in general education has evolved in recent years, on the basis of a comparison of the GPI values provided by the 2011 ESA (based on the 2007 HBS) and those computed for 2013 on the basis of BEST data (See Table 6.1). The primary level is the only one where no particular change is noted. Gender parity had been achieved in 2006, and has apparently been

maintained since, the GPI for 2003 standing at 1.02, very close to perfect parity. However, for every other cycle, significant changes are apparent. At the preprimary level, a positive evolution in favour of girls is noted, as parity has now been achieved, the GPI having improved from 0.91 to 1.02 over the period.

At postprimary levels however, disparities have grown. Although at O-Level the slip is slight, the GPI having dropped from 0.95 to 0.93 over the period, it could be interpreted that gender parity, once achieved, has now been lost. In fact, this evolution reflects a longer-term trend. In 2000, the GPI at O-Level stood at 1.13, indicating that the level of disparity in access to this cycle was high, and in favour of girls. But over the past 15 years, girls' enrollment has dropped gradually, initially to align with that of boys, achieving reasonable parity circa 2006, but then further, tilting the imbalance in favour of boys. In this light, it seems critical to arrest the trend.

Upper secondary is the level where the evolution has been the starkest, as the GPI has virtually halved, from 0.83 in 2006 to 0.43 in 2013. It is also the general education cycle where disparities are the greatest: only 4 girls are enrolled for every 10 boys in 2013, against 8 girls back in 2006. At higher university education, disparities have also broadened and are very important, although slightly less than at A-Level. The GPI has dropped from 0.65 to 0.54 over the period. Only half as many girls now attend university as boys.

Table 6.1: Gender Parity Indexes in Gross Enrollment Ratios, by Cycle, 2009 and 2013

Parity Indexes

	2006	2013
Preprimary	0.91	1.02
Primary	1.04	1.02
O-Level	0.95	0.93
A-Level	0.83	0.43
Higher	0.65	0.54

Source: UNESCO, 2011 for 2006 data; BEST, 2013 and authors' computations for 2013.

The current gender imbalance is portrayed in the educational pyramid, presented in Figure 6.1 below. At each level, the size of the trapezoidal shapes for boys and girls illustrate their respective levels of enrollment, whereas the shape of the trapezoids reflects their admission (the width of the base) and completion (the width of the top) for each cycle.

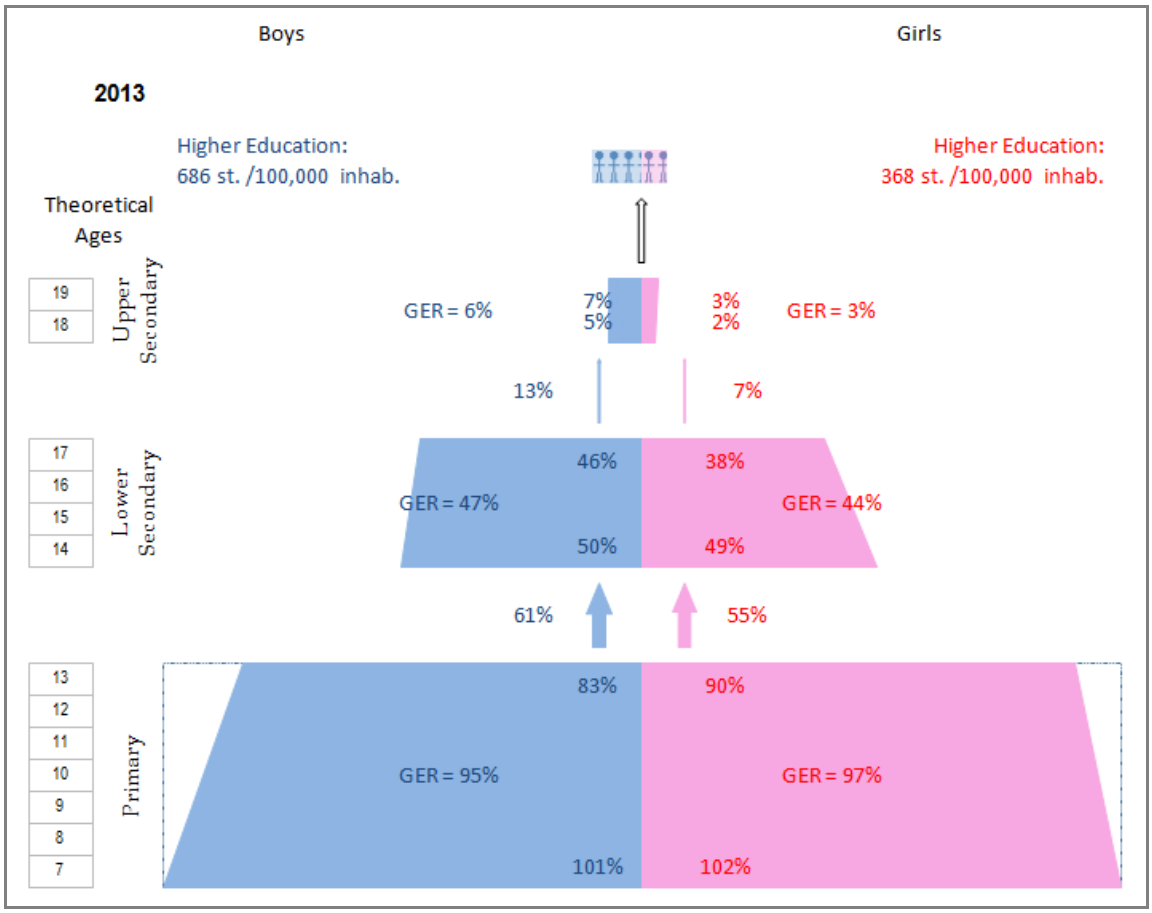
At a glance, the pyramid highlights the above findings in terms of the parity indexes, while providing further understanding of the causes of the noted disparities:

- Girls enrollment at the primary level (GER of 97 percent) is marginally greater than that of boys (GER of 95 percent). This is clearly related to a higher level of primary retention for girls. Although the access rates to the cycle are similar for both genders (marginally above 100 percent), girls completion of this level (90 percent) is higher than that of boys (83 percent).

- Beyond this point in their schooling careers, the imbalance is inverted, in favour of boys. Due to the lower rate of transition to O-Level secondary for girls (55 percent, against 61 percent for boys), a marginally slighter proportion of girls accesses lower secondary. Girls are then more prone to dropout at this level, so that their completion rate is just 38 percent, against 46 percent for boys. Over the full cycle, this translates into a slight disadvantage in participation for girls, with a GER of 44 percent, against 47 percent for boys.
- This disparity is then compounded by the respective transition rates to A-Level secondary. Although both are low, that of boys (13 percent) is twice as high as that of girls (7 percent). Considering that retention at this level is extremely high (as seen in Chapter 3, dropout is under 3 percent), overall A-Level coverage is twice as high for boys (GER of 6 percent) as for girls (3 percent).
- Over twice as many boys follow university education as girls.

Figure 6.1: Educational Pyramid, by Gender, 2013

Percent and Number of Students per 100,000 Inhabitants



Source: BEST, 2013 and authors' computations. Elaborated by the Pôle de Dakar/IIEP UNESCO.

In brief, different issues affect each gender at different education levels. Comparatively speaking, boys are particularly prone to dropout in the course of primary education, whereas girls' transition rates to O-Level and then on to A-Level secondary education are much weaker, and they are more

prone to dropout in the course of O-Level secondary. This in turn has a trickle-down impact on their access to both upper secondary and higher education.

One of the reasons flagged for girls' comparatively weak participation in postprimary education is that they are required to terminate their studies when they become pregnant at primary and secondary school levels. Although from an equity perspective this situation raises serious concerns, it is not immediately possible to confirm that the extent of early pregnancy is such that it could indeed affect enrollment ratios. BEST 2013 data indicates that 4,700 girls dropped out of secondary school due to pregnancy in 2012, which represents less than 0.5 percent of enrollment. Admittedly, due to the punishing nature of the policy, many other pregnant girls may have chosen to cite different reasons for leaving school. Fortunately, there are expectations that the guidelines for implementing the new Education and Training Policy (2014) will include provisions to allow girls to return to school after delivery.

While the above findings relate indiscriminately to both government and nongovernmental schools, a brief review of the level of girls' participation in each reveals some interesting findings (See Table 6.2). At the preprimary and primary levels, girls constitute a majority of pupils in government schools, by a very fine margin, whereas in nongovernmental schools the inverse is true. This has not changed significantly over the 2009-13 period, and the respective imbalances are not greatly significant.

Table 6.2: Share of Female Enrollment, by Level and Type of School, 2009 and 2013

Percent

	2009		2013	
	Govt.	**Nongovt.**	**Govt.**	**Nongovt.**
Preprimary	50.3%	49.0%	50.1%	48.8%
Primary	49.7%	48.7%	50.6%	49.1%
O-Level	43.9%	51.9%	47.8%	52.9%
A-Level	38.9%	44.6%	28.3%	46.2%

Source: BEST, 2013 and authors' computations.

At the secondary level however, the lower enrollment rates for girls noted above are clearly related to their low attendance of government schools, in particular. Indeed, at O-Level, girls in fact outnumber boys in nongovernmental schools (53 percent of pupils are girls in 2013), meaning that the lower female GER noted above, relative to the male GER, is entirely and disproportionately explained by their comparative absence from government schools. At A-Level, although girls represent less than half of enrollment in nongovernmental schools (46 percent), they represent well under a third of pupils in government schools (28 percent). Furthermore, this represents a drop of 10 percentage points since 2009, when 39 percent of A-Level pupils in government schools were girls.

In a context where the share of girls in secondary education has otherwise been on the increase, these findings call for careful review and analysis. They suggest that for girls having reached a certain age (that of puberty at least, after completion of primary education), the formal governmental

schooling system fails to provide for their specific needs, that the shortcomings are greater with successive levels of schooling, and that they have worsened over time.

Box 6.1: Special Needs Education

An equitable education system should provide access and quality learning opportunities to all, including children with disabilities. Special needs education is an integral part of education in Tanzania. The government is currently running educational services for learners with special needs through special schools, integrated units and inclusive schools. Each district council has an inclusive education programme, delivered through regular public schools, for children with moderate disabilities.

Ongoing educational support must be provided to minimize or remove the barriers that learners may experience. Some such types of support are: (i) the provision of specialized equipment, learning/teaching materials and support devices; (ii) the deployment of specialist teachers; and (iii) the adaptation of learning environments to make them adequate and appropriate for all learners.

	Formal Education				TVET		
	Preprimary	**Primary**	**Secondary**	**Subtotal**	**Technical**	**Folk&Voc.**	**Subtotal**
Albino	126	1,861	556	**2,543**	39	72	**111**
Autistic	70	746	—	**816**	—	—	**0**
Deaf/Mute	199	4,158	583	**4,940**	27	11	**38**
Deaf-Blind	46	276	279	**601**	16	12	**28**
Mentally Impaired	439	3,631	222	**4,292**	4	14	**18**
Multi Impaired	32	428	65	**525**	2	1	**3**
Physically Impaired	554	12,061	3,051	**15,666**	104	41	**145**
Visually Impaired	109	1,423	577	**2,109**	32	46	**78**
Other	—	—	—	**—**	—	15	**15**
TOTAL	**1,575**	**24,584**	**5,333**	**31,492**	**224**	**212**	**436**

Currently, the formal education system caters for 31,500 pupils with disabilities, including through primary and secondary schools. This number has varied little over the past five years, from 29,300 in 2010. The number of teacher trainees preparing the certificate of special education increased from 138 in 2009 to 419 in 2013.

Children with severe disabilities' parent/guardians are advised to send them to special education schools or units, of which there were 242 as of March 2013.

The opportunities for further education for these learners are unclear. TVET currently receives a small share of them (436) equally distributed between technical and folk and vocational education.

Source: BEST, 2013.

Access to Teacher Education

A brief review of levels of gender parity in teacher education is relevant here. Not only should women have equal access to the teaching profession, or access to training once in it, but a certain degree of gender balance in the teaching profession is desirable, as the likelihood of having a female teacher has been demonstrated to have a direct impact on the decision to enrol or keep girls in school. As such, it is an indirect factor of equity in girls' access to basic education.

Table 6.3: Gender Parity in Teacher Education, by Type of Course, 2009-13

Parity Indexes

	2009	2010	2011	2012	2013
Teacher Education	*0.94*	*0.83*	*0.85*	*0.78*	*0.72*
Preservice Diploma	0.65	0.69	0.60	0.64	0.60
In-service Diploma	0.46	0.64	0.51	0.45	0.47
Preservice Certificate	1.16	1.02	1.02	0.82	0.79

Source: BEST, 2013 and 2014 and authors' computations.

The general trend over the 2009-13 period is one of relative decline in the participation of women in teacher education, compounding a situation where a slight gender imbalance was already noted (See Table 6.3). All types of training combined, the GPI gradually slipped from 0.94 to 0.72, indicating that just 7 women are trained for every 10 men. This general trend conceals several levels and types of disparity:

- Female teachers are only half as likely as their male counterparts to follow in-service diploma training (GPI of 0.47 in 2013), a situation that has changed little over the period, with the exception of 2010 when a comparatively greater number were enrolled on such courses.
- The gender imbalance in enrollment in preservice training has grown over the period, be it for the certificate (the GPI having fallen from 1.16 to 0.79) or the diploma (the GPI having fallen more moderately, from 0.65 to 0.60).
- Of the two, disparities are greatest for the diploma, suggesting that women are far less likely to obtain jobs as secondary school teachers than as primary school teachers.
- The one type of training where women were comparatively advantaged, the preservice certificate (GPI greater than 1 over 2009-11, indicating that more women were enrolled than men), is also that where their comparative participation has dropped to the greatest degree.

Overall, these findings paint a rather negative portrait of women's access to teacher training. In particular, further research would help to establish the reasons for women's declining interest in the teaching profession, and identify those levers that would enable to reverse this unfortunate trend.

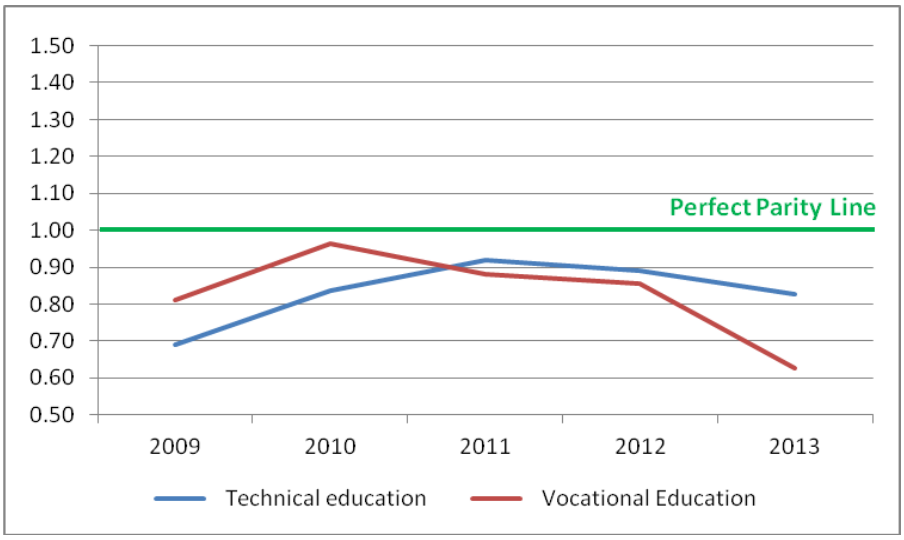
TVET Coverage

Girls have consistently been under-represented in TVET enrollment, be it in technical education or folk and vocational education, on average. As Figure 6.2 below shows, the only point gender parity can be considered to have been achieved was for folk and vocational education in 2010 (GPI close to 1, of 0.96).

Although girls' participation has varied according to the stream, the bell-shaped profile of both curves suggests that the subsector overall gained some appeal with girls/women until 2010, but lost it again after 2011. There is little difference in the level of female enrollment within folk and vocational education: the GPI for both FDCs and VTCs is close to 0.63, indicating that about 6 girls are enrolled in such courses for every 10 boys. The GPI for the number of graduates is identical, signalling that in their respective proportions, girls and boys are equally successful.

Figure 6.2: Gender Parity in TVET Enrollment, by Type, 2009-13

Parity Indexes



Source: BEST, 2013 and 2014 and authors' computations.

In technical education the situation in more nuanced, as gender parity is in fact almost perfect in nonhigher technical courses (GPI of 0.98), whereas the disparity is considerable in higher technical education (GPI of 0.60). In addition, although technical education is apparently less appealing to girls overall (GPI of enrollment of 0.83), there is near parity in graduation (GPI of 0.95). This effectively means that a greater share of those girls that enrol are successful than boys.

Access to Adult and Nonformal Education

Generally speaking, disparities in adult and nonformal education are limited (See Table 6.4 below). In COBET, after rising from 43 percent to 46 percent between 2009 and 2010, the share of female enrollment has remained fairly stable at that level, and no difference is noted between COBET I and

COBET II cohorts. Although this means that girls' enrollment is 8 percentage points less than that of boys, this does not appear to represent a situation of particular iniquity, in as much as the COBET courses' vocation is to mainstream children back into basic education, and a similar gap is apparent between girls and boys respective levels of dropout in the course of the primary cycle.

The effectiveness of COBET courses is however variable according to gender. The share of girls who are successfully mainstreamed into Standard IV, of 48 percent, is higher than their share of enrollment, reflecting the fact that a greater share of female participants (25 percent) achieve this particular outcome than the share of male participants (22 percent). However, greater shares of boys are mainstreamed into Standard V and Form 1, and accepted into vocational training.

Table 6.4: Female Participation in Adult and Nonformal Education Courses, by Type, 2009-13

Percent

	2009	2010	2011	2012	2013
COBET	*43.3%*	*45.8%*	*45.9%*	*46.3%*	*46.6%*
Cobet I					46.6%
Cobet II					46.6%
% Mainstreamed into Std IV					48.1%
% Mainstreamed into Std V					43.9%
% Mainstreamed into Form 1					42.3%
% accepted into VET					42.6%
ICBAE	*54.3%*	*51.2%*	*52.5%*	*52.1%*	*52.5%*
Basic Literacy					53.3%
Extension Activities					51.2%
Income Generation					53.9%
Life Skills					48.8%
Vocational Skills					59.3%
ODL					*53.5%*
Distance Learning Program					49.8%
Evening Program					54.0%

Source: BEST, 2013 and authors' computations.

Female participation in community-based adult education has represented over half of enrollment over the 2009-13 period, 53 percent on average, with only slight year-on-year variations. Women outnumber men to a greater extent in the vocational skills (59 percent of participants) and income generation (54 percent) programmes. In the basic literacy programme, the fact that they account for 53 percent of enrollment seems slight in the light of the gap in the adult literacy rate, which is 10 percentage points lower for women than for men (See Chapter 5). Future plans will clearly need to focus on providing greater opportunities for women in these programmes.

Similarly, female participation in open and distance learning courses has outweighed that of men. Although there is perfect gender equity in participation in the distance learning program, women represent 54 percent of participants in evening programs.

Regional Disparities in Access to Education and Training

The greatest disparities are apparent between regions, especially at the secondary level, where enrollment ranges from 14 to 91 percent. At the primary level, the rate of out-of-school children varies between 6 and 44 percent.

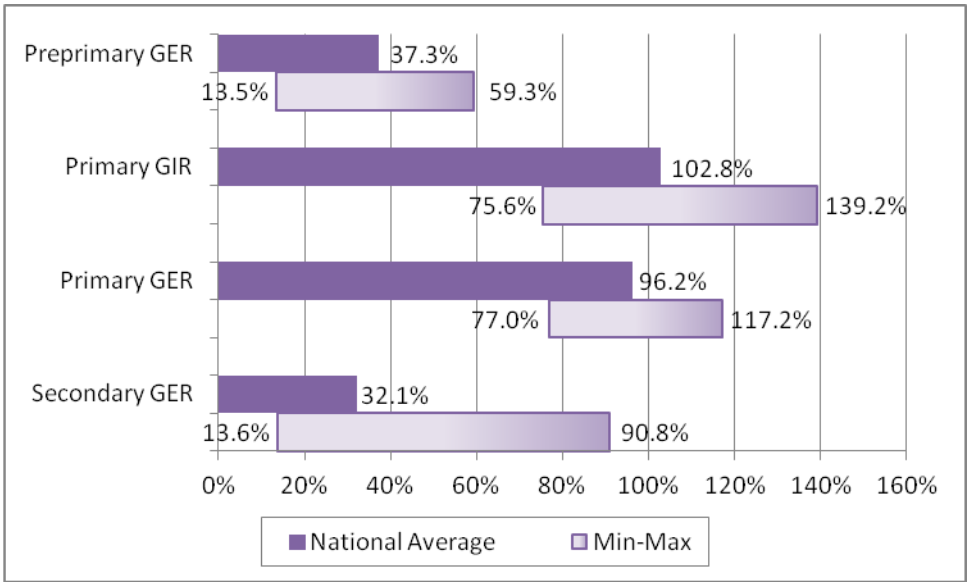
The kind of data presented in the 2011 ESA does not easily lend itself to an analysis of historical trends in the evolution of regional disparities in the interim period. However, considering that they are significant, this section will provide an overview of their current state. It will focus firstly on disparities in enrollment in general education, and in adult and nonformal and folk and vocational education coverage. Regional disparities in out-of-school will then be considered.

Enrollment

Enrollment disparities by region are very significant, particularly at the secondary level. Figure 6.3 provides the spread of regional values found for each of a set of key enrollment indicators for general education, and compares them to the national average for each.

Figure 6.3: Spread of Regional Enrollment Ratios, by Level, 2013

Percent



Source: BEST, 2013 and 2014 and authors' computations.

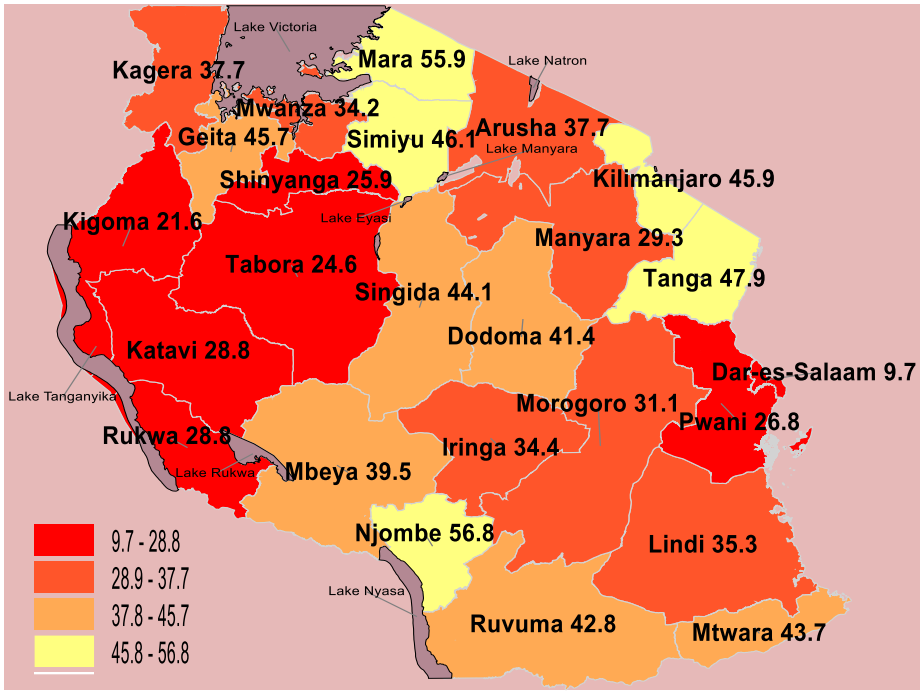
At the preprimary level, although the national average gross enrollment ratio is 37 percent, the regional values for this indicator spread from 13 percent to 59 percent, signaling variations by a factor of four. So for instance, whereas the regions of Njombe (59 percent), Mara (57 percent), Tanga (49 percent), Kilimanjaro (48 percent), Simiyu (46 opercent), Geita (46 percent) and Mtwara

(45 percent) all boast preprimary GERs above 45 percent, in Kigoma (22 percent), Tabora (25 percent), Shinyanga (26 percent) and Pwani (28 percent) they fail to reach 30 percent, and in Dar es Salaam the GER is a meager 13 percent.

In considering the net enrollment ratio for preprimary, although the overall level of regional disparities remains constant, with a gap of approximately 47 percentage points between the highest and lowest regional rates, the number of regions with low ratios increases (See Figure 6.4). This is the natural result of the phenomenon of late entry to the cycle.

Figure 6.4: Preprimary Net Enrollment Ratio, by Region, 2013

Percent



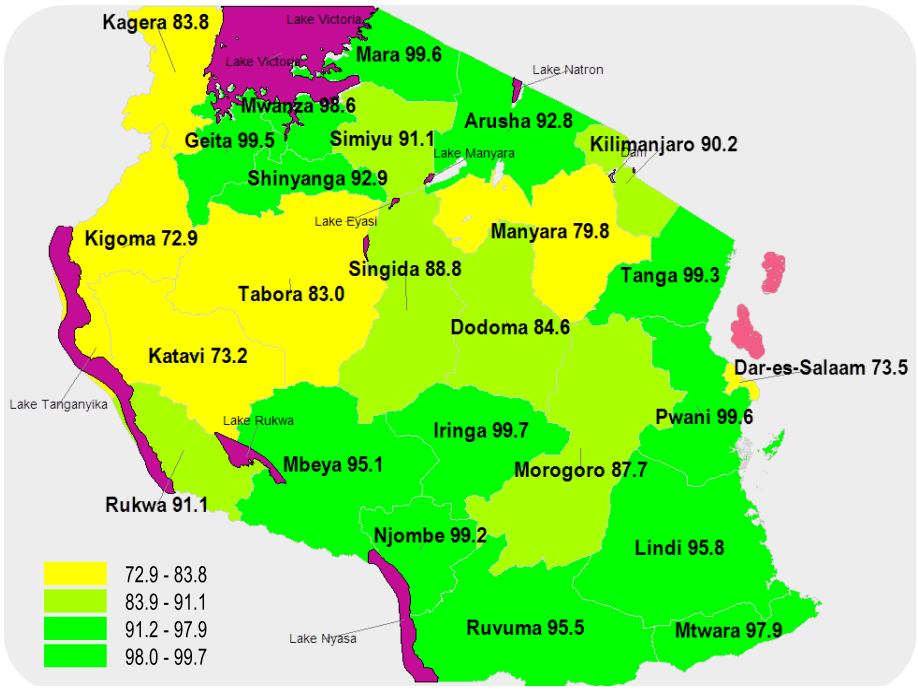
Source: BEST, 2013.

At the primary level, regional disparities are greater in terms of the gross intake rate (access to Standard I), but are slightly more modest for the cycle overall, as measured by the gross enrollment rate. Indeed, the spread of regional GIRs, from 76 percent to 139 percent, denotes a 64 percentage point difference between the highest and lowest rates, and the GER spread, from 77 percent to 117 percent, a 40 percentage point difference. However, almost half of regions' GER is above 95 percent (12 regions), whereas the GER is below 90 percent in only 7 regions. In only four regions, Kigoma (77 percent), Dar es Salaam (78 percent), Katavi (79 percent) and Manyara (83 percent) is the GER below 90 percent. This indicates that despite the spread of values noted, most regions GERs are relatively close to, or above, the national average, of 96 percent.

Figure 6.5 below illustrates the territorial distribution of net enrollment ratios at the primary level, as well as their spread, from 73 percent to 100 percent. The regions where enrollment at the appropriate age is more problematic are mainly located in the centre and north-west of the country.

Figure 6.5: Primary Net Enrollment Ratio, by Region, 2013

Percent



Source: BEST, 2013.

It is at the secondary education level that disparities are the greatest. It is worthy of note that the GERs at this level are to be interpreted in terms of the education system's capacity to enroll a given proportion of the regions' population, rather than the level of enrollment of that specific regions' population, given that it is known that many pupils attend schools outside their region of residence.

At this level, for all Forms 1 to 6, the disparities are considerable, the regional GER ranging from 14 percent in Katavi to 91 percent in Geita, a spread that is equivalent to 77 percentage points. The GER is above 40 percent in just five regions (Geita, Kilimanjaro, Iringa, Arusha and Pwani), but is below 25 percent in 10 regions, and indeed, below 20 percent in five of them (Kigoma, Tabora, Simiyu and Rukwa, in addition to Katavi).

Overall, it is interesting to note that the regions where enrollment is best are not necessarily those one would expect. Considering the average of the GERs for preprimary, primary and secondary, the top five ranking regions are Geita, Mara, Njombe, Iringa and Tanga (starting with the highest average enrollment), whereas the lowest five ranking regions are Kigoma, Katavi, Dar es Salaam, Tabora and Manyara (starting with the lowest average enrollment).

Regional disparities exist also for non-formal and adult education programmes (See Table 6.5 below). In terms of adult literacy, no literacy rates disaggregated by region were available for this analysis. However the distribution of learners throughout the country is highly variable. Six regions (Dodoma, Ruvuma, Shinyanga, Simiyu, Singida and Tanga) registered over 50,000 adult learners each in ICBAE programmes, whereas four registered less than 10,000 (Dar es Salaam, Rukwa, Kigoma and Katavi).

Box 6.3: The Right to Education

Tanzania has made important progress in realizing the right to education. Primary education is free and compulsory, and Tanzania has committed to protect children from any kind of work that interferes with their education, as well as to implement a strategy to provide equal access to education for all, with special attention to secondary enrollment.

However, a number of barriers remain, including the cost of schooling, child labour and early marriage. The fact that some primary schools request financial contributions from families prompts some pupils to seek further income or dropout, and many families cannot afford official secondary school fees. The right to education is also affected by child labour, that has been identified as a cause of absenteeism, dropout, or poor performance due to its extracurricular nature.

Early marriage or pregnancy often leads to the withdrawal of girls from school, or their expulsion, as policy condones this in when "offenses against morality" are committed. Many find it difficult to return. Routine pregnancy tests of pupils by schools constitute a serious infringement of their rights to privacy, equality, and autonomy. The 2014 Education and Training Policy explicitly permits the readmission of girls to school after childbirth, but does not address the issue of marriage.

The Human Rights Watch report particularly recommends to improve equity in access to education by:

- Improving access to education in mining areas, by instructing district officers to investigate and eliminate illegal primary school fees, and increasing access to secondary by allowing children to retake the PSLE;
- Increasing opportunities for vocational training;
- Ending pregnancy testing in schools, ensuring that teachers and school management know that it is prohibited; and
- Taking further required legislative and administrative steps to end the exclusion of married and pregnant girls from school.

Source: HRW, 2015.

It is not possible to establish whether these figures reflect the number of non-literate adults or variable degrees of motivation to acquire basic skills. They do not, at first glance appear to be related to the comparative opportunity of ICBAE access, or to local efforts to promote literacy learning. Indeed, the learner-facilitator ratio underlines the very variable level of investment regions place in such courses. Overall, the ratio ranges from 190:1 in Lindi (where participants number 21,700) to 9:1 in Kigoma (where learners are very few, 4,700); even among regions with high and comparable numbers of learners (about 50,000), the LFR ranges from one facilitator for 55 learners in Singida, to one for every 168 learners in Ruvuma.

Table 6.5: Regional Disparities in Adult and Nonformal Education, 2013

Number of Learners and Learner-Facilitator Ratio

	ICBAE	COBET	ODL
Learners			
Total Number	845,380	54,029	9,399
Regional Average	33,815	2,161	376
Regional Minimum	1,240	97	0
Regional Maximum	119,256	9,263	1,227
Learner-Facilitator Ratio (LFR)			
National Average	48:1	15:1	—
Regional Minimum	9:1	1:1	—
Regional Maximum	190:1	40:1	—

Source: BEST, 2013 and 2014, and authors' computations.

In COBET regional disparities are just as vast. In fact, just five regions account for over half of all learners: Kigoma, Tabora, Geita, Kagera and Katavi. These comparatively high levels of COBET coverage do not however appear to bear a direct relation to the level of primary enrollment, as although the primary GER is below 80 percent in Katavi and Kigoma, it is closer to 90 percent for Kagera and Tabora, and is well beyond 100 percent in Geita.

Vocational education is highly concentrated in three regions: Dar es Salaam, Arusha and Kilimanjaro, that together are home to 38 percent of the 896 vocational training colleges and account for 63 percent of all VTC learners. At the other end of the scale, Katavi, Simiyu and Kigoma, where fewest VTCs are located, are home to just 3 percent of centers, and account for barely 1.5 percent of learners. Folk Development Colleges, on the other hand, are more equally distributed throughout the country. Their greatest concentration is found in Pwani, Kilmanjaro and Mwanza regions, that each boast more than 500 learners. On the other hand, Arusha, Manyara, Katavi, Mbeya, Shinyanga, Iringa and Rukwa regions each provide FDC courses to less than 100.

Out-of-School

Considering the above findings on regional disparities in enrollment, it is to be expected that disparities between out-of-school rates will be equally significant. Disparities are indeed noted, between regions and urban/rural areas, as some regions achieve almost universal primary enrolment, whereas in others almost half of children are excluded from formal education.

Table 6.6 displays the five regions at each end of the out-of-school scale: those where the OOS rates are the highest and the lowest, for the respective age groups for primary and secondary education. The variations are considerable, the OOSC of primary school age rate ranging from just 6.4 percent in Kilimanjaro to 44.3 percent in Tabora. For those OOSC of secondary school age, the range is from 24.2 percent to 57.7 percent, for the same two respective regions.

Table 6.6: Highest and Lowest Ranking Regions in terms of OOSC, by Cycle Age Groups, 2012

Percent and Number

	OOSC of Primary School Age				OOSC of O-Level School Age			
	Rank	**Region**	**Rate**	**Number**	**Rank**	**Region**	**Rate**	**Number**
High Level	1	Tabora	44.3%	198,840	1	Tabora	57.7%	109,860
	2	Katavi	42.5%	46,570	2	Katavi	55.1%	25,830
	3	Geita	37.8%	134,300	3	Simiyu	52.1%	72,480
	4	Rukwa	35.5%	73,860	4	Shinyanga	51.2%	66,660
	5	Simiyu	33.5%	111,830	5	Singida	49.5%	54,010
	Tanzania Mainland		**23.5%**	**1,933,780**	**Tanzania Mainland**		**41.5%**	**1,498,740**
	Rank	**Region**	**Rate**	**Number**	**Rank**	**Region**	**Rate**	**Number**
Low Level	21	Mbeya	15.4%	77,990	21	Arusha	33.4%	51,440
	22	Njombe	10.2%	14,400	22	Tanga	32.3%	53,510
	23	Iringa	9.3%	17,000	23	Njombe	31.5%	19,500
	24	Dar es Salaam	8.6%	48,840	24	Iringa	27.3%	22,730
	25	Kilimanjaro	6.4%	19,550	25	Kilimanjaro	24.2%	36,530

Source: MoEVT/UNICEF, 2015.

Collectively, half of Tanzania's OOSC of primary age live in the eight regions of Tabora, Dodoma, Geita, Kagera, Simiyu, Mwanza, Kigoma, and Morogoro, whereas more than half of Tanzania's OOSC of lower secondary school age live in the nine regions of Dar es Salaam, Tabora, Mbeya, Mwanza, Kagera, Dodoma, Morogoro, Kigoma, and Simiyu.

Regional disparities are greatest for children of primary school age. The gap between the five best performing regions, where less than one in ten children are out of school, and the five worst, where over one in three children are out of school, is significant. Furthermore, the OOSC rate in the worst performing region is six times higher than the rate in the best. For OOSC of lower secondary school age, the gap is slightly narrower, the lowest regional OOSC rate being three times the highest (MoEVT/UNICEF, 2015).

The MoEVT/UNICEF study established a clear and positive relation between the OOSC rate and both the availability of teachers and the shortage of classrooms. Of the thirteen regions where the OOSC rate was found to be above the national average, 11 had population-teacher ratios above the national average, whereas all regions where the OOSC rate is below average have population-teacher ratios below average. Tabora, where the primary OOSC rate is the worst (44.3 percent), has the worst population-teacher ratio (1 teacher for 57 children), whereas Kilimanjaro, with the best primary OOSC rate (6.4 percent) has the best population-teacher ratio (1 teacher for every 34 primary school-aged children).

Box 6.2: Education Supply and Demand Factors

School surveys do not enable to properly capture the reasons for dropout. The main motives considered in BEST data are death, illness, misbehaviour, the inadequate provision for needs at school, parental illness, pregnancy and truancy. Truancy, the act of being absent from school, is a vague and all-encompassing notion, that represents 76 percent of motives at both primary and secondary levels. The inadequate provision for basic needs is the only supply-side factor, and accounts for 6 percent of dropout at primary and 13 percent at secondary, according to BEST. Pregnancy (5 percent) and misbehaviour (3 percent) are minor, but significant, in secondary. This information is too imprecise to effectively to design remediation programmes.

The MoEVT/UNICEF study on OOSC of 2015 provides more valuable information. The majority of OOSC appear to be coming from poor and marginalized families, single-parent families, urban and suburban centres, and areas of subsistence economic activity (artisanal mining, fishing, cattle-breeding, small scale agriculture, seaweed and tobacco farming and petty trade). The study further identifies a list of key supply and demand-side barriers and governance bottlenecks to full school coverage.

Supply-side barriers	**Demand side barriers**
Shortage of teachers	Poverty
Poor school infrastructure and facilities	Indirect and opportunity costs of schooling
Poor Quality of education	Perception of low value of education
In early primary grades	Peer pressure
Of primary education in general	Late entry to primary schooling (boys)
Corporal punishment	Early dropout (girls)
Distance to school	Frustration at repetition and exam failure
Safety in and out of school	Weak nuclear family, parental migration
Shortage of textbook supply	Disability
Lack of provision for disability	
Governance, political, and financial bottlenecks	
Budget allocation and timely delivery of grants	
Planning of education system, reflecting population volume, growth and distribution	
Motivation of teachers	
Provision of sports and extracurricular activities	
School inspections	
Education policy enforcement	
Community spirit	
Information on out of school children	

The report found that the majority of OOSC interviewed would return to education if given the opportunity, including in TVET. Those at risk of dropout mentioned that the provision of materials, equipment and meals, greater proximity of schools, the abolition of direct costs and corporal punishment would encourage their retention.

Equity in the Distribution of Public Education Resources

Disparities in the allocation of education resources are inherent to the sub-sector imbalance in favor of higher education but are also particularly apparent in the national range of both primary and secondary PTRs.

Educational Resources

Considering the above finding in relation to the correlation between the availability of teachers, in particular, and the OOSC rates, the level of disparity in the distribution of education resources clearly provides a policy lever that could help to improve enrollment and address both dropout and OOS issues.

The Education and Training Policy of 2014 identified an issue with the general availability of classrooms, which is not proportional to enrollment in primary schools. Although considerable classroom building efforts have been deployed during the PEDP and through community efforts, overcrowding remains an issue in several areas, suggesting that the building programme has not addressed the equity issue.

Disparities in the pupil-classroom ratio are indeed significant, and the ratio's high level in some areas is certainly not conducive to quality teaching and learning. Regions such as Geita (105:1), Tabora (97:1), Mwanza (96:1), Katavi and Mara (94:1), Simiyu (88:1) and Rukwa (86:1) crowd over 85 pupils into a class, on average (BEST, 2014). On the other hand in Kilimanjaro (43:1), Njombe (49:1) and Ruvuma (55:1) average pupil-classroom ratios are below 55:1. In terms of area of residence, the World Bank found in 2011 that overcrowding was more of an issue in urban areas (World Bank, 2011). In contrast to the then national average of 74 children per classroom, an average of 92 pupils share a classroom in urban areas, against 70 pupils in rural areas.

Table 6.7 provides a further glimpse of the variation in the availability of teachers, qualified teachers and pupil desks, by region.

Table 6.7: Regional Disparities in the Pupil-Teacher Ratio, Pupil-Qualified Teacher Ratio and Pupil Desk Shortage, by Cycle, 2013

Ratio and Percent

	Preprimary		Primary			Secondary		
	PTR	PQTR	PTR	PQTR	Desk Shortage	PTR	PQTR	Desk Shortage
Total	83:1	158:1	43:1	44:1	24.4%	25:1	28:1	23.1%
Regional Minimum	24:1	41:1	31:1	32:1	-25.0%	18:1	21:1	-4.8%
Regional Maximum	355:1	1,064:1	59:1	59:1	62.6%	39:1	43:1	49.0%

Source: BEST, 2013 and authors' computations.

Note: All data presented is for governmental and nongovernmental schools combined.

In terms of teachers, the regional spread is greatest at the preprimary level. Teacher availability ranges from one for every 24 pupils in Dar es Salaam, to one for 355 in Rukwa, by a factor of 15. The PTR for Simiyu is also above 300:1, and the PTRs for Dodoma, Geita, Katavi, Mbeya, Mwanza, Shinyanga, Singida and Tabora are all above 100:1. With the further exception of Arusha, Kilimanjaro and Njombe, all other PTRs are greater than 50:1. Clearly, the percentage of preprimary teachers that are properly qualified is limited, as the national PQTR (158:1) is almost double the national PTR (83:1) at this level. In only three regions is the PQTR below 100:1 (Arusha, Dar es Salaam and Pwani), whereas it is 200:1 or above in 11 regions, reaching the worst scenario in Rukwa, where there is only one qualified teacher for over a thousand pupils.

At both the primary and secondary levels the spread is nevertheless significant, the difference between the best and worst staffed regions being equivalent to a factor of 2. The PTR spans from 31:1 to 59:1 at the primary level, and from 18:1 to 39:1 at the secondary level. The difference between the PTR and the PQTR at these levels, be it in terms of the national indicator, or the minimum and maximum values, is minimal, signalling that the disparity in terms of teachers' training and qualifications is no greater than that noted in their allocation.

These disparities are further reflected at the district and school levels, and in terms of area of residence. The magnitude of district-level disparities in the primary PTR reflects that noted at the regional level. So for instance, the PTR ranges from 33:1 (Tarime TC) to levels in excess of 55:1 (Serengeti DC) in Mara, from 43:1 (Tabora MC) to 76:1 (Kiliua) in Tabora, and 36:1 (Bukoba M) to 63:1 (Kyerwa) in Kagera. The average primary PTR in rural areas was 50:1 in 2011, compared to just 39:1 in urban areas (World Bank, 2011). This situation implies a very heavy workload for some teachers, potentially negatively affecting their motivation and willingness to stay in remote areas.

Variations at the school level are even more glaring, especially at the secondary level. A 2012 study conducted in 16 primary and 16 secondary schools in 8 districts found that the average PTR in secondary schools was 88:1. Only one school met the SEDP target PTR of 30:1; four further schools' PTR was nevertheless under 50:1; in the remaining schools it was above 50:1, and above 100:1 in four of them (Tamasha, 2012, cited in Sumra and Katabaro, 2014).

The shortage of desks and textbooks provides one further perspective on disparities in terms of the availability of educational resources at the school level. At the primary level, in the best regional scenario, all pupils have access to a desk (indeed, Arusha, Kilimanjaro and Njombe have more than needed), whereas in the worst, just 37 percent do (See Table 6.7 above). At the secondary level, the situation is more encouraging, as although the national shortage is similar (23 percent, against 24 percent for primary), disparities are slighter: supply is sufficient for all pupils in the most fortunate region, Manyara (the data, should it be correct, even suggests a surplus of 5%), whereas in the least fortunate region, Dar es Salaam, 51 percent of pupils study in appropriate conditions. The 2011 ESA found that disparities in the distribution of textbooks are also extreme (UNESCO, 2011). The analysis found the regional pupil-textbook ratio to be greater than 3.6:1 in Kagera and Lindi, against 1.3:1 in Tanga, and highlighted that the degree of coherence in textbook availability at the district level was also weak, their number being proportional to the number of pupils in 57 percent of cases for math books, and 67 percent of cases for English books.

Financial Resources

Equity in the allocation of public education financing can be considered from multiple perspectives. Several of them have been addressed in earlier in this report, to the extent that data permit, such as the comparative level of unit costs, household contributions to education and the distribution of resources among subsectors (See Chapter 4). Readers are reminded of the structurally inequitable allocation in this respect, related to the high share of the education budget that is bestowed on higher education, which mainly benefits the wealthiest pupils from the formal education system, and funds a loan mechanism that continues to be assimilated to a system of grant awards.

The distribution of education resources among pupils according to the highest education level attained is a further valuable measure of equity that greatly synthesizes the previous point. The detailed data required to compute the present state of this (the Lorenz Curve and Gini Index) are unfortunately not available at this time. As a reminder, the 2011 ESA found that the 10 percent most educated individuals effectively absorbed 47 percent of resources, against under 5 percent of resources for the 10 percent least educated.

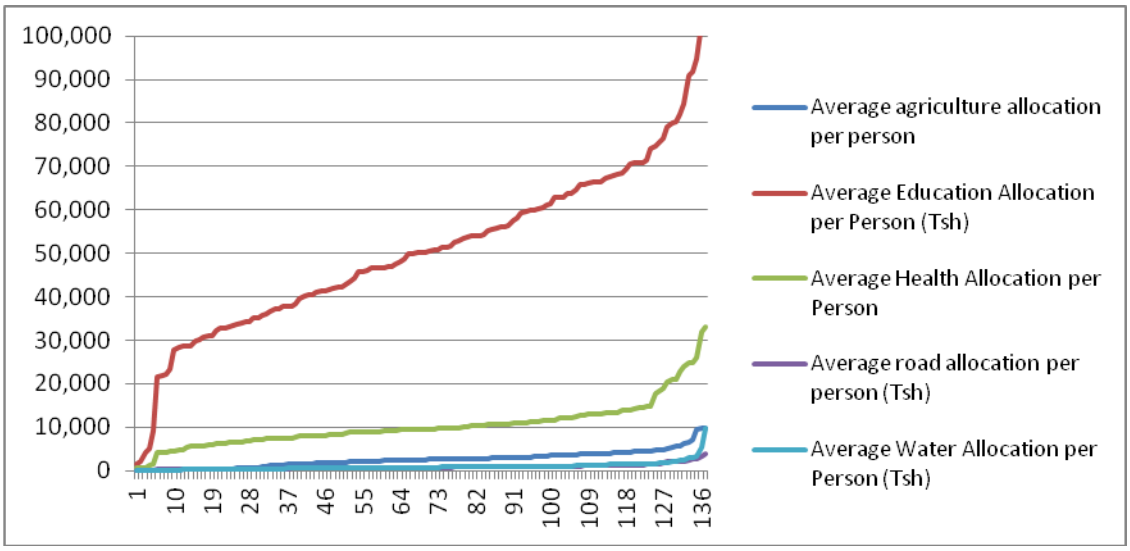
To complement the above, this section will briefly review some evidence of the degree of equity in the regional allocations of the education budget. Indeed, inequity in recurrent budget allocations to local government authorities (LGAs) helps to explain regional disparities in social service delivery, as funds are used to cover both salary and non-salary expenses.

The 2013 public expenditure review found that some LGAs spend more than four times more recurrent funds (adjusted per capita) than others (PER, 2013). As the allocation formula was not shared, it is not fully clear to what extent this is the consequence of inequity in central government allocations, and to what extent it stems from variable execution capacity. Most regions' execution rate is above 85 percent, with a reported 100 percent in Kigoma and close to 100 percent in three further regions. Geita is an outlier, with an execution rate of just 39 percent.

Using PMO-RALG data, the PER was further able to establish the wide degree of variation in the execution of the education budget by individual districts, ranging from a low 21.6 percent in Bahi District to a high 121.4 percent in Lushoto District. Figure 6.6 illustrates the extent of the disparities, both between districts, and compared to other sectors. Each number along the horizontal axis represents a district council. Discarding the first couple of districts, whose data is deemed to be incoherent, the education budget allocation appears to vary from under 5,000 T Sh to 100,000 T Sh per capita, by a factor of 20. Not only does this represent a vastly inequitable situation, but it appears to stand out in comparison to other sectors. For the health sector, in comparison, per capita district budget allocations range from under 3,000 T Sh to 30,000 T Sh, by a factor of 10.

Figure 6.6: Recurrent Spending Allocation Per Capita, District Council, 2013

T Sh



Source: PER, 2013.

Such large geographical disparities in regional per pupil spending are a major challenge for education service provision, which is compounded by the fact that some regions are comparatively weak economically. The government has recognized this fact, and the PMO-RALG and the Ministry of Finance are said to be reviewing the formula-based regional budget allocation system under the Public Financial Management Reform Programme Strategy (Phase IV - 2012/13-2016/17) in an effort to make the system more transparent and equitable.

Learning Outcomes

Disparities in exam performance are closely correlated to those in the allocation of education resources, particularly teachers. While boys outperform in basic education, girls are more successful at A-Level.

Resource availability considerations, and the degree of equity in their territorial distribution, beyond their established relation to education access, also have a direct impact on learning outcomes. This section will review disparities in performance in this perspective, before describing the variable outcomes achieved by gender.

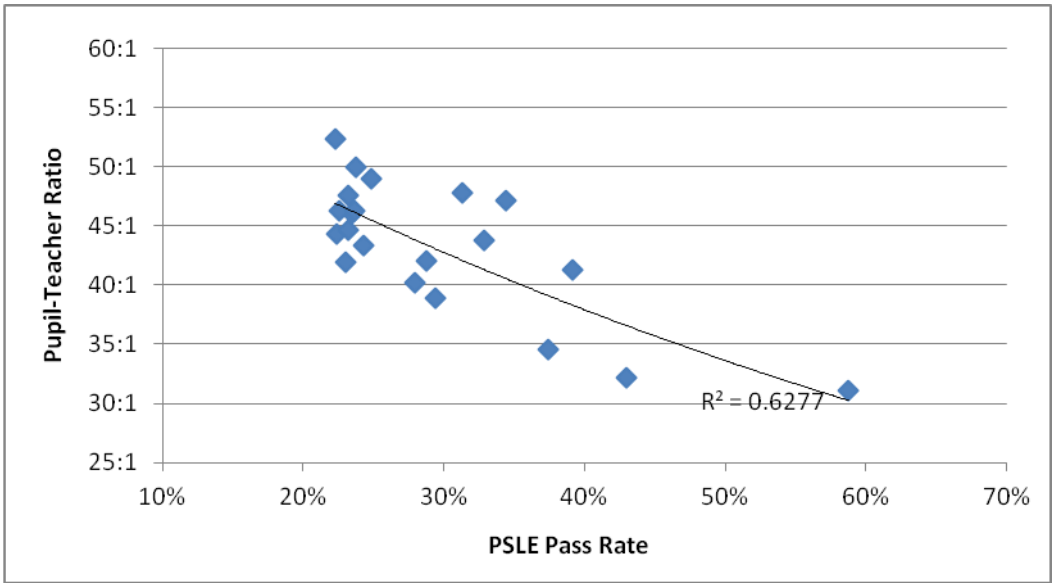
Pupils' achievements bear a significant and positive relation to the availability of education resources. Figure 6.7 below plots each region according to its average PSLE pass rate on the one hand, and its pupil-teacher ratio, on the other. First and foremost, the figure illustrates the degree of disparity in regions' average performance at the end of the primary cycle, through the PSLE pass rate. This varies from a low 22 percent (in Tabora, Mtwara and Lindi) to close to 40 percent (in Arusha, Kiringa and Kilimanjaro). In one region only does it exceed this level, reaching 59 percent in

Dar es Salaam. The great majority of regions achieve an average pass rate between 20 and 25 percent.

Furthermore, the figure is extremely conclusive with respect to the impact of class sizes on learning outcomes, at least at the primary level: the higher the pupil-teacher ratio, the lower the success at the PSLE, and conversely, the greater the availability of teachers (low PTRs), the better the examination pass rate.[14] The high level of concentration of the regions around the trendline indicate that this relationship is both significant, positive, strong and consistent.

Figure 6.7: Distribution of Regions According to the Relationship between their PTR and PSLE Pass Rate, 2013

Ratio and Percent



Source: BEST, 2013 and authors' computations.

Note: The highest PQTR as indicated in Table 6.7 above, of 59:1 and corresponding to Geita, does not appear on this chart because no data was available for this region's average PSLE pass rate. For the same reason, Katavi, Njombe and Simiyo do not appear on the graph either.

Recent research provides further evidence of the level of disparities in learning outcomes by region and location, at early primary (UWEZO, 2013):

- The percentage of children aged 9 to 13 years who passed the Standard II Kiswahili literacy test varied from below 40 percent in Mara, Kigoma and Tabora, to above 60 percent in Mbeya, Arusha, Iringa, Kilimanjaro and Dar es Salaam.
- In the numeracy test, the same regions top and bottom the performance list, with the former achieving over 45 percent, and the latter achieving 31 percent or less.

[14] As was noted above, the difference between the PTR and the PQTR is very limited, meaning that a vast majority of teachers are considered to hold adequate qualifications. The noted relationship is equally strong whether the PTR of the PQTR is used.

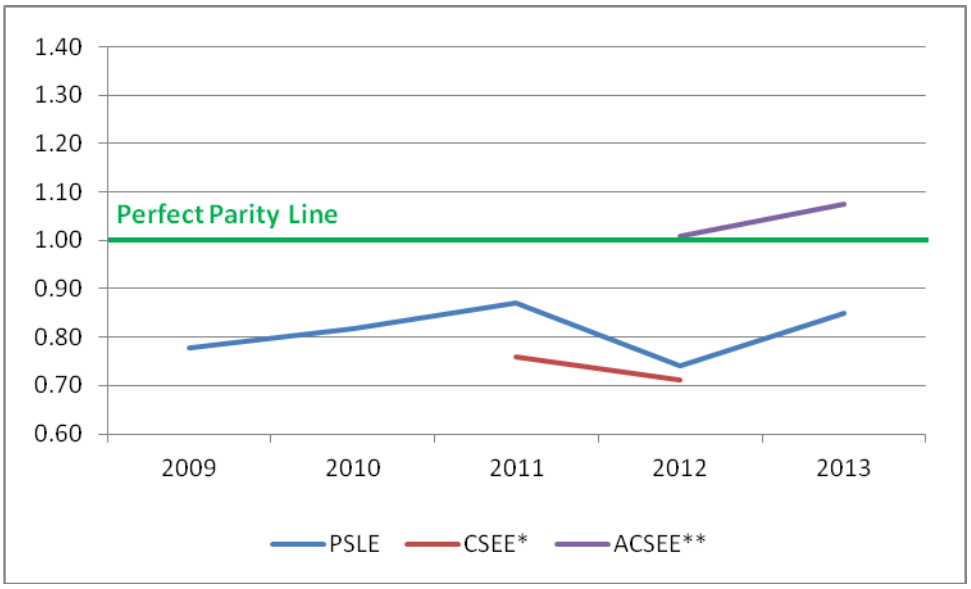
- Over half of urban children passed the literacy and numeracy tests (55 percent), against over a third of rural children (36 percent) in 2013.
- In Standard VII, 13 percent of urban children were not able to read the Standard II Kiswahili storybook, against 21 percent of rural children (UWEZO, 2012).

A comparison of the respective pass rates of girls and boys at the key national examinations validating the completion of primary, lower secondary and upper secondary education serves as a reminder however that educational quality is not a simple equation, that is directly proportional to the level of resources allocated. The concept of equity must consider positive discrimination in how resources benefit particular groups, to ensure that their specific characteristics are addressed in a way that provides them with an equal chance of achieving comparable outcomes.

Figure 6.8 below provides the gender parity indexes for the pass rates of girls and boys in the PSLE, CSEE and ACSEE examinations. Echoing the findings presented in Chapter 5, it shows that girls generally underperform at both the PSLE and CSEE. For the most recent year with available data, approximately 8 girls passed the PSLE, and 7 girls passed the CSEE, for every 10 boys (after controlling for the number of each that sit the examinations).

Figure 6.8: Gender Parity in PSLE, CSEE and ACSEE Pass Rates, 2009-13

Parity Indexes



Source: BEST, 2013 and authors' computations.

Note: Due to data constraints, the GPIs for the CSEE and ACSEE are computed on the basis of the number of girls and boys passing each of the subject examinations, rather than their overall success at the exam. * Data was available only for 2011 and 2012. ** Data was available only for 2012 and 2013.

On the other hand, girls outperform boys in the early grades of primary, according to recent evaluations. In the 2013 UWEZO assessments, girls' pass rates were systematically 2 to 3 percentage points higher than those of boys, in Kiswahili, English and numeracy, regardless of their age (UWEZO, 2013). Likewise in the EGRA/EGMA tests, a greater number of girls than boys were in the high performance band, in both urban and rural contexts, and girls outperformed boys in all the EGRA

subtasks and the procedural EGMA subtasks (but boys performed best in the conceptual EGMA subtasks – See USAID, 2014).

This apparent contradiction between girls' performance in the early and late grades of primary raises questions about the reasons for the deterioration in their learning achievements throughout the cycle. It may, at any rate, be worthwhile taking steps to ensure that teaching practices, the learning environment and examination procedures do not present inherent forms of discrimination.

Finally, the figure underlines the fact that girls are more successful at the ACSEE examination than boys, as 11 girls passed in 2013 for every 10 boys. This constitutes a departure from a situation of near perfect parity in 2012. Should this be significant, which it is not possible to determine without historical data over a longer period, the explanation might hypothetically be found in a degree of subject bias: more boys opt for science subjects (Advanced Mathematics, Physics and Chemistry), that attract less interest on behalf of teachers, and that suffer from a general lack of laboratories and learning materials, implying that the quality of learning outcomes would suffer comparative to the arts and humanities subjects that are chosen by greater proportions of girls (Kiswahili, English and History, in particular).

Chapter 7: External Efficiency

The previous chapters have examined Tanzania's education system from the perspectives of enrollment, internal efficiency, cost and financing, learning outcomes and equity. This chapter aims to appraise the system's external efficiency, meaning the impact of education and training on economic and social development. It first analyzes the effect education has on the likelihood of facing poverty, before reviewing available data on the relevance of education and training to the labor market, through the education profile of the population and employability, with particular focus on TVET.

Education and Human Development

The external efficiency of primary and secondary education in terms of individual social outcomes appears to have eroded over recent years, while that of adult education has apparently doubled.

Due to data constraints, it is not possible to assess the extent to which the impact of education on human and social development has evolved in many respects, such as attitudes towards family planning, or access to health services. However, the impact of education on poverty is appraised, and this is perhaps the most important outcome expected of individuals' education careers, in addition to the fact that it is usually highly correlated with changes in different types of social behavior. The Household and Budget Surveys conducted in 2007 and 2011/12 provide a historical perspective that covers a five year time-span.

The survey results clearly underline the extent to which poverty is associated with education (See Table 7.1). The probability of being poor is inversely related to the level of education of the head of household. In 2011/12, just 5 percent of households whose head had at least completed secondary education were poor (in terms of *basic needs* poverty), against 27 percent of those whose head had completed primary, 32 percent of those whose head had some primary education, and 41 percent of those whose head had no education. A similar trend is noted in the probability of extreme poverty.

Although these figures represent an overall improvement on 2007, it should be kept in mind that economic growth will have played a significant part. Indeed, even for households whose head had no education, the probability of being poor dropped by 8 percentage points over the period. To appraise the extent to which education may have had an impact on poverty, the final column of Table 7.1 computes an index of change, which is relative to the change noted for households whose head has no education.

This index shows that the probability of poverty related to having attended but not completed primary education was reduced by 20 percent more than the control group, suggesting some level of positive external efficiency of primary education. However, although the probability of those households whose heads had completed primary education, or secondary and above, dropped over the period (by about 10 percent), this is slighter than the drop noted in the control group of households whose head had no education (whose probability of being poor dropped by 16 percent).

This suggests both that the external efficiency of primary education is eroded in higher grades, and that the external efficiency of both primary and secondary education as a whole has dropped over the 2007 to 2011/12 period.

Table 7.1: Incidence of Poverty, by Highest Education Level Attained by Head of Household, 2007 and 2011/12

Percent

	2007		2011/12		Change Index
	Extreme Poverty	Basic Needs Poverty	Extreme Poverty	Basic Needs Poverty	Basic Needs Poverty
No Education	19.6	48.7	12.0	40.8	1
Adult Education	22.9	42.9	12.8	28.4	2.1
Incomplete Primary	12.1	40.1	11.4	32.1	1.2
Complete Primary	9.2	30.1	10.1	26.9	0.7
Secondary and Above	2.1	6.0	1.4	5.4	0.6
Total	**11.8**	**34.4**	**9.7**	**28.2**	**1.1**

Source: HBS, 2014.

The impact of adult education on the probability of poverty is worthy of particular note. In 2011/12, the percentage of households whose head had followed adult education that were poor was 28 percent; lower than the percentage of those whose head had incomplete primary education, but higher than those whose head had completed primary. This constitutes significant progress since 2007, since the relative reduction in the probability of poverty over the period has been twice as important as for households whose head has no education.

Education Profile of the Labor Force

Although the profile of the labor force has improved in terms of the share with secondary education, helping to fill a gap, the increase in the stock of highly qualified graduates does not appear to be matched by formal employment opportunities, and the population with no education still represents 19%.

The profile of the Tanzanian labor force has continued to improve. The 2011 ESA noted that the share of individuals aged 15 to 60 years with secondary education or above had increased from 5.6

percent to 7.0 percent over 2001-06, and those with tertiary education stood at 0.3 percent in 2006. In 2011/12, the share of the population aged 15 years and above with at least secondary education stood at 21 percent, up from 10 percent in 2007 (See Table 7.2). The share of individuals with tertiary education rose from 1 percent in 2007 to at least 3 percent in 2011/12.[15]

This constitutes a very favorable evolution, and has contributed to reduce the severe shortage of individuals with secondary education noted in the 2011 ESA. This stood at 7.6 percent in 2007 (O-Level and A-Level combined), and has risen to 16.4 percent in 2011/12. Furthermore, in 2011/12, more than half of the population had primary education to at least Standard V, in both urban and rural areas.

Table 7.2: Distribution of the Population aged 15 Years and above, by Highest Education Level Attained, 2007 and 2011/12

Percent

	Dar es Salaam		Other Urban Areas		Rural Areas		Tanzania Mainland	
	2007	**2011/12**	**2007**	**2011/12**	**2007**	**2011/12**	**2007**	**2011/12**
No education	7.9	4.4	12.1	8.9	28.5	24.2	23.6	18.6
Preprimary	—	0.0	—	0.0	—	0.1	—	0.1
Adult education only	0.4	0.1	0.7	0.5	1.2	0.4	1.1	0.4
Primary Standards I-IV	5.2	3.4	7.9	6.5	12.3	10.8	10.9	9.0
Primary Standards V-VIII*	57.0	48.6	58.9	50.6	52.4	51.8	54.0	51.2
O-Level Secondary	16.6	27.2	13.7	25.3	4.1	10.6	7.0	15.7
A-Level Secondary	2.4	2.0	1.0	1.5	0.2	0.3	0.6	0.7
Diploma/University	2.6	7.6	0.9	2.7	0.3	0.4	0.6	1.8
Postprimary Course	2.0	0.3	1.4	0.3	0.5	0.1	0.8	0.2
Post O-Level Course	4.8	2.5	2.8	1.0	0.4	0.3	1.1	0.7
Post A-Level Course	0.8	0.6	0.4	0.2	0.0	0.1	0.2	1.5
Other Certificate	1.1	0.0	0.4	0.0	0.1	0.0	0.2	0.0
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: HBS, 2014.

Note: * Although primary education is today comprised of just seven grades, there are still members of the population who went through the system when it had eight grades.

Nevertheless, the share of the population with no education, despite a 5 percentage point drop over the 2007-11 period, continues to be considerable, at 19 percent. Furthermore, it is more than twice as high in rural areas (24 percent) as in urban areas (9 percent). Disparities are further compounded by gender, as in rural areas 17 percent of men had no education, compared to 31 percent of women (HBS, 2014).

[15] These figures do not apply to exactly the same population groups: 15-60 years for the 2011 ESA ; 15 years and above for the HBS surveys. Although the HBS figures will therefore be somewhat higher, the share of the population aged 60 years and above is just 5.9 percent (PHC, 2012), so the trends are significant.

Beyond the highest level of education attained, it would be valuable to establish just how many graduates/leavers the education system is producing every year, by area of specialization. Unfortunately this is not immediately possible, as BEST data for higher education does not provide a breakdown by subject area, or the number of graduates. Tables 7.3 and 7.4 therefore respectively provide the number individuals enrolled in higher education, according to the type of course followed and the level of the award sought, and the number of nonhigher TVET graduates, by area of specialization.

The stock of higher education graduates expected to enter the labor market over the coming years is estimated at 226,000 individuals (See Table 7.3). The vast majority have followed degree courses (81 percent), mainly at the Bachelor's level (69 percent overall). Just 12 percent of higher education students follow courses at the postgraduate level or above, which translates into 26,500 graduates at this level.

Table 7.3: Higher Education Enrollment, by Type and Award, 2013

Number

	University	Technical	Total
Non-Degree Courses	*41,665*	*1,297*	*42,962*
Certificate	24,997		24,997
Ordinary Diploma	16,408		16,408
Advanced/Higher Diploma	260	1,297	1,557
Degree Courses	*162,510*	*20,742*	*183,252*
Bachelor's	145,392	10,460	155,852
Postgrad.	*1,989*	*8,770*	*10,759*
Post Graduate Certificate	43	7,410	7,453
Post Graduate Diploma	1,946	1,360	3,306
Masters	14,297	1,512	15,809
Doctorate	832		832
TOTAL	**204,175**	**22,039**	**226,214**

Source: BEST, 2013.

At the nonhigher technical level, including vocational education and training, a total of 171,000 learners graduated in 2013. Table 7.4 shows that the main area of specialization is the automotive sector (with 50,000 graduates), but information and communication technology (23,000 graduates), business administration (23,000 graduates) and hospitality and tourism (18,000 graduates) streams also contribute high numbers. Comparatively, the numbers of graduates having specialized in fields directly relevant to industry and science are low.

Overall, assuming an average higher education course duration of three years, these figures should translate into approximately 250,000 graduates joining the workplace each year.

Table 7.4: Nonhigher TVET Graduates, by Field of Study, 2013

Number

	Vocational	Technical	Total
Automotive	49,881	—	49,881
ICT	22,765	—	22,765
Business Administration*	9,677	12,840	22,517
General Subjects	20,197	—	20,197
Hospitality and Tourism	17,810	—	17,810
Electrical	8,628	—	8,628
Construction **	6,781	75	6,856
Agriculture ***	4,372	1,922	6,294
Clothing and Textile	5,857	—	5,857
Health and Welfare	—	2,466	2,466
Mechanical	2,204	—	2,204
Mining	2,178	—	2,178
Science	—	1,811	1,811
Services	—	542	542
Pedagogy/Androgogy/ToT #	26	315	341
Printing	179	—	179
Laboratory Technology	94	—	94
Total	**150,649**	**19,971**	**170,620**

Source: BEST, 2013.

Note: * Also includes Social Sciences and Law for technical education; ** Also includes Engineering and Manufacturing for technical education; *** Also includes food processing in vocational education; # Labeled Education for technical education.

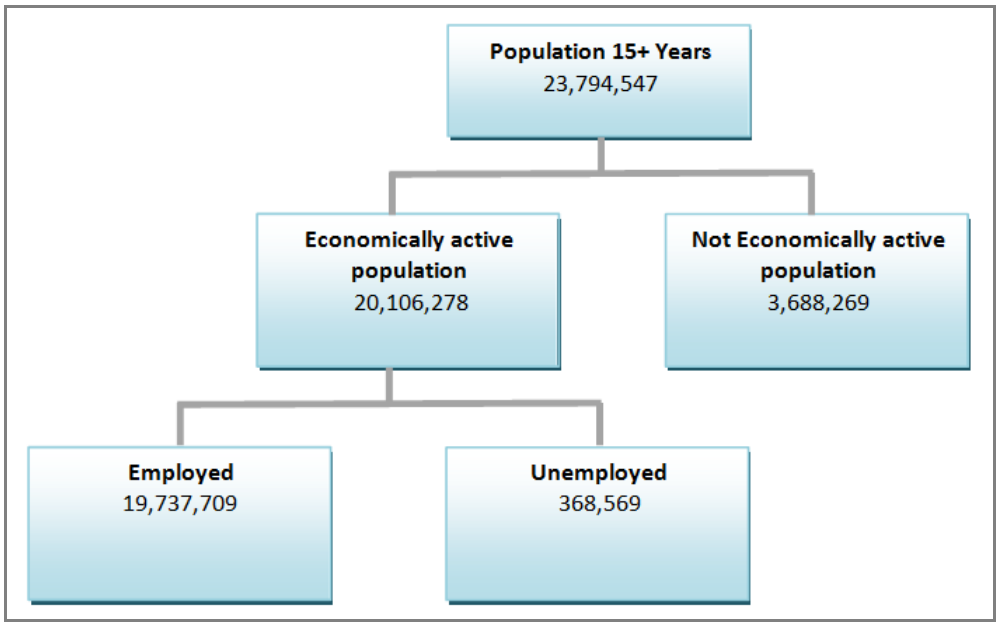
Employability

Available data suggest that the skills acquired by education leavers are not aligned with labor market demands, contributing to rising unemployment, in particular among youth.

Figure 7.1 provides the breakdown of the adult population according to their employment status in 2011/12. Of the total population aged 15 years and above, 84 percent were economically active, of which 98 percent were employed. Total employment in 2011/12, at 19.7 million individuals, represents an increase on 2007, when it stood at 18.3 million, indicating that total employment has grown by 7.6 percent over the period.

Figure 7.1: Employment Status of the Population Aged 15 Years and above, 2011/12

Number



Source: HBS, 2014.

This growth in real terms has however been slower than the growth of the population, estimated at 13 percent over the period. As a result, employment rates have dropped, from 86 percent in 2007 to 83 percent in 2011/12, overall (See Table 7.5). This global trend does however conceal some significant variations:

- Employment has dropped by the greatest extent in Dar es Salaam, from 79 percent to 58 percent, but other urban areas have also been greatly affected. The lower employment ratio in Dar es Salaam is attributed to both higher unemployment rates, and the fact that more women are inactive (HBS, 2014).
- Rates have in fact risen marginally in rural areas, from 89 percent to 91 percent, and are higher in rural areas than in urban areas across all age groups.
- Whereas for the population aged 35 years and above employment rates have remained stable, overall, they have dropped for the population aged 15 to 34 years. This drop has been greatest for the group aged 25 to 34 years, from 92 percent to 88 percent.

Table 7.5: Employment Rates for the Population Aged 15 Years and above, by Age Group and Area, 2007 and 2011/12

Percent

	15-24 Years		25-34 Years		35-64 Years		65+ Years		Total	
	2007	**2011/12**	**2007**	**2011/12**	**2007**	**2011/12**	**2007**	**2011/12**	**2007**	**2011/12**
Dar es Salaam	60.9	31.5	87.3	66.4	90.2	77.9	54.2	35.0	79.0	57.9
Other Urban Areas	54.5	51.2	87.6	78.7	92.9	87.1	58.2	53.2	76.9	70.4
Rural Areas	83.1	85.4	94.3	96.1	94.8	97.3	72.3	76.4	88.7	91.3
Total	**74.7**	**71.4**	**92.0**	**87.8**	**94.1**	**93.0**	**69.5**	**71.0**	**85.6**	**83.0**

Source: HBS, 2014.

In 2013, the formal modern sector only accounted for 7.8 percent of employment: two thirds in the private sector and one third in the public sector. The two sectors that employed most people were manufacturing and education, employing 19 percent and 17 percent of all formal sector employees, respectively (Sumra, 2015).

The overall share of unemployed persons, on the other hand, has increased slightly in five years, from 1.5 percent in 2007 to 1.8 percent in 2011/12 (See Table 7.6). The unemployment rate was highest in Dar es Salaam, at 6.7 percent, which has been attributed to high share of unemployed youth (17.2 percent, for the population aged 15 to 24 years – HBS, 2014). The higher prevalence of youth unemployment (of 3 percent overall, but reaching 9 percent in urban areas) is of particular concern, especially considering their weight in a country with a young population structure. It has been estimated that the number of unemployed youth aged 15 to 29 years has almost doubled since 1990, to 12.4 million in 2012 (DESA, 2013, cited in Sumra, 2015).

Table 7.6: Unemployment Rates for the Population Aged 15 Years and above, by Age Group and Area, 2007 and 2011/12

Percent

	15-24 Years		25-34 Years		35-64 Years		65+ Years		Total	
	2007	**2011/12**	**2007**	**2011/12**	**2007**	**2011/12**	**2007**	**2011/12**	**2007**	**2011/12**
Urban Areas	9.3	8.9	3.0	4.4	1.0	2.2	1.1	3.2	3.7	4.5
Rural Areas	1.2	1.3	0.9	0.9	0.3	0.4	0.3	1.2	0.7	0.9
Total	**3.1**	**3.0**	**1.5**	**2.0**	**0.5**	**0.9**	**0.4**	**1.5**	**1.5**	**1.8**

Source: HBS, 2014.

The unemployment rate for the population aged 15 to 34 years is slightly lower, although it has increased marginally, from 1.5 percent in 2007 to 2.0 percent in 2011/12. The 35 to 64 year age group recorded the lowest rates over the period, at 0.9 percent.

Although data do not provide a breakdown of the population by both employment status and education level, the conjunction of the improvement in the education profile of the population and the deterioration in overall employment, despite strong economic growth, suggest that the external efficiency of the education system is generally weak.

Sumra has suggested that a mismatch between the skills and attitudes the education system produces and those required by the labor market are partly responsible for the employment crisis:

> *"Tanzanian employers argue that the educational system fails to teach the skills and the intellectual prowess they require. The result is a small pool of well-qualified people, creating a skills shortage, and this is one of the factors making Tanzania unattractive for business (ATE 2011). Even those employers impressed by the scientific and technical knowledge possessed by graduates, are concerned about their lack of English proficiency, communication skills, and problem solving ability, innovativeness, and creativity. They also report negative attitudes towards others, unwillingness to learn, and reluctance to hard efforts amongst workers (ATE 2011)."* (Sumra, 2015).

Furthermore, as much as hard skills are effectively provided by tertiary, technical and vocational training institutions, youth are deemed to lack the soft skills that are also required for employment, and are therefore ill prepared for work. If it is the responsibility of the formal education system to develop some such soft skills, and its efforts are complemented by a number of government, NGO, and private sector training organizations, there may be a gap in terms of workplace-oriented soft-skills, that is not addressed (Sumra, 2015).

TVET and Employment

Despite considerable growth in the number of TVET learners and institutions, training content is felt to be insufficiently aligned with labor market needs, qualifications obtained by pupils lack recognition due to the lack of an appropriate certification system, and the monitoring of quality through college accreditation and inspections must be reinforced.

TVET faces particular challenges in meeting labor market needs.[16] The current education and training system is mainly academically oriented, where selection of basic education leavers for further nonhigher education is based on academic performance rather than pupils' overall abilities, skills and talents. This is related to the fact that educational opportunities at higher levels of education are limited in comparison with the number of primary and secondary school leavers.

The positioning of TVET training and qualifications is unclear, due to the lack of a unified and coherent certification and qualification system, as well as the lack of clear linkages to the general education system. This makes it difficult for TVET graduates to pursue their education at higher levels, and affects their employment prospects due to a general lack of recognition of their qualifications and awards.

The curricula at different levels of education and training are not robust enough to meet the economic, social, scientific and technological changes the country faces. Given the growth in the number of technical institutions, it is necessary to improve the level and practice of verification and accreditation, as well as to match this growth with a consequent increase in the number of inspectors and supervisors, to monitor quality.

Folk development may well constitute an exception however. In 2010, a tracer study conducted to prepare the update of the curriculum found that 85 percent of FDC graduates were actively self-employed, in line with the original purpose of FDCs, while the remaining 15 percent were employed in a range of institutions.

[16] This section draws mainly on the working paper produced by Dubois and Athumane, 2016.

Overall, it is felt that the TVET system produces graduates who are insufficiently qualified to compete effectively for employment against their peers leaving higher education. These further challenges directly affect the quality of TVET, and its relevance and responsiveness to labor market needs:

- The lack of specific strategies to provide the skills required for both poverty reduction (in particular rural) and priority sector growth for sustainable development (agriculture, manufacturing, service and tourism sectors). The TVET system is deemed to be inflexible, making it difficult to modify training contents to respond to the changing needs of the labour market. Modular training is not fully used.
- The relationship between TVET training institutions and industry is weak. So for instance, despite the fact that there are two representatives of employers on the VETA Board (out of 10 members) and on Trade advisory committees, the quality of the VET programme is weak.
- A lack of appropriate leadership is noted at all levels of the TVET system. The Tanzania Employment Services Agency is not capable of responding to the needs of employers due to its lack of resources, adequate tools and leadership.
- The quality of trainers falls short of expectations. It is difficult to recruit trainers meeting the agreed qualification profiles, with the required industrial experience and pedagogical skills. The TVET system lacks an incentive and accountability mechanism for teachers, especially to attract them to priority sectors/trades and for their deployment to hard-to-reach areas.
- Trainees lack foundation skills and basic qualifications.

Recommendations to improve the quality and relevance of TVET focus on four areas: (i) developing mechanisms to improve its alignment with the labor market; (ii) enhance the quality of teaching; (iii) improving management capacities; and (iv) improving certification standards.

To effectively link training with labor market needs, appropriate skills anticipation and assessment mechanisms could be set up, at national, regional and sector/industrial levels. NGOs in particular might be trained to carry out training needs assessments to help identify regions and communities' training needs. The skill requirements for rural development, including farm and non-farm activities could be identified through value chain analysis. More flexible training programme content and structure could be achieved through course modularization, the adoption of competency-based programmes and increasing the level of autonomy in adapting content to local contexts.

Trainers should both follow specific courses in pedagogy, be required to perform periodic or part-time industry placements to ensure their knowledge is relevant and up to date, and undergo continuous training to update their skills. Individuals working in industry could also be encouraged to assume part-time training duties. Training center directors, on the other hand, should have access to capacity-building in the leadership and management of training institutions, not least to develop greater autonomy to benchmark their performance within and across districts and sectors.

Finally, to promote new learning pathways throughout the education system, not least to open up the opportunity of progression to higher education for TVET learners, it is felt that assessment should be professionalized through the evaluation and certification of examiners, moderators and assessors, which will previously require the development of standards.

Chapter 8: Management Issues

This chapter will analyze education management principally from an administrative perspective. It firstly aims to identify some of the key challenges posed by current institutional arrangements, including at the central and school levels, as well as in teacher education and inspections. A review of the issues in the management of teachers provides a perspective of the recent evolution of pupil-teacher ratios and teacher qualification levels in general education, the profile of higher education academic staff and concerns with teachers' training and professional development. The availability of infrastructure and equipment in primary and secondary education sheds further light on regional disparities in learning conditions. This is complemented by a presentation of available information on textbook availability, and an examination of some of the causes explaining shortages, including procurement and capitation grant management. A section on TVET takes a broad view of multiple factors affecting performance, for the subsector as a whole, and FDCs in particular. Finally, the key challenges related to the collection, consolidation, analysis and use of education sector management information for monitoring and evaluation are appraised.

Institutional Arrangements

The sector's institutional arrangements are not always conducive to effective coordination and school management, be it at the school or central levels, is generally weak.

Institutional arrangements in the education sector are fragmented. Mandates and responsibilities are shared among several ministries, including: the Ministry of Education and Vocational Education and Training (MoEVT), the Prime Minister's Office for Regional Administration and Local Government (PMO-RALG) and the Ministry of Community Development, Gender and Children (MCDGC):

- MoEVT is responsible for the overall implementation of education sector programmes and sets policy and standards, trains teachers, and conducts national examinations.
- PMO-RALG, through the LGAs, is responsible for the delivery of education services at regional and local government levels and for the actual implementation of the primary and secondary education programmes.
- MCDGC is entrusted with the supervision of and support to folk development colleges.

This administrative structure poses a number of challenges, not least because of the overlap that exists in terms of certain education implementation and monitoring functions between MoEVT and PMO-RALG. In addition, there are challenges with decentralization governance.

This structure requires regular sector dialogue so that policies, programmes, innovations, technical inputs and implementation on the ground are well aligned. The current ESDP suggests that this aspect is weak however, and that the coordination among subsectors suffers as a result: although the ESDP is the overarching programme, the coherence and linkages between subsector programmes within it is not fully apparent. This is further reflected in the national qualifications framework, where many horizontal transitions among general, technical and vocational streams are yet to be clearly established. In addition, the institutional setup agreed upon is not being adequately followed; hence, dialogue processes are ineffective.

These issues have a direct impact on sector-wide planning and performance. Broad ownership of the ESDP process, sector analysis and the ensuing strategies will be critical to harmonize approaches and ensure complementarity in ministerial efforts to achieve subsector goals and targets.

Teacher education was initially managed and regulated by the Directorate of Teacher Education and Training, a Department within MoEVT. This entity was responsible for oversight of the pre-service training and preparation of teachers for pre-primary, primary and secondary education. Teacher education management is now decentralized, and involves several entities: MoEVT, NACTE, TCU, TIE, ADEM, and PO-RALG. Since August 2015, the 34 government-owned TTCs are implementing reforms to become autonomous. NACTE now holds a regulatory and certification role for all TTCs, while TIE is responsible for curriculum development, adapted to learner curricula. NACTE also regulates technical teacher education, and VETA is responsible for the training of vocational teachers.

School management is weak, furthermore, at a variety of levels:

- Human resource distribution among schools is unequal:
- School inspections and support are inadequate and insufficient; and
- The management of capitation grants is unsatisfactory, with untimely disbursements to schools from the central government and amounts released not matching budget allocations.

Community involvement at the school level is deemed inadequate. There is a stated expectation that communities will support the provision of education services (URT, 2008). However, communities are insufficiently informed and empowered to advocate for better education. For example, despite wide variations in the quality of education between schools and regions, stakeholders including parents and communities are not able to compare their schools to those of their peers or the nation overall, and demand more improvements. Their potential role in co-management or reinforcing accountability is therefore severely limited.

Director selection and support mechanisms are poor, so that they often lack the skills to manage and help teachers improve learning in the classrooms. A general lack of training and of an incentive structure hampers motivation to improve education delivery. A further challenges is the low level of support provided to education managers.

School inspections and support are inadequate and insufficient. As Table 8.1 shows, on average, just 13 percent of institutions within the mandate of the Inspectorate were actually visited in 2012/13,

representing a third of the target number. Even for secondary schools (46 percent) and teacher training colleges (54 percent), where the targets were closest to being met, just half of the planned institutions were covered. For vocational education centers (17 percent), adult education centers (21 percent) and special education schools (13 percent), inspection coverage fell shortest of goals.

Table 8.1: School Inspection Rates, 2012/13

Number and Percent

	Institutions				
	Number (March 2013)	**Number Targeted**	**Number Inspected**	**Share of Target Met**	**Share Inspected**
Preprimary Schools/Streams	14,283	6,166	2,026	32.9%	14.2%
Primary Schools	16,442	7,165	2,682	37.4%	16.3%
Secondary Schools	4,576	1,815	833	45.9%	18.2%
Postprimary Vocational Centers *	319	88	15	17.0%	4.7%
Special Education Schools/Units	242	87	11	12.6%	4.5%
Adult Education Centers	12,124	3,663	777	21.2%	6.4%
Teacher Training Colleges	119	111	60	54.1%	50.4%
TOTAL	**48,105**	**19,095**	**6,404**	**33.5%**	**13.3%**

Source: BEST, 2013 and authors' computations.

Note: These are covered by MOEST school inspections, and are different from VTCs.

This underperformance can be explained in part by staff shortage, as only 76 percent of the inspectors deemed necessary were available, on average (See Table 8.2). However, assuming that the number of institutions targeted is aligned with the number of inspectors required, the comparison of inspection rates with inspector availability for those levels where data are available suggest that the way the process is planned lacks efficiency. Indeed, at the secondary level it is estimated that 73 percent of the achievable target number of schools were covered, when taking the human resource constraint into account. At the primary level however, under half of the potentially achievable target number of schools were inspected (48 percent), and just 59 percent of the adjusted teacher training college target was achieved.

Table 8.2: Inspector Availability, 2012/13

Number and Percent

	Inspectors		
	Number Required	**Number Available**	**Share Available**
Primary Schools	1,279	988	77.2%
Secondary Schools	235	148	63.0%
Teacher Training Colleges	47	43	91.5%
TOTAL	**1,561**	**1,179**	**75.5%**

Source: BEST, 2013 and authors' computations.

This situation may be explained by the underfunding of the directorate, meaning that inspectors lack the means to travel to schools. Indeed, despite this weak performance in 2012/13, the 2013/14

budget allocation to the inspection department was just T Sh 3 billion, well short of the T Sh 10 billion recommended by experts and members of parliament (Hakielimu, 2013). Further explanations may relate to weak management and planning, the diversion of human resources to other functions within the ministry, or to some degree, to the unrealistic setting of targets.

Although a new system, the pen Performance Review and Appraisal System (OPRAS), was created in 2012 to measure the performance of teachers and other staff in order to determine corrective measures and promotion, it is not fully operational, due to complications in conducting assessments and providing feedback.

Teacher Issues and Challenges

General Education Pupil-Teacher Ratios (PTR)

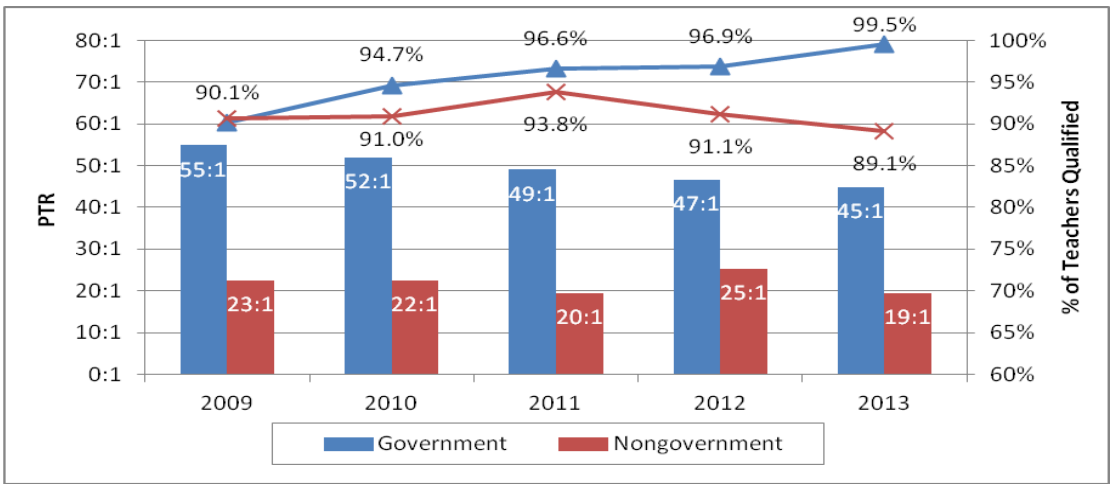
Pupil-teacher ratios have improved significantly at both primary and secondary levels, although secondary teacher qualification requirements have been relaxed to redress a severe subject-specialty imbalance.

At the primary level, national pupil-teacher ratios (PTR) have improved steadily, from 54:1 in 2009 to 43:1 in 2013, in pursuit of the earlier trend (in 2004 the primary PTR stood at 59:1). Although the marginal decline in the number of primary pupils has of course contributed (See Chapter 2), much of this improvement is attributable to the considerable government recruitment effort over the period. The workforce increased by approximately 28,000 teachers, net of attrition, which translates into an 18 percent increase. As a result, the average national PTR in government schools reached 45:1 in 2013, down from 55:1 in 2009 (See Figure 8.1). As of 2013, the accumulated shortfall of primary school teachers was 16,311 (on the basis of compliance with the national PTR target of 40:1 as stated in the PSDP), down from 30,405 in 2009. Class sizes in nongovernment schools are barely half, the PTR having fluctuated around the 20:1 mark over the same period.

The pupil-qualified teacher ratio (PQTR) has also improved, and at a faster rate indeed than the PTR. From 54:1 in 2009, it has dropped to 44:1 in 2013. This is reflected in the percentage of teachers that are qualified, that has improved from 94 percent to 99 percent, on average. Figure 8.2 again illustrates that this improvement is greatly due to the profiles of government teachers, almost all of which (99 percent) are now qualified. This is attributed in great part to ongoing in-service teacher training programmes. In nongovernmental schools, the percentage of qualified teachers has been variable over time, and in 2013 was marginally lower, at 89 percent, than in 2009. As noted in Chapter 6, these national averages conceal considerable disparities among regions, and urban and rural areas however.

Figure 8.1: Primary Pupil-Teacher Ratios and Percentage of Teachers Qualified, by Type of School, 2009-13

Ratio and Percent

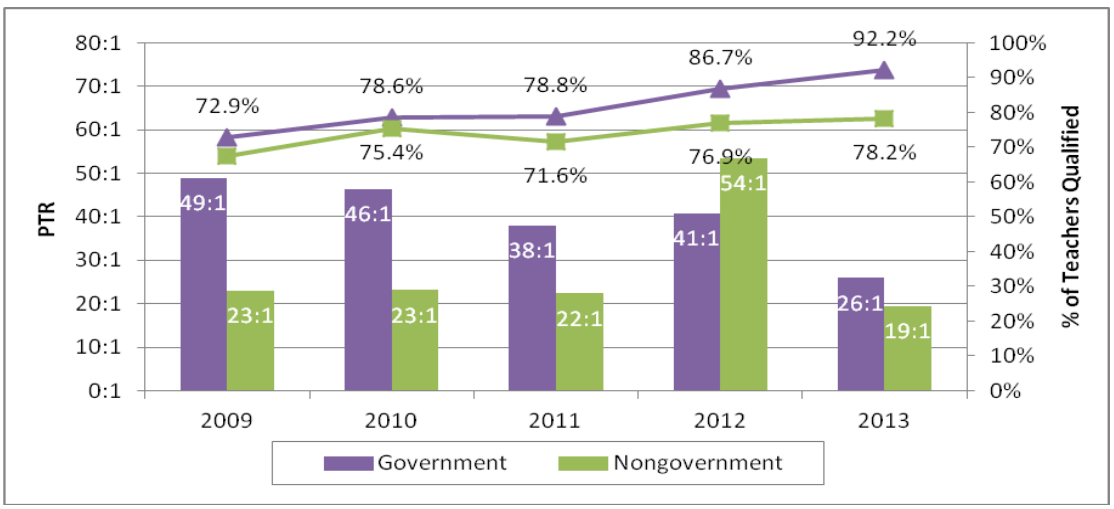


Source: BEST, 2013 and authors' computations.

At the secondary level, the average national pupil-teacher ratio has also improved, from 43:1 in 2009 to 25:1 in 2013. This reflects a marked reversal of an earlier deteriorating trend, as the PTR stood at 19:1 in 2004 (UNESCO, 2011). The current level is also well within the national SEDP target, of 30:1. This quick decrease in the secondary PTR is due to the growth rate in the number of teachers (at an annual average of 21.3 percent over 2009-13) vastly outstripping growth in enrollment (average annual growth of 5.4 percent at O-Level and 3.9 percent at A-level over the same period). The overall increase in staff numbers over the period is close to 39,500, net of attrition, with an increase of 31,600 in government schools.

Figure 8.2: Secondary Pupil-Teacher Ratios and Percentage of Teachers Qualified, by Type of School, 2009-13

Ratio and Percent



Source: BEST, 2013 and authors' computations.

Although PTRs have dropped in both government and nongovernment schools, the improvement is starkest in the former, from 49:1 in 2009 to 26:1 in 2013. In the latter, secondary PTRs have followed a similar trend as those in primary schools, dropping from 23:1 to 19:1.

Pupil-qualified teacher ratios have also improved, from 60:1 to 28:1 on average nationwide. The reduced gap with the PTR reflects the fact that a much greater proportion of teachers are now qualified, 89 percent in 2013, an improvement of 20 percentage points over 2009. This increase has been more pronounced in government schools, particularly since 2011, when the gap with the percentage of qualified teachers in nongovernment schools has deepened. However, unlike primary, this does not necessarily reflect a tangible improvement in teachers' qualifications or training. Following the expansion of enrollment in secondary education, one approach adopted to reduce the shortage of qualified teachers was to lower the qualification requirement, especially for teachers in certain subjects, such as English, Mathematics, and Science. On the assumption that the less qualified staff were assigned to O-Level classes, this could partly explain the generally lower CSEE pass rate between 2009 and 2013 (See Chapter 5).

Overall, for basic education, the key challenges are therefore to maintain the pace of teacher recruitment at the primary level, to further align PTRs with national targets, and to proactively explore policy options that will enable the secondary system to attract more qualified candidates, achieving a better subject-specialization balance, and in increasing numbers as enrollment continues to expand in the context of the new basic education policy. TTC capacity will require expanding, to ensure that enrollment and graduation are in phase with increasing enrollment in all subsectors. This has implications for budgets and resources, as well as infrastructure, facilities and instructional materials.

Profile of Higher Education Academic Staff

In higher education, it is felt that the level of faculty staff qualifications seriously limits the capacity of institutions to provide quality teaching and conduct serious and rigorous research work. In 2013/14, just over a third held a bachelor's degree, equivalent to the level they are teaching.

In university and university colleges, the number of academic staff has increased drastically over a very short time. With a total of 5,400 staff in 2012/13 and 9,200 in 2013/14, numbers have risen by 69 percent in just a year (See Table 8.3). Much of the increase is attributable to the recruitment of staff of bachelor level, whose numbers have virtually trebled, from about 1,250 to 3,450. The number of masters-holding staff accounts for most of the remaining overall growth, having increased from about 2,950 to 3,850. Furthermore, it is noteworthy that the share of non-Tanzanian staff has more than doubled year-on-year, suggesting that the higher education system is under strain to train a sufficient pool of suitable local human resources to cater for its needs.

Although recruitment has not kept pace with enrollment, student-teacher ratios remain reasonable overall, at an average of 23:1, up from 15:1 in 2009/10 (UNESCO, 2011). The share of female academic staff, although higher in 2012/13, has dropped back to its 2009/10 level in 2013/14, representing about a fifth.

Table 8.3: University and University College Academic Staff, by Qualification, 2012/13 and 2013/14
Number and Percent

	2012/13			2013/14			
	Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Distribution**
Undergraduate*	75	17	92	78	9	87	0.9%
Bachelor's Degree	908	338	1,246	3,051	400	3,451	37.5%
Postgraduate Certificate/Diploma	19	0	19	56	7	63	0.7%
Masters	2,097	852	2,949	2,751	1,096	3,847	41.8%
PhD	915	220	1,135	1,434	320	1,754	19.1%
Total	**4,014**	**1,427**	**5,441**	**7,370**	**1,832**	**9,202**	**100.0%**
% Foreigners	9.0%	13.0%	10.1%	21.7%	27.7%	22.9%	—
% Female	—	—	26.2%	—	—	19.9%	—

Source: BEST, 2013 and 2014 and authors' computations.
Note: * Undergraduate includes Certificate, Ordinary Diploma, Advanced Diploma and Higher Diploma.

On the other hand, the average level of qualifications appears to have deteriorated.[17] In 2009/10, 30 percent of academic staff held a PhD, a further 33 percent a master's degree, and almost all lecturers were estimated to have the required level of qualification for the course they taught (2 percent were underqualified – UNESCO, 2011).

In context, the structure of the teaching staff and their qualifications presented in Table 8.3 provides a less favorable picture. The situation that is potentially cause for greatest concern, is the fact that just 62 percent of academic staff hold a qualification above the bachelor's level, whereas bachelor degree students represent 71 percent of enrollment (See Chapter 2). This suggests that a significant number are being taught by insufficiently qualified staff, of the very degree level they are studying.

In terms of research capability, only 19 percent of faculty staff held a PhD in 2013/14. Although an indirect indicator, this suggests the capacity of higher education institutions to provide quality teaching and conduct serious and rigorous research work may be limited.

Inadequate human capital is among the most serious challenges currently facing the higher education sector in Tanzania. The apparent lack of candidates with the appropriate profiles is met with a multi-pronged strategy: (i) underqualified new staff is recruited locally and institutions invest in upgrading their qualifications. However, training and staff development have not kept pace with student enrolment; (ii) different forms of partnership and collaboration are sought, such as part-time teaching arrangements, exchange programmes for students and academic staff and joint research projects; (iii) diverse sources of funding are mobilized for staff development programmes, from the HESLB, government allocations, cost-sharing mechanisms and with the support of

[17] 2009/10 data cited from the 2011 ESA are based on a subsample of higher learning institutions.

development partners; but ultimately (iv) higher learning institutions have to resort to recruiting staff abroad.

Teacher Training and Professional Development

The Education and Training Policy stipulates that teacher education is intended to equip pre-service and in-service teachers with the knowledge, skills and competences required to transform human potential and society through education. These should include: (i) a deep understanding of the foundations of the school curriculum and mastery of subject content; (ii) pedagogical skills; (iii) assessment and evaluation techniques; and (iv) the basic principles of psychology, guidance and counseling.

The Teacher Development and Management Strategy (TDMS) was derived from the Education and Training Policy of 1995, implemented from 2010 to 2015 and evaluated in 2015. Although some aspects of the TDMS were not implemented, some key lessons were learned from those that were:

- The education system lacks a unique teacher policy with a holistic vision. The existing subsector teacher policies characterize a fragmented approach to teacher development and management.
- The absence of unique core teacher education curriculum is a challenge to professional certification and quality assurance.
- The lack of adequate funding undermines the provision of sustainable in-service training as well as equity in terms of access. Current such programs are generally uncoordinated and their impact difficult to measure. Continuous professional development through in-service training is considered to be a key incentive for teacher retention.
- The effective implementation of the reformed teacher education and professional development program requires strong and unified leadership and effective coordination and cooperation among entities, as well as a functional teacher management information system.
- Teacher education has gradually evolved into a form of technical education, with focus on pedagogical training to the detriment of other aspects.
- Teacher diploma-level qualifications are unequal, with diplomas delivered by universities being considered more valuable than those awarded by TTCs. This in turn generates dissatisfaction among teachers in terms of salary, promotions and professional status.

Accounting for government spending on teacher education is an issue. The fragmented and effectively uncoordinated approach to teacher education and management makes it difficult to trace public and private spending. Until 2000, pre-service teacher training was fully financed by the government, and some key education partners were authorized to finance in-service training activities. From 2000, a form of cost-sharing arrangement was introduced, whereby teacher trainees paid tuition fees of T Sh 150,000 and the government provided food and accommodation. In 2015, as TTCs became financially autonomous, they were mandated to generate their own funds and

collect tuition fees from pre-service teacher trainees. This carries a risk that tuition fees may increase, limiting access (Ssereo, 2015a).

Further Issues and challenges

Teacher management is apparently poor at all levels, and working conditions and prospects considered unsatisfactory by many.

Teacher deployment poses a particular challenge, in achieving an appropriate balance between equity in the allocation of staff among schools according to enrollment levels, and respecting teachers' basic preferences in terms of postings, based on their region of origin, mother tongue or family ties. The 2011 ESA estimated that 41 percent of primary and 61 percent of secondary teacher postings were not justified by enrollment levels in 2007. The management of teacher deployment mechanisms is still deemed unsatisfactory, especially in staffing remote rural and hard-to-reach areas (Ssereo, 2015a).

Effectively addressing the issues flagged above will require giving attention to issues of teacher attraction and motivation. Although the main motivations to join the profession are currently income stability and job security, these are not sufficient to attract candidates with the most appropriate profiles, or to ensure the effective retention of staff (Ssereo, 2015a). As such, motivation for the profession is deemed unsustainable. Whereas a competitive admissions approach to TTCs may improve the baseline profile of future teachers, improving motivation and retention will require a more holistic approach, covering better in-service training opportunities and working conditions.

Poor infrastructure in TTCs and insufficient textbooks and teaching materials, inadequate equipment, poor housing and large class sizes in schools, have frequently been evoked as factors driving teacher attrition. Furthermore, the allocation of allowances, housing and benefits is currently felt to be inequitable. Higher salaries may encourage better performance but an improvement in service conditions would contribute to promote job satisfaction, motivation and retention.

Infrastructure and Equipment

The general condition of infrastructure (quantity and quality) is not deemed to provide adequate learning conditions. Classrooms are overcrowded at the primary level and the shortage for secondary is estimated at 23%. There is a general shortage of latrines and desks, not to mention science laboratories for secondary.

Primary school infrastructure and equipment is deemed insufficient and of poor quality. The service delivery indicators study carried out in 2012 estimated that only 40.9 percent of a sample of 400 primary schools had the minimum infrastructure (World Bank, 2012a).

Despite the increase in the number of classrooms, schools are overcrowded, and increasingly so. In 2010 the pupil-classroom ratio stood at 66:1 (UNESCO, 2011), and has increased to 72:1 in 2013 (See Table 8.4). In fact, not a single region meets the stipulated norm of 40:1, although Kilimanjaro does come close, with 43 pupils per classroom, on average. Nationwide, this translates into a classroom shortage of 42 percent, although in the least endowed regions (Rukwa and Geita), the shortage can exceed 60 percent.

Table 8.4: Availability of General Facilities and Equipment in Primary Schools, by Region, 2013

Percent and Pupil-Classroom/Desk/Latrine Ratios

	Classrooms		Desks		Latrines		Teachers' Houses	Electric power
	Shortage	Ratio	Shortage	Ratio	Shortage	Ratio	Shortage	Shortage
Arusha	27.7%	54:1	-7.5%	2.8:1	46.5%	42:1	75.9%	65.3%
Dar es Salaam	41.8%	72:1	—	—	66.8%	64:1	94.1%	—
Dodoma	46.5%	75:1	39.5%	5.0:1	60.0%	57:1	83.7%	87.3%
Geita	62.2%	126:1	48.0%	5.8:1	76.1%	107:1	82.9%	98.3%
Iringa	31.6%	61:1	18.6%	3.7:1	73.4%	36:1	64.9%	81.1%
Kagera	44.2%	75:1	9.5%	3.3:1	57.1%	55:1	79.8%	78.7%
Katavi	58.5%	88:1	31.6%	4.4:1	63.7%	61:1	76.2%	92.8%
Kigoma	52.6%	85:1	31.6%	4.4:1	67.9%	103:1	82.6%	98.4%
Kilimanjaro	14.8%	43:1	-25.0%	2.4:1	23.1%	26:1	84.7%	75.2%
Lindi	23.2%	50:1	10.2%	3.3:1	52.2%	47:1	69.3%	93.4%
Manyara	35.2%	54:1	-7.7%	2.8:1	40.3%	35:1	69.1%	87.4%
Mara	42.5%	76:1	28.7%	4.2:1	83.1%	60:1	75.4%	90.4%
Mbeya	44.2%	76:1	22.0%	3.8:1	53.4%	46:1	77.0%	93.0%
Morogoro	36.0%	72:1	29.1%	4.2:1	51.2%	54:1	77.8%	84.1%
Mtwara	37.8%	60:1	6.3%	3.2:1	54.2%	47:1	73.9%	93.3%
Mwanza	55.3%	110:1	41.1%	5.1:1	70.8%	77:1	84.8%	84.4%
Njombe	22.7%	48:1	-18.3%	2.5:1	22.6%	40:1	59.1%	82.4%
Pwani	43.4%	66:1	21.9%	3.8:1	47.8%	45:1	75.3%	86.5%
Rukwa	67.4%	184:1	62.6%	8.0:1	59.8%	58:1	67.8%	91.7%
Ruvuma	31.6%	53:1	13.5%	3.5:1	45.1%	40:1	65.5%	96.5%
Shinyanga	35.9%	65:1	48.6%	5.8:1	69.5%	70:1	84.2%	91.2%
Simiyu	54.4%	89:1	55.0%	6.7:1	73.8%	85:1	77.4%	95.3%
Singida	39.4%	65:1	24.9%	4.0:1	49.2%	44:1	72.0%	89.2%
Tabora	48.3%	84:1	30.7%	4.3:1	65.5%	66:1	82.8%	94.8%
Tanga	37.8%	67:1	18.9%	3.7:1	46.7%	42:1	85.7%	89.5%
Total	**41.9%**	**72:1**	**24.4%**	**4.2:1**	**60.6%**	**53:1**	**79.0%**	**87.8%**
Regional Minimum	**14.8%**	**43:1**	**-25.0%**	**2.4:1**	**22.6%**	**26:1**	**59.1%**	**65.3%**
Regional Maximum	**67.4%**	**184:1**	**62.6%**	**8.0:1**	**83.1%**	**107:1**	**94.1%**	**98.4%**

Source: BEST, 2013 and authors' computations.

Note: All figures include government and nongovernment schools. Electric power includes the national grid, biogas, solar power, generators, wind power and small-scale hydroelectric power.

The shortage of pupils' desks stood at almost 25 percent in 2013.[18] Overall, over four primary pupils share a desk, whereas the norm is set at three. Four regions in fact meet the standard (Arusha, Kilimanjaro, Manyara and Njombe) and a further three (Mtwara, Lindi and Kagera) are close. However, in just as many at least five pupils have to share a desk on average, the worst situation being that of Rukwa, where the pupil-desk ratio is 8:1.

Further indicators of the state of infrastructure confirm the general picture of inadequate school environments: (i) the national primary pupil-latrine ratio is 53:1, almost double the 22.5:1 norm; (ii) teacher accommodation is in short supply, the average shortage ranging from 59 percent in Njombe to 94 percent in Dar es Salaam; and (iii) just 12 percent of primary schools have some form of electricity supply.

Regarding preprimary education, as classes are organized within the facilities of primary schools, BEST data does not differentiate between the resources allocated to preprimary and primary respectively. It is however known that capitation grants do not take preprimary enrollment into account, which suggests that the shortages of appropriate infrastructure and learning materials due to insufficient funding are likely to be acute.

At the secondary level, the overall availability of general infrastructure is slightly greater, although also falling short of set standards. The same indicators as above demonstrate better school environments overall, and regional disparities are significantly narrower (See Table 8.5).

- The national pupil-classroom ratio stood at 39:1 in 2013, with regional ratios ranging from 29:1 in Katavi to 49:1 in Geita. Overall, the classroom shortage is nevertheless estimated at 23 percent, reaching a maximum of 35 percent where it is most acute.
- The availability of pupils' desks is more uniform across regions, ranging from one to two pupils per desk, although the national ratio of 1.3:1 is still shy of the target of providing each secondary pupil with a desk.
- The national pupil-latrine ratio is considerably closer to the national target for secondary schools, at 29:1, which translates in to a concomitantly lower shortage, of 40 percent none the less.
- About 63 percent of secondary schools have some form of electricity supply nationwide, although in over half of regions, approximately 50 percent of schools or less have power.
- The shortage of teacher accommodation is similar to that of primary, at 78 percent.

[18] On average, there is in fact a surplus of desks in nongovernment schools, of 1.2%. For government schools only, the shortage would be 27.4%.

Table 8.5: Availability of General Facilities and Equipment in Secondary Schools, by Region, 2013

Percent and Pupil-Classroom/Desk/Latrine Ratios

	Classrooms		Desks		Latrines		Teachers' Houses	Electric power
	Shortage	Ratio	Shortage	Ratio	Shortage	Ratio	Shortage	Shortage
Arusha	24.6%	46:1	27.3%	1.4:1	38.5%	28:1	72.8%	7.2%
Dar es Salaam	15.1%	44:1	49.0%	2.0:1	41.5%	36:1	89.8%	6.2%
Dodoma	16.5%	32:1	20.3%	1.3:1	41.3%	29:1	78.8%	51.4%
Geita	35.3%	49:1	16.1%	1.2:1	55.4%	43:1	78.8%	49.5%
Iringa	12.9%	36:1	14.4%	1.2:1	24.8%	22:1	74.5%	27.7%
Kagera	26.5%	38:1	19.7%	1.2:1	33.5%	26:1	75.8%	32.9%
Katavi	28.7%	29:1	17.4%	1.2:1	36.1%	19:1	76.2%	33.3%
Kigoma	27.1%	39:1	15.5%	1.2:1	36.3%	31:1	75.2%	20.5%
Kilimanjaro	16.3%	39:1	29.3%	1.4:1	31.4%	24:1	73.0%	10.5%
Lindi	26.0%	30:1	15.2%	1.2:1	41.8%	24:1	73.6%	47.1%
Manyara	26.6%	38:1	-4.8%	1.0:1	47.4%	31:1	75.7%	47.5%
Mara	17.7%	43:1	13.0%	1.1:1	44.3%	36:1	73.3%	50.0%
Mbeya	11.3%	36:1	22.3%	1.3:1	36.8%	30:1	80.9%	37.8%
Morogoro	20.7%	36:1	20.0%	1.3:1	40.3%	29:1	79.8%	48.7%
Mtwara	25.5%	34:1	20.1%	1.3:1	49.8%	29:1	75.2%	66.7%
Mwanza	32.8%	48:1	23.3%	1.3:1	50.1%	40:1	81.7%	41.7%
Njombe	17.4%	35:1	7.0%	1.1:1	23.0%	20:1	64.7%	10.1%
Pwani	19.3%	36:1	35.1%	1.5:1	31.0%	22:1	76.3%	11.6%
Rukwa	24.8%	32:1	15.7%	1.2:1	35.2%	24:1	79.1%	37.8%
Ruvuma	25.4%	33:1	24.1%	1.3:1	42.3%	24:1	76.3%	54.3%
Shinyanga	26.4%	40:1	29.8%	1.4:1	41.1%	28:1	78.0%	56.6%
Simiyu	33.6%	43:1	14.8%	1.2:1	61.1%	42:1	79.0%	68.0%
Singida	31.3%	33:1	14.2%	1.2:1	43.0%	26:1	78.6%	58.7%
Tabora	28.5%	42:1	25.5%	1.3:1	45.6%	33:1	79.0%	51.7%
Tanga	27.2%	39:1	16.1%	1.2:1	47.9%	30:1	84.3%	56.8%
Total	**22.6%**	**39:1**	**23.1%**	**1.3:1**	**40.4%**	**29:1**	**78.0%**	**37.3%**
Regional Minimum	**11.3%**	**29:1**	**-4.8%**	**1.0:1**	**23.0%**	**19:1**	**64.7%**	**6.2%**
Regional Maximum	**35.3%**	**49:1**	**49.0%**	**2.0:1**	**61.1%**	**43:1**	**89.8%**	**68.0%**

Source: BEST, 2013 and authors' computations.

Note: All figures include government and nongovernment O-Level and A-Level schools. Electric power includes the national grid, biogas, solar power, generators, wind power and small-scale hydroelectric power.

Much as these general indicators are comparatively encouraging, quality teaching and learning at the secondary level also requires more specialized facilities and equipment, such as science laboratories, computers and libraries. These are considerably less widespread (See Table 8.6). Although Tanzania's secondary schools now have over 3,300 science laboratories (for biology, chemistry and physics combined), these only represent a quarter of estimated requirements. Agriculture and geography subject facilities are in shorter supply still, the national shortage being estimated at 94 percent on average. Just 15 percent of needs in terms of computer rooms are satisfied. Perhaps cause for greatest concern however, is the fact that 3,500 secondary schools, equivalent to over three-quarters, lack even a library.

Table 8.6: Availability of Specialized Facilities and Equipment in Secondary Schools, 2013

Number and Percent

	Requirement	Available	Shortage
Biology Laboratory	4,416	1,044	76.4%
Chemistry Laboratory	4,461	1,217	72.7%
Physics Laboratory	4,475	1,104	75.3%
Agriculture Laboratory	1,355	72	94.7%
Geography Laboratory	3,888	269	93.1%
Computer Laboratory	8,869	1,341	84.9%
Library	4,549	1,024	77.5%

Source: BEST, 2013 and authors' computations.

Textbook and Capitation Grant Management

Textbook Availability and Management

The availability of textbooks has declined slightly for primary, and despite improvements at secondary, continues to be grossly inadequate in many subjects. Current procurement mechanisms and capitation grant allocations jeopardize quality.

Available BEST data do not enable to assess textbook availability at the primary level in recent years. In 2009, on average across all grades, the pupil-textbook ratios were 2.7:1 for English books, 2.5:1 for mathematics books and 2.8:1 for Kiswahili books (UNESCO, 2011). A comparison with the findings of the Tanzania Service Delivery Indicators study nevertheless suggests there has been a slight decline in availability (World Bank, 2012a). On the basis of a sample of 179 schools, it estimated that in 2012, there were 0.94 textbooks per pupil in total, the ratio being slightly better in rural areas.[19] On the basis of the ratios noted above, it can be estimated that in total there were 1.13 textbooks per pupil in 2009, all subjects combined. Should the SDI sample be effectively representative of the situation across the country, this continues to fall well short of the required standard, where each pupil should have their own book in each subject. Under a third of required books are available at the primary level.

At the secondary level, textbooks are also in very short supply. The overall pupil-textbook ratio in government schools, all subjects and grades combined, is 2.3:1: more than two pupils have to share a book, which is considerable, considering the target ratio of 1:1, and the impact it must have on the ability to learn both in class and at home, given the more theoretical content of the curriculum.

Availability varies considerably by grade and by subject (See Table 8.7). Whereas O-Level Forms 1 and 2 face the greatest shortages, of above 60 percent, Form 3 is in fact the grade where the pupil-

[19] The SDI study methodology compares the total number of textbooks available, all subjects combined (English, mathematics and Kiswahili) to the total number of pupils, for all primary grades.

textbook ratio is the best throughout the whole of secondary, at 1.4:1. Generally however, the availability of books is much improved at A-Level, with an average pupil-textbook ratio of 1.7:1, compared to an average of 2.3:1 for O-Level.

At the subject-level, the ratio spreads from 1.5:1 to 5.2:1, all grades combined. This constitutes a significant improvement on 2009, when it was estimated that between four and nine pupils shared a textbook, depending on the subject (UNESCO, 2011). In 2013, the science subjects continue to be the best endowed: in physics, basic mathematics, chemistry and biology less than two pupils share a book. Indeed, at Forms 3 and 4 for these subjects, the number of books almost meets the number of pupils. In economics and the languages (English, French and Kiswahili) the ratios are higher, but moderate comparatively to other subjects, with under three pupils sharing a book. In Geography, History, Civics, Agriculture and General Studies the ratio is higher than 4:1, and in the worst case scenario, for Food and Nutrition, it reaches 5.2:1.

In a limited number of subjects and grades there is an oversupply of textbooks. This is particularly the case of English Kiswahili, and Commerce at A-Level, where there are twice as many books as pupils. On the other hand, the shortage is most severe for Book Keeping at A-Level, where over ten pupils share a textbook.

Table 8.7: Availability of Textbooks in Government Secondary Schools, by Subject, 2013

Pupil-Textbook Ratio and Percent

	Form 1	Form 2	Form 3	Form 4	Form 5	Form 6	Total	Shortage
Agriculture	5.2:1	6.1:1	3.3:1	2.8:1	1.7:1	1.3:1	**4.3:1**	**77.0%**
Basic Mathematics	1.7:1	2.0:1	1.1:1	1.5:1	2.4:1	1.9:1	**1.6:1**	**37.7%**
Biology	2.1:1	2.5:1	0.9:1	2.5:1	2.1:1	1.8:1	**1.9:1**	**47.3%**
Book Keeping	4.3:1	5.2:1	1.8:1	1.8:1	9.9:1	11.8:1	**3.7:1**	**72.6%**
Chemistry	1.6:1	2.7:1	1.0:1	1.1:1	2.3:1	1.8:1	**1.6:1**	**38.4%**
Civics	4.6:1	5.2:1	2.9:1	4.3:1	2.1:1	0.8:1	**4.3:1**	**76.9%**
Commerce	4.4:1	5.4:1	1.8:1	1.8:1	0.5:1	0.4:1	**3.6:1**	**71.9%**
Computer Studies	4.1:1	4.2:1	2.4:1	2.2:1	1.9:1	1.9:1	**3.4:1**	**70.5%**
Cookery	5.7:1	7.0:1	1.9:1	1.7:1	1.4:1	2.9:1	**3.9:1**	**74.5%**
Economics	3.0:1	4.3:1	1.7:1	1.5:1	1.9:1	2.0:1	**2.0:1**	**50.9%**
English	2.7:1	3.1:1	1.3:1	1.8:1	0.5:1	0.5:1	**2.2:1**	**53.7%**
Food and Nutrition	6.8:1	7.1:1	3.2:1	2.5:1	1.9:1	3.7:1	**5.2:1**	**80.8%**
French	2.8:1	3.1:1	1.3:1	1.3:1	4.5:1	3.1:1	**2.5:1**	**60.2%**
General Studies	2.6:1	3.0:1	0.9:1	3.0:1	5.7:1	4.9:1	**4.6:1**	**78.4%**
Geography	4.4:1	5.2:1	2.6:1	3.9:1	2.5:1	1.8:1	**4.0:1**	**74.9%**
History	4.7:1	5.6:1	2.8:1	4.2:1	1.1:1	1.2:1	**4.2:1**	**76.4%**
Kiswahili	3.6:1	4.4:1	1.4:1	2.0:1	0.4:1	0.4:1	**2.6:1**	**61.2%**
Physics	2.3:1	1.5:1	0.9:1	0.9:1	2.2:1	2.0:1	**1.5:1**	**33.0%**
Total	**2.7:1**	**3.0:1**	**1.4:1**	**2.1:1**	**1.8:1**	**1.6:1**	**2.3:1**	**57.0%**
Shortage	**62.7%**	**67.0%**	**27.9%**	**52.3%**	**45.4%**	**36.4%**	**57.0%**	—

Source: BEST, 2013 and authors' computations.

Furthermore, textbook quality is criticized, the approach to procurement often being blamed. Currently, some of the issues to be addressed include: (i) the fact that the multi-textbook policy means that private companies can act as suppliers, with the approval of a private body (Elsam

Management Consultants) under the Commissioner for Education, leading to poor control of textbook quality; (ii) the lack of control, books being purchased at the school level; and (iii) the lack of alignment between learning materials and pedagogical resources.

Some of the solutions considered to address these challenges include: (i) the central management of the procurement process, including the design, procurement and distribution, under PMO-RALG for compulsory basic education (preprimary, primary and secondary); (ii) mandating TIE, under the supervision of the Commissioner for Education, with the elaboration and publication of both textbooks and teaching and learning materials; and (iii) the introduction of e-learning and digital learning resources in higher education.

Quality aside, and although many possible explanations exist, the amount and timing of school capitation grant transfers are definitely related to the lethargic supply of textbooks in general education.[20]

Capitation Grant Management

Capitation grants are allocated and transferred to schools, in amounts supposedly directly proportional to the number of students enrolled and are mainly meant to finance the purchase of textbooks and other teaching and learning materials. A small percentage is also allowed to be devoted to funding repairs, administrative materials and the organization of examinations.

Their management has been fraught with issues for years, and according to a field study carried out recently by UNICEF (MoEVT/UNICEF, 2016), those issues highlighted in the 2011 ESA have not been resolved:

- The amounts that schools effectively receive consistently fall short of expectations. The grants are meant to be equivalent to T Sh 10,000 per primary pupil (double that for pupils with special needs) and T Sh 25,000 per secondary pupil. In practice, none of the schools surveyed received those amounts in 2014. The study found that in Mara region for instance, only 30 percent of the projected grant for primary and under 40 percent of that for secondary were received. Hakielimu estimated that during fiscal year 2012/13, only T Sh 6,025 were disbursed per primary pupil, and just T Sh 13,266 per secondary pupil, on average (Hakielimu, 2013). This would imply that there has been little change in real terms since 2009, when the 2011 ESA found that the average amount received by schools was T Sh 4,189 per pupil.
- The 2011 ESA also noted several variations between the amounts declared as received by schools and those declared as sent by district councils, raising questions over financial tracking and accountability.

[20] For adult and nonformal education no funds are allocated for publishing and purchasing books. Critical shortages of teaching and learning materials are also prevalent in folk education due to the lack of fund allocation. The introduction of e-learning through the use of digital learning resources and open and distance learning courses may help to overcome these challenges.

- Clearly, there is a lack of transparency in the way grants are computed and allocated, as schools are not informed of the per pupil basis for their calculation, and no reason for deductions relative to the statutory amounts is provided.
- Schools complain that the nominal amount of the grants has not been revised over the past decade, despite rising operational costs and inflation.
- The actual disbursement of the grants is erratic and untimely, meaning that added to the uncertainty over the amount that will eventually arrive, planning procurement and other financial commitments is tentative, at best.
- Finally, the authority given to schools to manage funds under the principles of decentralization by devolution is often not met with the required capacity for financial management, not to mention the fact that schools are no longer accountable to education boards, meaning that grants are prone to be misused (MoEVT/UNICEF, 2016).

The overall image of capitation grant management derived from these situations suggests that the impact on school-level activities is likely to be severely detrimental to quality, affecting both management and teaching, with a resulting knock-on impact on learning achievements (Hakielimu, 2013). Unfortunately, the future of nonsalary school-level financing continues to be shrouded in uncertainty. The transition towards a standard allocation by school (block grants), should it proceed, carries a double risk: that school financing be further reduced, and that as a result, school management revert to charging parents to fill the gap.

TVET and Higher Education Management Issues

Over the years, the government has deployed a series of strategies to ensure the adequate and more concerted development of both the higher education and TVET subsectors, to supply the economy with the increasing number of skilled and knowledgeable professionals it needs to sustain its growth. These efforts have however neglected some streams, and significant challenges remain.

Critical Challenges in TVET

Beyond the systemic issue of underfunding, institutional mandates for the regulation and delivery of TVET need review, outreach to the labor market and other stakeholders needs improving, and capacities in coordination and monitoring and evaluation require strengthening.

Some of the key achievements in the management of TVET noted in the 2011 ESA include: (i) improved coordination, thanks to incorporating vocational education and training and technical education under MoEVT; (ii) the development of a TVET development programme, addressing incoherence in training content; (iii) the improvement of quality assurance processes under NACTE,

through registration and accreditation standards and procedures; (iv) the inclusion of National Technical Awards in the national qualifications' framework; (v) the implementation of an outcome-based training approach; and (vi) the ongoing registration of technical education teachers.

Nevertheless, a number of challenges remain. In the wake of globalisation and the development of a knowledge-based economy, the TVET sector calls for reforms to improve governance, access, financing, quality and relevance, as well as a review the role of the private sector and the acquisition of skills in nonformal and informal environments (Dubois and Athumane, 2016). In Tanzania, TVET is expected to contribute to address three major sustainable development issues and to set Tanzania on course towards middle-income status, by 2025:

- Youth unemployment and under-employment;
- Income poverty, particularly in rural areas; and
- Skills for the agriculture, manufacturing, service and tourism sectors.

A recent study commissioned by UNESCO identified the following critical factors affecting governance and management of the TVET sector (Dubois and Athumane, 2016):

- The continued fragmentation of vocational and technical education streams affects the quality, relevance and efficiency of the TVET system. This is felt at both: (i) the regulatory level, where VETA is responsible for vocational training and NACTE is responsible for technical education), thereby creating a situation where articulation is weak, coverage of needs is partial, resources are duplicated and beneficiaries are confused; and (ii) the delivery level, where different ministries and bodies are involved in the provision of training.
- Outreach by TVET institutions and institutes to stakeholders, the private sector and society in general is insufficient, resulting in a training system that is not responsive to their needs. In particular, employers feel that they are underrepresented on TVET institute governing boards (they represent 20 percent of members, on average).
- VETA holds two conflicting roles, being both a regulator and provider of vocational training.
- There is a general lack of effective and systematic monitoring and evaluation mechanisms, to actively track progress over time in terms of service delivery, outcomes and impacts.
- Coordination and information-sharing is insufficient to ensure that the results of those studies and reviews that are conducted can be harnessed by all stakeholders in a sector-wide coherent approach. Labor market surveys for instance, are carried out by different stakeholders, including VETA and the Ministry of Labour.

Furthermore, since the number of technical institutions is growing fast, there is a need to improve the level and practice of technical college verification and accreditation by NACTE. The number of registered technical colleges increased from 170 in 2007 to 323 colleges in 2013, without a concomitant increase in the number of inspectors and supervisors to monitor the quality of instruction provided. The improvement of the quality and learning outcomes will benefit greatly from a greater frequency of supervision.

Finally, as mentioned in Chapter 4, financial resources are perhaps the greatest constraint faced by TVET institutions, which particularly lack modern training equipment and sufficient and relevant

learning materials. Recommendation for more effective TVET funding focus primarily on: (i) the improvement and diversification of financing mechanisms; and (ii) the more effective use of available resources. Central to the former, is the proposal to establish a National Skills Development Fund (NSDF). This could initially be housed within an existing MDA to minimize costs, but should ultimately have an autonomous governing body. Although public funding could be increased to expand access and improve quality, further diversification of funding sources could be pursued. In complement to public funds, and in addition to the skills development levy, the option of setting up voluntary funds through stakeholders, of a general or sectoral nature, could be explored, and training centers themselves could mobilize resources by developing and offering fee-paying services based on the training provided.

To promote the efficient use of TVET resources, it is suggested that guidelines be drawn up to determine both the procedures and criteria for the disbursement of funds, including through the NSDF should this be established. The fee structure for different types and duration of training should be reviewed, to become more equitable and efficient, ensuring that training costs are not inflated and resources are optimized. The option of introducing performance-based budgeting has also been raised (Dubois and Athumane, 2016).

Addressing these outstanding challenges to ensure TVET increases its relevance and fulfils its assigned role will no doubt require further reflection on funding mechanisms for the subsector, the review of institutional mandates to streamline responsibilities in terms of regulation and delivery, improving outreach to the labor market and other stakeholders, and building capacities in coordination and monitoring and evaluation, in particular.

Specific Issues relating to Folk Development Colleges

FDCs face a number of challenges, relating to their institutional anchoring, infrastructure, equipment, staff, resources and more fundamentally, the positioning of their courses within the national education landscape.

At the institutional level, the Ministry of Community Development, Gender and Children is responsible for the general oversight of FDCs, that are administered at the district council level. Cooperation between MCDGC and councils is unsatisfactory, despite the fact that the District Executive Directors where FDCs are located are the Chairpersons of FDC boards. Folk Education could be further developed and integrated, programmatically if not institutionally, with other ANFE initiatives, in order to deliver programmes in the most effective way possible for the target groups.

FDCs have a well-defined management structure at the local level. Each FDC has a seven-person governance board, responsible for the preparation of budgets requested of the central government. FDC directors report to the ministry quarterly, and regularly to the chair of the board. There is no regular reporting or accountability to the community, nor any formal channel for feedback or complaints. ‘Open Days’ used to be held for the community, but were abandoned many years ago.

Infrastructure and teaching and learning materials and equipment are both outdated and in short supply. Many FDCs were built in the 1960s and are in urgent need of repair or renovation. Only 36 out of 55 FDCs have mains electricity. Currently the colleges are mainly found in semi-urban areas, mainly in the East, at the expense of effectively meeting the demands of their prime target rural beneficiaries. Tools and textbooks for vocational courses face a particularly acute shortage, and technical equipment for practicals is both outdated and insufficient. This situation reflects a general lack of fund allocations for FDC programmes, which are consistently given low priority by both central government and LGAs.

Tutors and facilitators are in equally short supply. By December 2014, the requirement gap was estimated at 3,821 (1,150 for VET courses and 2,671 for folk education). Most adult and nonformal education centers use seconded primary and secondary school teachers, but the meager teaching allowance they are offered provides little incentive. Unqualified facilitators (Form 4 or 5 leavers) are used as an alternative, which leads to poor performance. This is not helped by the lack of any kind of professional academic inspections. There is currently no long-term training strategy to build the required human resource capacity to impart vocational skills.

Although FDCs aim to enable learners with little formal schooling to learn a trade or skill, a recently introduced method of competency-based assessment now requires learners to take ten subjects, in English, in addition to their chosen trade subject, in order to obtain a certificate. These requirements make it almost impossible for a learner without secondary schooling to achieve the necessary level, thus reducing the flexibility and openness of FDC courses.

The nature of the courses provided by FDCs effectively make them accountable to both MCDGC and VETA, which creates a conflict of interest. Principals are known to receive uncoordinated directives from VETA and MCDGC, on how they should run vocational programmes, in particular with respect to which curricula to use. Being mandated to oversee vocational education and training, VETA insists FDCs use its curriculum, which would enable participants sit VETA examinations and obtain recognized certificates. MCDGC on the other hand insists the colleges use its curriculum because the philosophy of FDC programmes is a flexible approach to the provision of skills, and not the provision of certificates to participants.

This situation well illustrates the conflicting expectations of FDCs, which were created to fill a void in the provision of education offers, for learners with specific vocational needs but little or no formal education. Today, pressure to formalize this particular stream of nonformal education, by ensuring it is reflected in the Tanzania Qualifications Framework, and systematically validated by a recognized certificate, would indeed enable learners to pursue their education within different subsectors. The challenge will be to ensure that it continues to provide for the needs of its original beneficiaries, and not leave a new void in its place.

Recent Initiatives in Higher Education

Past achievements in the higher education subsector include: (i) the incorporation of the subsector into MoEVT's mandate in 2008, providing a solid and more modern institutional framework for its development; (ii) the strengthening of the Tanzania Commission for Universities, to improve quality assurance; and (iii) the implementation of a streamlined admissions procedure and centralized admissions' system (UNESCO, 2011).

Some of the key challenges have been outlined in previous chapters, such as the sustainability and equity of the financing model through the HESLB (See Chapter 4) and achieving the appropriate balance of academic staff, in terms of both subject-specialization and academic seniority (See above). Data have not permitted to establish whether administrative efficiency has improved over the period, which was noted as a challenge five years ago (with an average ratio of administrative staff to teaching staff of 1:1).

A number of initiatives aimed at improving the quality of learning outcomes in higher education are ongoing, including: (i) a student loan programme specifically destined at facilitating the purchase of books and other teaching and learning materials; (ii) a system of managed and referenced libraries, to facilitate both lecturers' and students' access to knowledge and resources; (iii) the introduction of e-learning mechanisms, using digital learning resources and the design of open and distance learning courses, to both enhance teaching and learning experiences through ICT, improve access to educational resources, and reduce the cost of purchasing books; and (iv) University Teaching and Learning Improvement Programmes (UTLIP), whereby lecturers without a teaching background are oriented with pedagogical knowledge.

Challenges and Lessons Learned in Education Data Management

The EMIS system fails to provide decision-makers with the necessary steering and monitoring data and tools.

Introduced in 2007 in direct response to the sector-wide need for an "in-built monitoring system" within the MKUKUTA framework, the Education System Management Information System (ESMIS) purported to be a key element of the ESDP, 2008-16 (JESR Aide Memoire 2007). At central level, the ESMIS was intended to function as a coordination tier, harmonizing its constituent sub-systems for data management and analysis across the basic education (BEMIS), vocational (VET-MIS), higher and technical education sub-sectors (HET-MIS). Yet the evolving sector context has raised key challenges in terms of sector-wide capacities for data management, analysis and use.

- Even where financial planning for M&E differentiates between recurrent and non-recurrent costs, government budget allocations are often cut to meet other sector priorities. Ad hoc

planning results in a perennial shortage of funds for M&E and routine sub-sector censuses are conducted with short-term/external financing.

- The sector lacks an institutionalized M&E framework, stipulating the roles and responsibilities of diverse MDAs across all sub-sectors. As a result, mandates for M&E remain unclear and there is uncertain ownership of and accountability for the sub-sector management information system cycles (BEMIS, VET-MIS, HET-MIS, etc).
- While sub-sector specific projects and programs (such as BRNEd) have perforce set up their own monitoring arrangements, these support neither sector-wide nor inter-sectoral monitoring. There is currently no single sector-wide monitoring tool, including benchmarks to measure the quality of teaching and learning at the institutional level.
- Human resource constraints have remained an issue since 2010. The M&E Department and ICT Department at MoEST have long been understaffed and with limited recruitment of skilled personnel there is a heavy reliance on external technical assistance or the outsourcing of routine activities.
- Data flows between sub-sector systems are not harmonized. Online data capture at the school level is an available option for basic education, but not for the VET-MIS and HET-MIS. ESMIS sub-systems are not currently hosted on a single server, to facilitate coordinated system maintenance. Moreover, The ICT environment and infrastructure in the sector's ministries have not been systematically reviewed since 2008.
- All sub-systems are marked by poor data quality, including: data inconsistencies, incompleteness and gaps in expenditure data; and databases are polluted with redundant data. Annual reviews result in census questionnaires that are voluminous for all sub-sectors, resulting in low returns and under-performing sub-systems.
- The recent upgrade of BEMIS (to StatEduc V.2) by a core group of 15 government staff supported by UIS has launched a decentralized programme for the training of trainers and district/ward level staff. But this 'cascade' model of training is an emergency response to the need for timely 2016 school census data; a sustainable response for the harmonization of BEMIS under ESMIS is required.
- The sector is severely undermined by the lack of a sustained pool of government expertise, such as data managers, IT technicians for overall database maintenance and statisticians for data analysis and reporting. Yet training takes place in project mode, and one-off training ends when projects end.
- Access to and use of data for decentralized planning and school-based management remains a priority concern. Yet there is no coherent response for user-friendly reporting functionalities demanded across sub-sectors; such as the parallel development of an online report-building tool by UIS and a BRNEd reporting dashboard.
- Underpinning the above is the breakdown of political will for sector-wide M&E, as well as the dialogue structures to enable accountability in the sense of information-sharing, learning and mutual support. Rather, systems-building takes place in a leadership vacuum and dialogue is reduced to technicians seeking and/or reporting on the utilization of donor funds.

Some of the lessons learned over time include the need for: (i) a strategic plan to strengthen ESMIS, including a costed capacity building component based on a rigorous sector-wide capacity needs assessment; (ii) an M&E framework, including a single sector monitoring tool for national and

international monitoring; (iii) sustainable capacity development (in terms of systems-building and expert personnel) to both establish routinely functioning BEMIS, VET-MIS and HET-MIS sub-systems and ensure the timely production of quality sector monitoring data; and (iv) a strengthened accountability mechanism for sector-wide M&E and education management.

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