

# CHAPTER 2

## ENROLLMENT AND INTERNAL EFFICIENCY

Education policies in Africa generally focus on achieving universal primary education, and to a lesser degree on enabling the quantitative and qualitative development of other education subsectors in response to a country's needs and financial capacity. This chapter analyses the expansion of schooling and the structure of student flows in detail, to assess what Tanzania has achieved so far. It also attempts to identify the main issues in dealing with students' access to and progression through the education system. Here the analysis relies on quantitative indicators, mainly at the national level; equity issues (gender, location and socioeconomic disparities) are later addressed in Chapter 5.

## The Structure of the Tanzanian Education System

In Tanzania, the management of the education system is the mandate of the Ministry of Education and Vocational Training (MoEVT).<sup>10</sup> However, some responsibilities fall under other ministries such as the Prime Minister's Office for Regional Administration and Local Government (PMO-RALG), the Ministry of Community Development, Gender and Children (MCDGC), and various line ministries for technical education.

Since 2008, the education system is organized into four subsectors (See Figure 2.1 below):

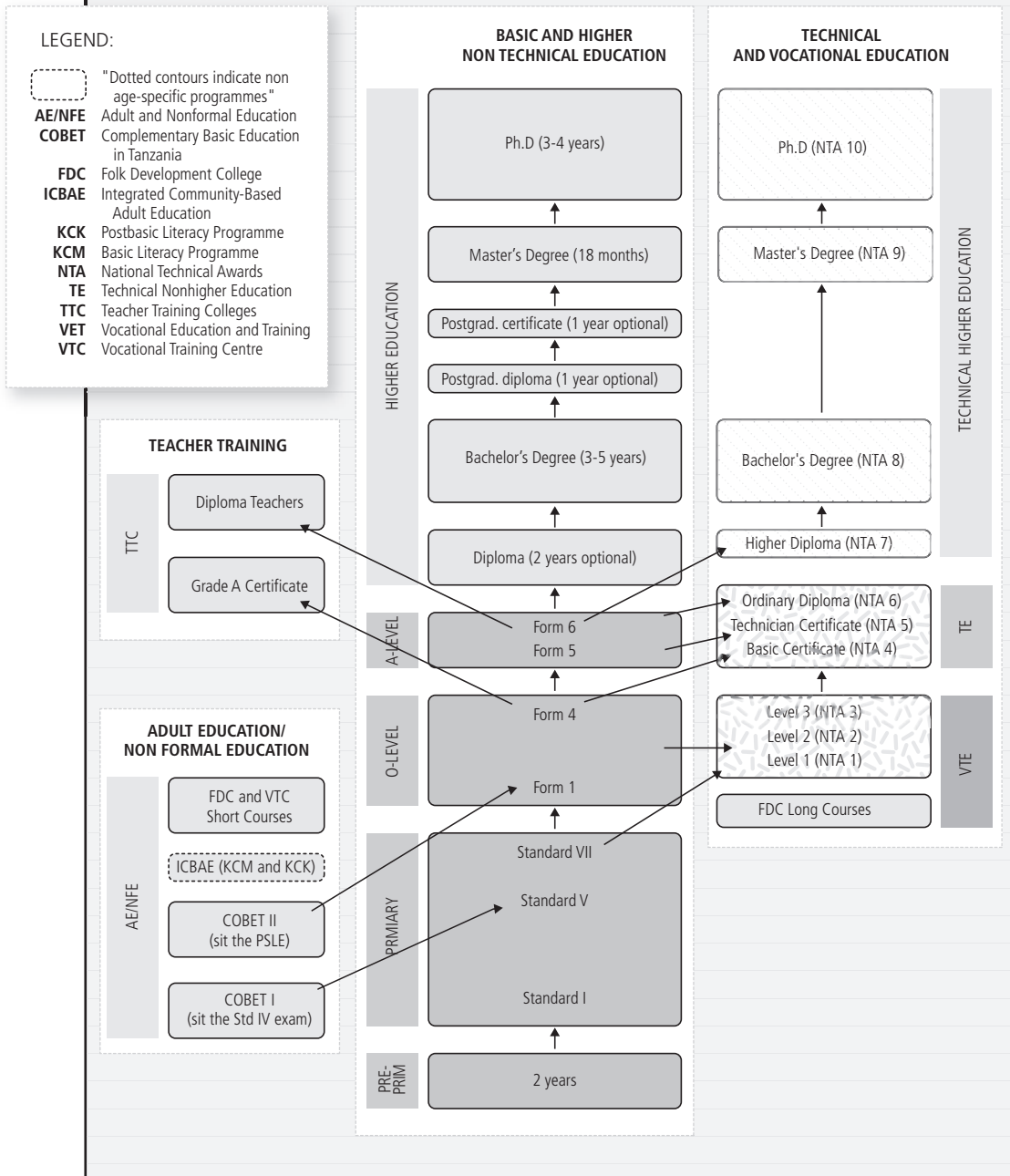
- (i) Basic Education, that comprises preprimary, primary, secondary, teacher training, and adult education and nonformal education (AE/NFE);
- (ii) Folk Education;
- (iii) Technical and Vocational Education and Training (TVET); and
- (iv) Higher Education (University and nonuniversity)

However, this *institutional* structure does not always overlap with the *programmatic* structure. Indeed, folk education may be categorized either under AE/NFE in the case of Folk Development College (FDC) short courses, or under vocational education and training (VET) for FDC long courses. Similarly, technical nonuniversity curricula can fall either under TVET or under higher education. For analytical purposes, the forthcoming analysis provides a description of the system by subsectors, based on the functional nature of the curricula offered.

### ● Basic Education

*Preprimary education* offers a two-year cycle for children aged five to six years.<sup>11</sup> The government recognizes its positive contribution to primary school preparedness, but also to helping reduce late entry into primary, which is still a major issue (See Figure 2.8 below). The current policy is to attach preprimary streams to all government primary schools. Dedicated preprimary streams and schools are also offered privately. However, the development of the subsector remains a responsibility shared between MoEVT, PMO-RALG, NGOs, communities and the private sector. Indeed, the involvement of the private sector and communities in preprimary school ownership and management is especially encouraged to allow for the rapid expansion of the subsector. However, the mechanisms supporting these alternative approaches are still to be better defined.

Figure 2.1: The Structure of the Tanzanian Education System



*Primary education* is compulsory and is a seven-year cycle, officially enrolling children aged seven to 13 years. Primary education has been fee-free since 2002. The cycle is sanctioned by a final examination at the end of Standard VII, which is used both to assess learning achievements, and to filter entry into Form 1 in government secondary schools. An examination is also sat at the end of Standard IV to assess pupils' academic progress. Until 2009, pupils who failed this exam were required to repeat the year.<sup>12</sup> However, repetition is generally discouraged throughout the cycle.

*Secondary education* comprises two cycles: Ordinary Level (O-Level) and Advanced Level (A-Level). Under the pressure of the growing numbers of primary school leavers following the implementation of the fee-free primary education policy, Tanzania has favored the expansion of O-Level secondary education since 2004. The O-Level lasts for four years and is sanctioned by a national examination at the end of Form 4, the Certificate of Secondary Education Examination (CSEE), used to assess students' learning achievements and to select students for A-Level government secondary schools, of which there are very few. An exam in Form 2 is also held to assess students' learning achievements.

The A-Level lasts for two years and offers arts and science subject combinations. At the end of the level, students take the Advanced Certificate of Secondary Education Examination (ACSEE).

Secondary schools in Tanzania can be for boys only, for girls only, or coeducational. Although they are formally categorized as government, government-community owned, seminaries and nongovernmental, in general they are grouped into government and nongovernmental categories. In 2009, 4,102 secondary schools were registered, most of them government-owned (80 percent). Whereas 3,649 schools offered O-Level, 453 offered A-Level. All A-Level schools (but six, located in Dar es Salaam) are boarding schools, most are gender-specific, and they are generally attached to schools offering O-Level.

O-Level curricula are also provided through the open distance learning (ODL) programme delivered by the Institute of Adult Education (IAE). The programme caters for different groups: youth and adults who missed out on the opportunity of formal education due to social, economic and cultural reasons (pregnant girls were until recently evicted from school). It is delivered through modules and face-to-face sessions with regional resident tutors and especially invited secondary school teachers. ODL students can sit the CSEE as private candidates.

*Teacher training* is offered at three levels: (i) a two-year Grade A certificate offered by teacher training colleges (TTCs) designed to train CSEE graduates to be primary school teachers; (ii) a two-year programme to train ACSEE graduates to be O-Level school diploma teachers and; (iii) a degree offered by higher learning institutions (HLIs) (Universities and University Colleges of Education) to prepare teachers for both O-Level and A-Level secondary schools.<sup>13</sup>

*Adult education and nonformal education* is offered through various channels to deal with different groups with different needs: (i) the Complementary Basic Education in Tanzania

(COBET) programme caters for children aged 11 to 18 years who never went to school or who dropped out.<sup>14</sup> It is a kind of second schooling chance for some children, or a first chance for those who were never able to access school at all. Children are grouped into two cohorts according to their age (Cohort I for children aged 11 to 13 years and Cohort II for those aged 14 to 18 years). They study for two to three years. Cohort I pupils sit the Standard IV examination, and Cohort II pupils sit the Primary School Leaving Examination (PSLE), through which they are mainstreamed back into the formal education system. The programme started as a pilot in July 1999 and was fully up-scaled in 2004. Secondly: (ii) the Integrated Community-Based Adult Education (ICBAE) programme offers KCM (basic literacy) and KCK (postbasic literacy) components.<sup>15</sup>

Adult education is also delivered through Folk Development College (FDC) short courses, Vocational Education and Training (VET) short courses and tailor-made courses (via both the in-centre and outreach modalities). Both FDC short courses and VET short courses/tailor-made courses are programmes offered for one to ninety days in areas such as income generating support skills, business skills, entrepreneurship, gender knowledge, environmental management, food preservation, and so on. Outreach courses depend on trainee needs and are delivered at their residence or place of work. All short and outreach training courses are normally provided after conducting needs' assessments and identifying specific areas for training and groups or individuals in need.

## ● Technical and Vocational Education and Training

Technical and Vocational Education and Training (TVET) provides alternative education and training opportunities upon completion of primary and secondary education levels, which lead to careers as skilled workers, technicians and professionals for various sectors of the economy. They focus on imparting the necessary knowledge and skills to youth in order to enable them to contribute to the socioeconomic development of their communities, and ultimately to that of the country. TVET is offered through the following channels:

- (i) *Technical Education (TE)* is offered through postsecondary nonuniversity colleges and institutes that provide one to two year certificate courses, two to three year diplomas and two to three year courses leading to higher diploma/degrees, producing higher-level technicians and professionals;
- (ii) *Vocational Education and Training (VET)* is mainly offered through the Vocational Education and Training Authority (VETA) long courses provided by vocational training centers (VTCs) that cater for primary school leavers and O-Level secondary school leavers. Courses last for one to three years and lead to recognized academic certifications (the National Technical Awards - NTA 1 to 3); and
- (iii) VET is also delivered through Folk Development College long courses. Long course programmes refer to all courses with a duration of ninety days to two years, aiming to provide knowledge and skills essential for self-employment. The subjects offered

are carpentry, masonry, metal work, domestic science, car mechanics, agriculture, welding and so on. General education support subjects are provided to broaden learners' mental faculties and enable them to utilize their technical skills more productively. These subjects include civic education, culture, languages and bookkeeping. Contrary to VETA long courses, FDC long courses do not provide certification because of the variety of candidates and courses offered. Participants are however delivered a completion certificate by the training institution and are allowed to sit VETA-supervised examinations.

To allow for greater integration between education subsectors, TVET was included under MoEVT's mandate in 2008, leaving the Ministry of Labor, Youth and Development. Whereas the National Council for Technical Education (NACTE) regulates and accredits all postsecondary and higher technical institutions, the VETA is in charge of postprimary vocational centers. FDCs however are still managed by the MCDGC (See Chapter 8).

### ● Higher Education

Higher Education (HE) is part of MoEVT's mandate since 2008.<sup>16</sup> This cycle is organized into two levels - university and nonuniversity. Nonuniversity level institutions include those which offer courses of up to three years leading to a technical bachelor's degree;<sup>17</sup> whereas university level institutions include those which offer courses leading mainly to standard bachelor's degrees and above. Higher education is provided both by government and nongovernmental institutions. The coordination and quality assurance functions remain the responsibility of the Tanzania Commission for Universities (TCU) at the university level and of the NACTE at the nonuniversity level, both under the supervision of MoEVT (See Chapter 8).

### ● Data Sources

This chapter relies on the school census data from the Basic Education Statistics in Tanzania (BEST),<sup>18</sup> the 2002 NBS-corrected projections and the latest household surveys (the 2000/01 and 2007 Household Budget Surveys – HBS, the 2004/05 Demographic and Health Survey - DHS). When possible, data from other African countries are presented to allow for cross-country comparisons. The quality of available EMIS data suffers from many flaws, mainly related to the inadequate coverage of survey responses from schools/institutions and to the provision of national consolidated figures that did not systematically flag the missing information. Although systematic cross-checks were performed to ensure the data used were reliable, these constraints have seriously limited the scope of the analysis performed.

## Enrollment Dynamics by Education Level

The analysis of raw data (the enrollment of students by school level) is the first step to perform when analyzing a school system. Table 2.1 below presents a general overview of enrollment trends over the 2000-09 period, by education subsector.

### ● Enrollment Trends by Education Level since 2000

*Enrollment in **preprimary** schools has rapidly increased over the last years, from 554,835 pupils in 2004 to 896,146 pupils in 2009, equivalent to an annual growth rate of nine percent over the period. The policy to incorporate preprimary teaching to every primary school has certainly provided preprimary enrollment with a major boost: in 2009, 79 percent of government primary schools offered the preprimary curriculum. The share of the private sector in preprimary teaching, although increasing, remains minor with only five percent of preprimary pupils enrolled in nongovernmental schools in 2009.*

*Enrollment in **primary** schools has steadily increased, effectively doubling over the decade, to reach 8,441,553 students in 2009. Over the last five years however, enrollment has grown at a slower pace (with an average annual growth rate of three percent, against 13 percent for 2000-04), suggesting the recent existence of a saturation effect. The growth in primary enrollment is now mainly driven by demographic pressure. Indeed, significant increases in school enrollment were observed following the implementation of the fee-free primary education policy in 2002: over the 2001-02 period, the system absorbed an additional 1.1 million students (See Figure 2.2 below). The private sector has remained contracted, enrolling just 1.5 percent of students in 2009. This is consistent with the ministry's policy of offering fee-free primary education to all Tanzanian children.*

**Table 2.1: Enrollment by Level, 2000-09**  
Number of Pupils

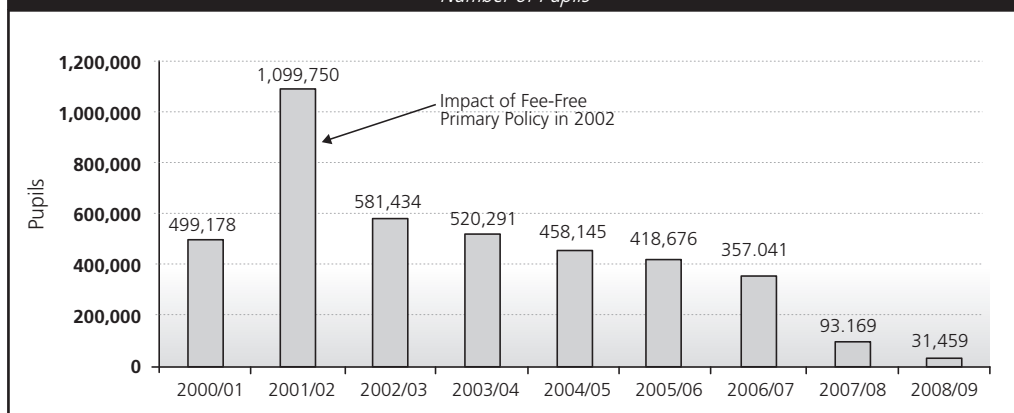
Level	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Preprimary	—	—	—	—	554,835	638,591	669,137	795,011	873,981	896,146
Primary	4,382,410	4,881,588	5,981,338	6,562,772	7,083,063	7,541,208	7,959,884	8,316,925	8,410,094	8,441,553
Secondary	261,896	289,699	323,378	345,441	432,599	524,325	675,672	1,020,510	1,222,403	1,515,935
O-Level	238,194	264,892	296,529	319,487	401,598	489,942	630,245	967,087	1,164,250	1,401,559
A-Level	23,702	24,807	26,789	25,954	31,001	34,383	45,427	53,423	58,153	64,843
Open Distance Learning	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	49,533
Teacher Training (TTC) *	11,444	16,037	13,181	28,490	32,652	28,149	30,476	23,403	21,888	35,371
Adult Education/Nonformal Education										
COBET Equivalency	n.a.	n.a.	n.a.	n.a.	466,078	357,490	221,479	185,206	111,413	82,989
Cohort I	n.a.	n.a.	n.a.	n.a.	233,932	192,787	150,748	109,470	69,245	53,093
Cohort II	n.a.	n.a.	n.a.	n.a.	232,086	164,703	70,731	75,736	42,168	29,896
ICBAE	1,063,078	1,073,316	—	—	—	—	—	—	1,059,124	957,289
VTC Short Courses/Outreach	—	—	—	—	—	32891	35,207	49,657	45,890	—
FDC Short Courses	10,346	14,125	10,044	12,136	21,680	20,267	24,473	25,465	26,423	24,849
Technical Education **	—	—	—	—	—	—	36,586	—	48,603	49,591 **
Nonhigher Technical	—	—	—	—	—	—	20,094	—	31,145	28,760 **
Higher Technical	—	—	—	—	—	—	16,492	—	17,458	20,831 **
Vocational Education and Training	—	—	—	—	—	57078	66,997	95,766	68,502	72,938
VTC Long Courses	—	—	—	—	—	52765	62,670	90,844	63,433	68,230
FDC Long Courses	1,561	4,130	3,751	9,638	2,008	4,313	4,327	4,922	5,069	4,708
Higher Education **	—	—	—	30759	36,612	40,105	48,147	79,961	97,245	115,305

Source: BEST statistical yearbooks, various years; NACTE; TCU; VET and COBET.

Note: \* Teacher training refers to TTCs only, \*\* Technical education refers to NACTE-registered institutions. Whereas nonhigher refers to certificates and ordinary diplomas, higher includes advanced diplomas, degrees and beyond. Technical education figures for 2009 are based on authors' estimates. \*\*\* Higher education includes universities and university colleges.



**Figure 2.2: Primary Level Additional Enrollment Intake, over Sets of Two Consecutive School Years, 2000/01-2008/09**  
*Number of Pupils*

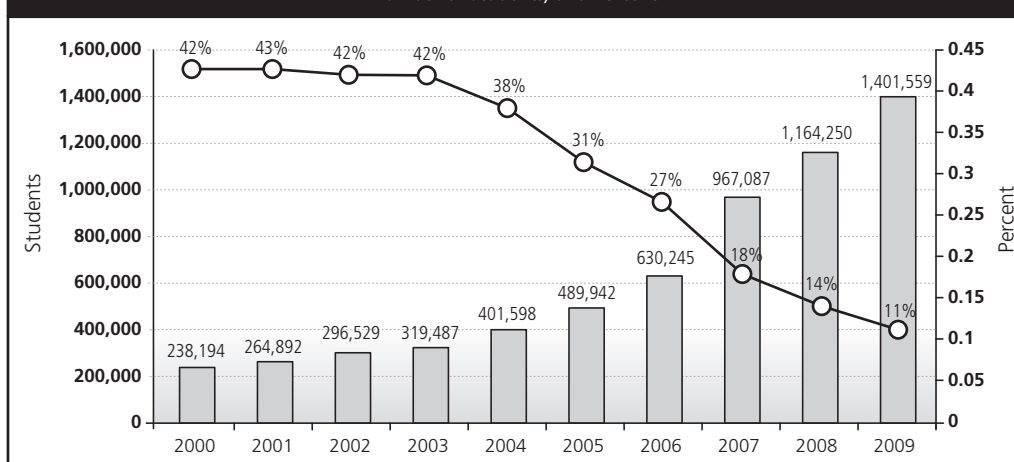


Source: BEST, various years.

Reading Note: Over 2001-02, the primary education system absorbed an additional 1,099,750 pupils. Over 2008-09, the additional intake was of 31,459 pupils.

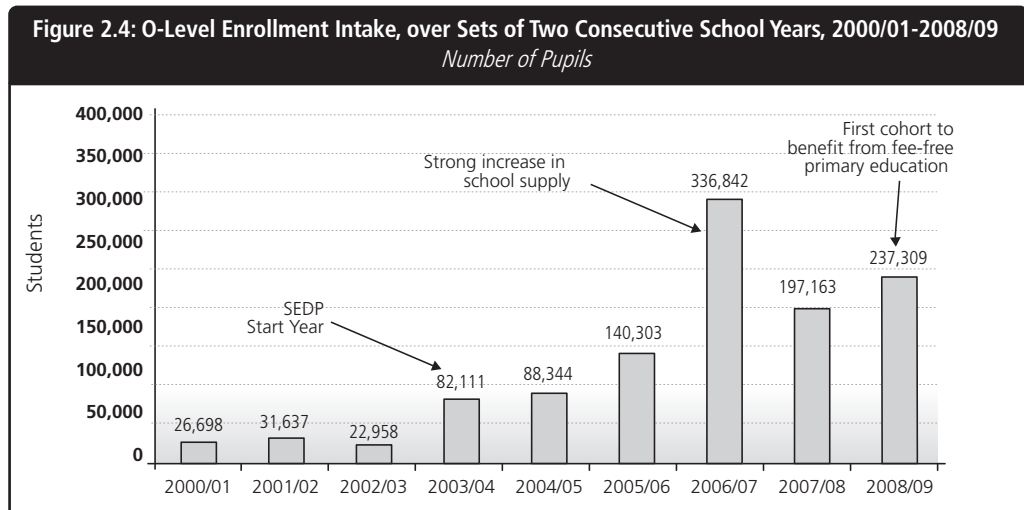
At **O-Level**, total enrollment has increased from 238,194 students in 2000 to 1,401,459 students in 2009, at an annual growth rate of 22 percent. A particular acceleration in enrollment is observed since 2004, with the implementation of the Secondary Education Development Plan (SEDP I). This considerable rise in enrollment has mainly been supported by government schools, whose share has grown from 62 percent in 2004 to 89 percent in 2009 (See Figure 2.3).

**Figure 2.3: O-Level Enrollment Trend and Share of Private Sector, 2000-09**  
*Number of Students, and Percent*



Source: BEST, various years.

This reflects the government's policy to increase secondary coverage by expanding the public supply of schools, as prescribed by the SEDP (See Figure 2.4).



Source: BEST, various years.

The increase is also explained by the implementation of the Primary Education Development Plan (PEDP), favoring primary enrollment. The first generation of fee-free primary pupils will leave primary school in 2009. This places considerable additional stress on O-Level schools, for them to adequately absorb the growing number of primary school leavers. Indeed, it is estimated that by 2015, the number of O-Level students could reach 3.8 million, 2.7 times the number of students currently enrolled. In this context, it will be critical that various alternative schooling paths are developed and promoted, such as distance learning, which currently only has 49,533 students registered.

**A-Level** enrollment has registered a similar upward trend, although less marked. In 2009 this secondary level enrolled 64,843 students against 23,702 in 2000, equivalent to an annual increase of 12 percent. While a growing number of students were absorbed by the private sector until 2004 (reaching 49 percent in 2004), the share of students enrolled in nongovernmental schools has decreased since, to 32 percent in 2009, the lowest level registered over the decade. This is consistent with the implementation of the SEDP. Many students finishing O-Level do not however proceed to A-Level. Some register for TVET programmes, but many simply join the labor market, despite having few skills to adequately engage in productive activities. Additional efforts are required to absorb the growing number of O-Level school leavers to avoid growing frustration among youth and limit unfulfilled human potential.

Enrollment in **teacher training** colleges (that offer in-service and preservice training for preprimary, primary, and O-Level school teachers) witnessed an upward trend until 2007, doubling the number of 2002-03 enrollees to adequately support the implementation of the free-free primary education policy and its related teacher requirements. This doubling of enrollment was made possible by shortening teacher training courses from two years to one year in 2003. In 2007, the extension of the programme back to two years led to a decrease in the total number of places available and consequently of enrollees, whose number dropped to approximately 22,000 in 2008. In 2009, TTC enrollment surged anew, reaching 35,371 students, of which 39 percent were enrolled in nongovernmental colleges, against three percent at the beginning of the decade. The public-private partnership has been one of the strategies chosen by MoEVT to increase teacher training opportunities, leading to a steady rise in the number of private TTCs, from seven to 43 colleges over the 2000-09 period, while the number of public TTCs has remained constant at 34. Another planned strategy to increase the teacher trainee intake is the expansion of existing TTCs' capacity.<sup>19</sup>

Reliable enrollment data on **nonformal education** are often hard to come by (See earlier Table 2.1). According to COBET data, in 2009 enrollment stood at 53,093 Cohort I learners, and 29,896 Cohort II learners, a sharp decrease since 2004 (when the system reached full capacity with 233,932 Cohort I learners and 232,086 Cohort II learners) due to the mainstreaming of more students into the formal education system. When compared with the estimated 1.7 million out-of-school youth aged 11 to 18 years (in 2006 - HBS, 2007), even the scale of the programme reached in 2004 appears limited. Further evidence suggests the decreasing and fairly limited efficiency of the programme in terms of returning children to the formal education system, as shown by the pass rates in the Standard IV (since 2006) and PSLE (since 2004) exams that are below the national average, and decreasing.<sup>20</sup>

Available data suggest high levels of **adult education** service provision. In 2009, the total number of ICBAE beneficiaries amounted to 957,289, having been reasonably stable since 2000. ICBAE covers 24 percent of the education needs of the illiterate adult population (aged 15 to 49 years), estimated at 3.97 million in 2009.<sup>21</sup> Furthermore, 24,849 enrolled on folk development college short courses, and 45,890 enrolled on vocational training centre short and outreach courses,<sup>22</sup> demonstrating a general rising trend. However, a slight decrease in enrollment is noticeable for all services over 2008-09 for ICBAE and folk education, and over 2007-08 for VTC short courses. In the latter case, the net closure of 44 centers (reducing their number from 880 to 836) may account for this situation.

Enrollment in **technical education** courses offered by NACTE-registered institutions has grown from 36,586 to 49,591 students over the 2007-10 period for which consolidated data are available. In academic year 2008/09, 42 percent of students (20,831) were enrolled on higher technical programmes, among which 10,884 were following degree courses (22 percent of total), up from 3,258 in academic year 2006/07 (nine percent of total). This evolution is consistent with the government's policy to develop a national pool of highly skilled technicians.

Enrollments by subject show that in the 2009/10 academic year, business and management absorbed the majority of enrollees (48 percent), followed by engineering (20 percent) and planning and welfare (15 percent). All subject areas have witnessed growth except health and allied sciences, which have seen the number of students drop by 38 percent over 2007-10.

**Table 2.2: Enrollment in Technical Institutions, by Subject Area, 2006/07 and 2009/10**  
*Number of Students, and Percent*

	Enrollment		Distribution of Students, 2009/10			
	2006/07	2009/10	% by Subject Board	% of Female Students	% in Public Institutions	% on Degree Courses
Agriculture, Natural Resources and Environment	2,413	4,031	8.1%	30.3%	89%	0.0%
Business and Management	15,792	23,879	48.2%	43.5%	98%	22.8%
Engineering and Other Sciences	4,990	9,711	19.6%	15.9%	73%	30.5%
Health and Allied Sciences	7,633	4,700	9.5%	63.7%	55%	0.0%
Planning and Welfare	5,758	7,270	14.7%	56.3%	85%	34.1%
<b>Total</b>	<b>36,586</b>	<b>49,591</b>	<b>100.0%</b>	<b>40.8%</b>	<b>84%</b>	<b>21.9%</b>

Source: NACTE.

Note: Figures refer to academic years (September to June).

In late 2009, technical education was offered by 221 institutions, including those of different ministries, private institutions and faith-based organizations. In academic year 2008/09, 196 institutions were registered, and 122 (62 percent) were publicly owned, accounting for 84 percent of the students.

In 2009, 72,938 students received **vocational education**, mainly on VTC long courses (93.5 percent). The information available on VET enrollment shows: (i) a sharp drop in the number of students (from 90,844 to 63,433) enrolled on VTC long courses over 2007-08, following the net closure of 49 centers,<sup>23</sup> and the orientation of students toward formal secondary schools, following their expansion; and (ii) an increase by a factor of three of the number of students attending folk development centers over the decade, to reach 4,708 in 2009, in slight regression however compared with 2008 (5,069 enrollees).

In late 2009, vocational education was being delivered through 986 institutions, of which 22 were owned by MoEVT through VETA, 53 by the MCDGC (FDCs), the remaining institutions being owned by other ministries and department agencies, and by private, community and faith-based organizations. Although patchy, the data show an important and rapidly increasing role played by the private sector, which in 2007 enrolled more than 79 percent of vocational students, against 65 percent in 2005.<sup>24</sup>

VTCs offer a great variety of courses (more than 90). In 2008, the most popular courses were tailoring, car mechanics, carpentry and joinery, domestic electricity and computing (accounting for 49 percent of the graduates). These courses have remained very popular over the decade.

Enrollment in **university education** on Mainland Tanzania has registered a continuous increase, particularly since 2007, and annual average growth of 25 percent over 2003-09. This positive trend is the result of a multipronged strategy designed by the government and stated in the National Higher Education Policy (1999), that aims to address enrollment and access issues through: (i) expanding public facilities' capacity; (ii) encouraging the establishment of new nongovernmental institutions;<sup>25</sup> (iii) increasing public-private cost-sharing; (iv) taking affirmative action to expand female participation; (v) promoting science and technology; and (vi) the creation of the Higher Education Student Loan Board in 2004 (made effective in 2006), key in making fees affordable to a greater number of students.

**Table 2.3: University Enrollment Trends, the Share of Nongovernmental Institutions and the Share of Science Courses, 2003/04-2009/10**  
*Number of Students, and Percent*

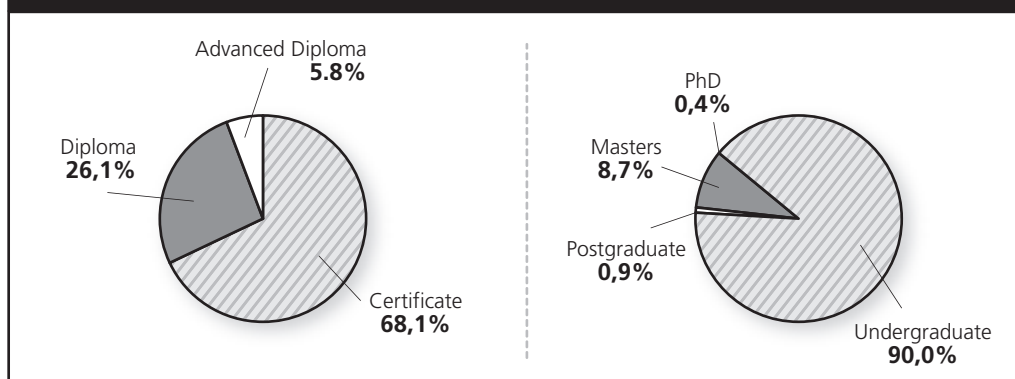
	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
Total Enrollment	30,759	36,612	40,105	48,147	79,961	97,245	115,305
Nongovernmental HLIs (%)	6.6%	7.4%	11.6%	19.4%	20.4%	23.9%	28.2%
Science Courses (%) *	29.0%	24.6%	29.1%	26.6%	24.2%	—	—

Source: TCU.

Note: \* Includes Zanzibar; figures are for academic years (September to June).

The relatively low interest in science subjects is of major concern: their share of students has declined from 34 percent in 2003 to 24 percent in 2007.<sup>26</sup> The motivation offered in the form of full loans/grants for those students studying sciences, appears to be insufficient. Indeed, the main causes for the decline appear to be: (i) the low number of students graduating from science subjects at A-Level; (ii) the lack of adequate training supply, as most existing HLIs focus on social sciences; and (iii) the absence of a clear policy to favor the establishment of private scientific universities. Further factors contribute to the subject being unattractive: (i) the perceived complexity of the subject itself; (ii) the scarcity of adequate science facilities (such as laboratories) and qualified teachers; and (iii) the narrow job prospects for individuals with science qualifications, associated with low wages.

**Figure 2.5: Distribution of University Students, by Type of Qualification, Academic Year 2009/10**  
*Percent*



Source: TCU.

Most students are enrolled on degree courses (89.6 percent), of which 90 percent at the undergraduate level (See Figure 2.5 above).<sup>27</sup> Most students enrolled on bachelor's degree courses follow teacher training programmes (47.3 percent), read social and behavioral sciences (9.4 percent), law (9.1 percent) and finance and accounting (6.4 percent).

Postgraduate degree programmes (including master's degrees and Ph.Ds) still accounted for a minor share of students in academic year 2009/10, at one percent of all degree courses; of these 8.7 percent are enrolled on master's programmes and 0.4 percent on Ph.D. programmes. Postgraduate programmes are nevertheless important as they promote research, crucial for the development of new information and knowledge. Postgraduate degree course enrollment is particularly low partly because few institutions offer postgraduate programmes.

The main areas of postgraduate study, by decreasing share of enrollment, are: finance and accounting (29 percent), management (27 percent), teacher training (13.3 percent) and social sciences (10.3 percent). Science programmes are not popular, except medicine, which accounted for three percent of total postgraduate enrollments in academic year 2009/10. Engineering and computer sciences are relatively negligible, which may ultimately hamper Tanzania's ability to keep pace with rapid technological development if no affirmative action is taken. The government, aware of these constraints, is implementing two projects that aim to increase the number of science teachers and graduates, through measures such as providing full student loans, and lowering the entry requirements: the Science, Technology and Higher Education Project (STHEP) and the Higher Education Development Programme (HEDP).

## ● Schooling Dynamics

### Growth Rates by Level/Subsector

Table 2.4 below summarizes annual enrollment growth rates for different education subsectors, for two five-year periods, showing that:

- (i) The policy to mainstream the provision of preprimary teaching through primary schools has enabled a growing number of young children to benefit from this level;
- (ii) The implementation of the fee-free primary education policy in 2002 was followed by a massive surge in primary enrollment in 2002-03, that then stabilized at a lower annual growth rate over 2005-09 (2.9 percent, against 12.8 percent on average for 2000-04). The growth in primary enrollment is now mainly driven by demographic pressure;
- (iii) Although significant increases have been recorded in primary schooling over the period in absolute terms (enrollment doubled), in relative terms the growth in enrollment was higher for all other subsectors (except COBET and ICBAE);

- (iv) Very high increases in secondary school enrollment were registered over the last five years, especially at O-Level, with an annual average increase of 30 percent (17 percent at A-Level). These trends should be credited to the expansion of secondary schools under the implementation of the Secondary Education Development Plan, and to the growing number of primary school leavers, under the Primary Education Development Plan. This increase in primary and secondary school enrollments is already putting a lot of strain on secondary schools and TVET institutions, and enrollments at those levels are expected to almost triple by 2015. A rapid and well planned response is required to ensure the smooth development of the whole education system;
- (v) Apart from the 2007-08 period that registered a decrease in TTC trainees (places were more limited as a result of the extension of the curricula from one to two years in 2006), the number of teacher trainees has increased over the decade. However, given the growing demand for teachers at all levels, the pursuit of the expansion of teacher training is to be closely monitored and planned, so as to not jeopardize the development of the primary and secondary school system;
- (vi) Technical education enrollment has risen substantially over the 2006-09 period, with an annual growth rate of 13 percent for nonhigher curricula, suggesting an important need for primary and secondary school leavers to further their studies;
- (vii) In the same vein, vocational programmes have allowed a sizeable number of youth and adults to benefit from training and skills' development; and
- (viii) Considerable emphasis has been put on higher education, to adequately meet the growing demand from secondary school leavers and produce skills relevant to current and future economic growth. University enrollment has grown at an average annual rate of 25 percent over the period, and at a rate of 30 percent over 2005-09, amongst the highest annual growth rates registered for all subsectors (although it started with lower enrollment). Special attention is required here as higher education is to face an ever increasing future demand, from the higher number of secondary school leavers.

**Table 2.4: Enrollment Growth Rates, by Level/Subsector, 2000-09**

Percent

Level	Annual Growth Rates			Total Growth 2000-09
	2000-04	2005-09	2000-09	
Preprimary	—	8.8	—	61.5 **
Primary	12.8	2.9	7.6	92.6
Secondary				
O-Level	14.0	30.1	21.8	488.4
A-Level	6.9	17.2	11.8	173.6
Teacher Training (TTC)	30.0	5.9	13.4	209.1
Adult Education/Nonformal Education				
COBET Equivalency	n.a.	-30.6	n.a.	-82.2 **
Cohort I	n.a.	-27.6	n.a.	-77.3 **
Cohort II	n.a.	-34.7	n.a.	-87.1 **
ICBAE	—	—	-1.2	-10.0
VTC Short Courses/Outreach	—	11.7	—	39.5 ***
FDC Short Courses	-32.3	5.2	10.2	140.2
Technical Education *	—	10.7#	—	35.5 #
Nonhigher Technical	—	12.7 #	—	43.1 #
Higher Technical	—	8.1 #	—	26.3 #
Vocational Education and Training	—	6.3	—	27.8
VTC Long Courses	—	6.6	—	29.3
FDC Long Courses	6.5	2.2	13.0	201.6
Higher Education	19.0 ##	30.2	24.6 ###	274.9 ###

Source: BEST, TCU, NACTE, various years; authors' computations.

Note: \* Refers to NACTE-registered institutions; \*\* Data covers 2004-09; \*\*\* Data covers 2005-08; # Data covers 2006-09; ## Data covers 2003-04; ### Data covers 2003-09.

## The Role of the Private Sector

The role of the private sector is extremely variable from one level to another (See Table 2.5 below):

- (i) It remains slight at the **primary** level, where barely 1.5 percent of students attend nongovernmental schools;
- (ii) It plays a greater role at **postprimary** levels, although its importance has decreased at O-Level and to a lesser extent at A-Level, following the government's policy of increasing access to the secondary cycle at a relatively lower cost to families, considered to be an effective pro-poor policy, reducing inequities. At O-Level, barely 11 percent of students were enrolled in nongovernmental institutions in 2009, against 42 percent in 2000. At A-Level, 32 percent of students are enrolled in nongovernmental institutions, down from 49 percent in 2004;



- (iii) The strategy at **teacher training** and **higher education** levels on the other hand focuses on cost-sharing approaches and an increased reliance on the private sector to broaden access. A system of student grants and loans has been set up in parallel to ensure that the poorer capable students are not left behind; and
- (iv) In **technical education**, all folk development courses are government-run, however those delivered through vocational centers are increasingly offered by the private sector, reflecting the ministry's policy of diversifying service providers and sources of financing to support the development of the subsector. By 2007, almost 80 percent of students enrolled in vocational long courses were in nongovernmental centers.

Level	2000	2004	2006	2007	2008	2009
Preprimary	—	1.3	2.3	2.5	7.8	5.0
Primary	0.3	0.6	1.0	1.0	1.3	1.5
Secondary						
O-Level	42.5	38.0	26.6	17.7	14.2	10.8
A-Level	46.0	48.6	38.6	37.4	36.4	32.3
Teacher Training (TTC)	3.2	5.4	9.3	16.7	23.7	38.6
Adult Education/Nonformal Education						
VTC Short Courses/Outreach	—	—	—	—	—	—
Technical Education *	—	—	15.5	—	16.2	—
Vocational Education and Training						
VTC Long Courses	—	—	67.8	79.4	—	—
Higher Education	—	7.4	19.4	20.4	23.9	28.2

Source: BEST, NACTE, TCU, various years; authors' computations.

Note: \* Refers to NACTE-registered institutions.

Compared with other East Africa Community countries, the private sector in Tanzania accounts for a smaller share of education enrollments, at all levels except A-Level (See Table 2.6 below).

**Table 2.6: International Comparison of the Share of Private Sector Enrollment, 2009 or MRY**  
Percent

	Primary	Lower Secondary (O-Level)	Upper Secondary (A-Level)	Higher Education *
Tanzania	1.5	10.8	32.3	22.3
Burundi	1.1	7.5	10.9	35.2
Kenya	10.6	13.2	12.1	21.3
Rwanda	2.5	27.6	52.0	56.8
Uganda	13.4	53.8	54.4	29.0
<b>East African Community Average</b>	<b>5.8</b>	<b>22.6</b>	<b>32.4</b>	<b>28.5</b>
African LICs				
<b>Average</b>	<b>16.7</b>	<b>20.4</b>	<b>27.7</b>	<b>19.5</b>
Min – Max	1.1 – 82.5	1 – 53.8	2.7 – 61.0	7.0 – 56.6

Source: Table 2.5 for Tanzania and World Bank and Pôle de Dakar-UNESCO/BREDA for other countries.

Note: \* Higher Education includes universities, university colleges and higher learning institutions;

## Girls' Schooling

Although this issue is tackled in greater depth in Chapter 5 on equity, a brief overview of the evolution of girls' enrollment in the different subsectors is provided here. It appears that girls' education is still lagging behind that of boys in most postprimary levels. Table 2.7 below shows that as far as basic education is concerned:

- (i) Gender parity has never been an issue at **preprimary** and **primary** levels, with girls accounting for 50 percent of enrollment in 2009; this share having been reasonably stable over the period;
- (ii) Both genders benefited from the expansion of **O-Level** schooling until 2007, although girls' access to secondary school is systematically lower than that of boys. Since 2007 however, girls' enrollment at O-Level has witnessed a downward trend, reaching 45 percent in 2009, the lowest level registered over the decade;
- (iii) At **A-Level**, although girls' enrollment lags behind that of boys, their education has increased steadily over the period, from 33.5 percent in 2000 to 40.7 percent in 2009. One explanation for girls' lower secondary schooling is that female students are less likely to pass the PSLE or CSEE exams that are necessary to enter public secondary schools. Also, Tanzania has few secondary schools, meaning that the walking distance to reach them is long, dissuading parents to send their daughters to school for security reasons (this is particularly striking in pastoralist zones).<sup>28</sup> To deal with this issue, the ministry is encouraging communities to build hostels to accommodate girls during the week. Cultural constraints also prevail in some parts of the country, where girls are destined to marriage and their education is deemed unnecessary. Finally, pregnancies and marriages increase the probability of early female dropout; and

**Table 2.7: Share of Female Student Enrollment, 2000-09**  
Percent

	2000	2004	2006	2007	2008	2009
Preprimary	—	49.6	50.5	51.2	50.1	50.2
Primary	49.5	48.8	49.1	49.3	49.3	49.7
O-Level Secondary	47.1	47.1	47.5	47.1	44.7	44.7
A-Level Secondary	33.5	34.7	40.0	40.5	39.6	40.7
Teacher Training	40.8	47.7	48.2	48.7	47.9	48.5
COBET Equivalency	—	47.5	41.4	42.5	43.4	43.3
Adult Education	58.5	58.1	53.2	53.5	51.7	53.0
Technical Education *	—	—	26.6	—	43.2	40.8
Vocational Education **	—	—	42.3	48.7	45.1	—
Higher Education	—	33.5	34.7	31.8	33.6	35.1

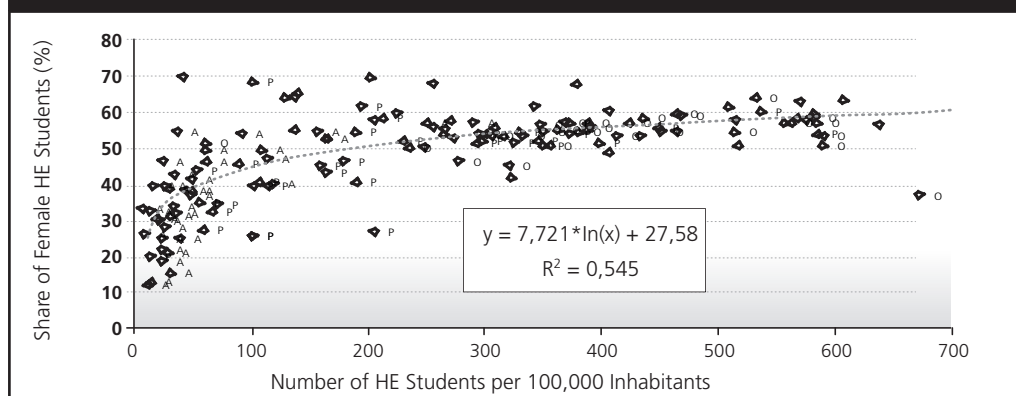
Source: BEST, various years; authors' computations.

Note: \* Refers to NACTE-registered institutions; \*\* Includes both VETA and FDC long courses.

- (iv) Gender parity is almost attained in **teacher training**, with 48.5 percent of female enrollees in 2009; a share that has been stable since 2004.

In other subsectors, the situation is more contrasted. Vocational education still attracts a majority of male students (55 percent in 2008). The courses on offer are still very gender-oriented: whereas car mechanics, carpentry and joinery and domestic electricity tend to attract mainly male students, girls are more prone to engage in tailoring, secretarial skills and computing. Girls' access to technical education is also lower than boys' access, although the situation has rapidly improved over 2006-09, with girls accounting for 42 percent of enrollment in 2008-09, preferring to register for health and allied sciences, discarding engineering and other science subjects.

**Figure 2.6: Cross-country Comparison of the Relationship between the Development of Higher Education and the Share of Female Students, 2006 or MRY**



Source: UNESCO/BREDA, 2009.

Note: O refers to OECD countries, A to African countries and P to other non African low-income countries.

At the **higher education** level, female enrollment has increased slightly, to reach 35 percent. However, as shown in Figure 2.6 above, a similar number of girls undertake university in Tanzania as in other countries where the subsector's development is at the same stage. Indeed, countries with approximately 335 higher education students per 100,000 inhabitants (such as Tanzania, see Table 2.8 below) tend to have female enrollment rates close to 35 percent. The reasons for fewer girls attending university in Tanzania are related to: (i) the lower probability of girls reaching secondary school; (ii) the subsequent lower share of girls sitting the ACSEE examination; (iii) the lower female pass rate; and (iv) the lower performance of the girls that do pass (See Chapter 4 on quality). As a result of these factors, the low number of girls who eventually qualify for university is compounded. However, affirmative action is being taken by the government to increase female participation, among other approaches by lowering entry requirements for girls, and establishing a special admission programme.

## School Coverage

### ● Gross Enrollment Ratio Trends

To reach a more accurate view of schooling patterns, it is important to analyze enrollment trends in the context of overall changes in population demographics. Indeed, enrollment patterns can be better understood when compared with the theoretical school-aged population by level, as this category defines potential demand for education. Table 2.8 below shows the evolution of school coverage indicators for all education levels in Tanzania, over the 2003-09 period:<sup>29</sup>

- (i) Coverage at the **preprimary** level has surged, to reach 37 percent in 2008, up from 26 percent in 2004, reflecting the policy of expanding the subsector, and the plan to make this level compulsory;
- (ii) At the **primary** level, the GER has structurally exceeded 100 percent, reaching 118 percent in 2007 before decreasing to 112 percent in 2009. The primary GER is artificially inflated by repetition, and is therefore not a reliable measure of the proportion of primary school-aged children that are actually enrolled.<sup>30</sup>
- (iii) **Secondary level** enrollment has increased sharply, with GERs at O-Level almost quadrupling and those at A-Level doubling over the 2003-09 period, respectively reaching 39 percent and four percent, reflecting the government's considerable effort to expand secondary school enrollment. Two major observations should however be made: (i) these rapid increases were built on very low initial enrollment levels; and (ii) the A-Level GER is still extremely low, with less than four children out of 100 attending school in 2009; and

### Box 2.1: Limitations of the Net Enrollment Rate (NER) in Assessing Schooling Coverage

Source: Derived from Reuge, 2004.

The NER is often used, in parallel to the Gross Enrollment Rate, to assess schooling coverage. The NER is the ratio between the number of pupils of official school-age enrolled and the total school-aged population, for that year. It is thus often perceived as an indicator of participation, as it shows what proportion of the official school-aged population actually attends school.

The major disadvantage of this indicator is that it only accounts for the education of those children who are within the official school-age range, thus failing to account for children who enroll early, or late; through repetition, some children may no longer be of official school-age for their year, despite attending. The NER therefore underestimates schooling coverage. Furthermore, in many African countries children's ages are often plagued by measurement errors, due to limited birth registration and/or the practice of changing children's ages to allow them to attend school, making the NER imprecise.

Neither is the NER any more able to adequately track the EFA goal that "all children should complete the entire cycle of primary schooling irrespective of their age," than the GER. Indeed, both provide average values for schooling over the cycle, and do not say much about pupils' schooling patterns. Different indicators and tools (such as schooling profiles) are required to obtain adequate information on access and retention. These data are of paramount importance for planners to develop adequate education policies.

- (iv) For **TVET** and **higher education** (the number of students enrolled per 100,000 individuals is used instead of the GER because there is no official age or curriculum length for these levels), the numbers of students enrolled were 250 per 100,000 and 335 per 100,000 respectively in academic year 2009/10. For higher education, enrollment has almost doubled since 2006, when it stood at 174 per 100,000.<sup>31</sup>

**Table 2.8: Schooling Coverage, by Level, 2003-09**  
Percent, and Students per 100,000 Inhabitants

	Preprimary	Primary	Secondary			TVET*	Higher Education **
			O-Level	A-Level	All		
			GER (%)				
2003	—	104.5	10.5	1.9	7.8	—	—
2004	26.3	109.5	12.8	2.2	9.5	—	—
2005	29.3	113.1	15.2	2.3	11.2	—	—
2006	29.8	115.9	19.0	3.0	14.0	235	174
2007	34.4	117.6	28.3	3.4	20.5	—	—
2008	36.7	115.4	33.0	3.6	23.8	252	291
2009	36.6	112.4	38.6	3.9	27.7	250	335

Source: Table 2.1, and census projections.

Note: \* TVET includes VTC and FDC long courses, and nonhigher technical education; \*\* Higher education includes universities, university colleges and higher technical education.

The international comparisons presented in Table 2.9 show that: (i) Tanzania, unlike many countries in the region, has a reasonable level of preschool attendance; (ii) Tanzania's primary level coverage is in line with the regional value, but above the average of low-income countries; (iii) O-Level school coverage is higher in Tanzania than in neighboring countries (except Kenya), although coverage tends to be lower than the LICs' average; (iv) the low A-Level coverage is particularly striking; Tanzania has the lowest upper secondary GER in the region, and one of the lowest of the LICs; (v) Tanzania's higher education coverage is lower than the average of neighboring countries, and than LICs in general; and (iv) for TVET coverage, the situation is the opposite.

	Preprimary	Primary	Lower Secondary	Upper Secondary	TVET*	Higher Education **
	GER (%)				Per 100,000 Inhabitants	
<b>Tanzania (2008)</b>	<b>36.7</b>	<b>115.4</b>	<b>33.0</b>	<b>3.6</b>	<b>252</b>	<b>291</b>
Burundi	5.4	115.3	22.9	6.0	156	243
Kenya	54.0	114.7	94.6	39.6	74	359
Rwanda	18.0	151.0	28.0	9.0	440	474
Uganda	3.7	120.7	28.1	10.3	115	329
<b>East African Community Average</b>	<b>23.5</b>	<b>122.8</b>	<b>42.4</b>	<b>13.7</b>	<b>212</b>	<b>337</b>
African Low-income Countries						
<b>Average</b>	<b>20.4</b>	<b>103.1</b>	<b>43.4</b>	<b>17.2</b>	<b>228</b>	<b>381</b>
Min – Max	0.8 – 141	56.9 – 157.7	15.9 – 94.6	2.6 – 39.6	35 – 484	61 – 1009

Source: Table 2.8 for Tanzania; World Bank/Pôle de Dakar-UNESCO/BREDA for other countries.

Note: To allow for international comparisons: \* TVET includes VET and FDC long courses and NACTE-registered technical nonhigher education; and \*\* Higher education includes universities, university colleges and technical higher education.

The rapid development of the higher education sector in recent years is however noticeable. Tanzania's main challenge will be to adequately plan this level's development to ensure it responds to labor market needs and general economic and social development priorities. Furthermore, as the system as a whole is undergoing structural changes, it will be important to assess the practical (teacher requirement, classroom needs, and so on) and financial feasibility and sustainability of the planned postprimary expansion policy, to ensure it develops at a manageable rate. Sectorwide financial models are useful tools to discuss and assess such issues.

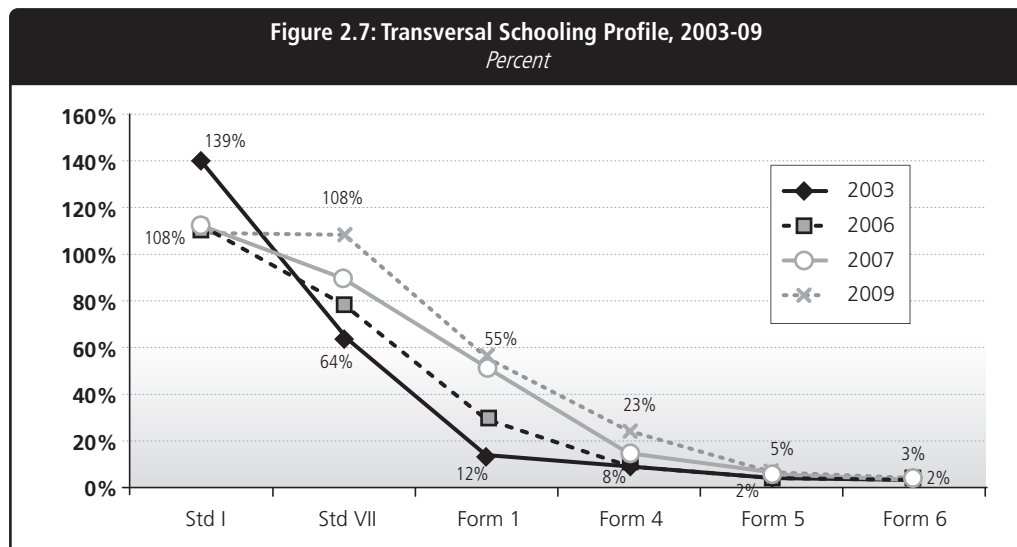
### ● Schooling Profiles

Although GERs provide a measure of school participation, being distorted by repetition rates makes them an imperfect measure of schooling coverage. They are more an average measure of coverage than a true reflection of the pattern of a cohort of children through their schooling career. It is thus preferable to compute schooling profiles that describe access to and retention in each grade.

There are several methods and data sources available to compute schooling profiles. In this chapter, administrative schooling and population data are used to compute transversal schooling (cross-sectional) and retention profiles, whereas household survey data (HBS, 2007) are used to compute probabilistic schooling profiles.

## Transversal Schooling Profile

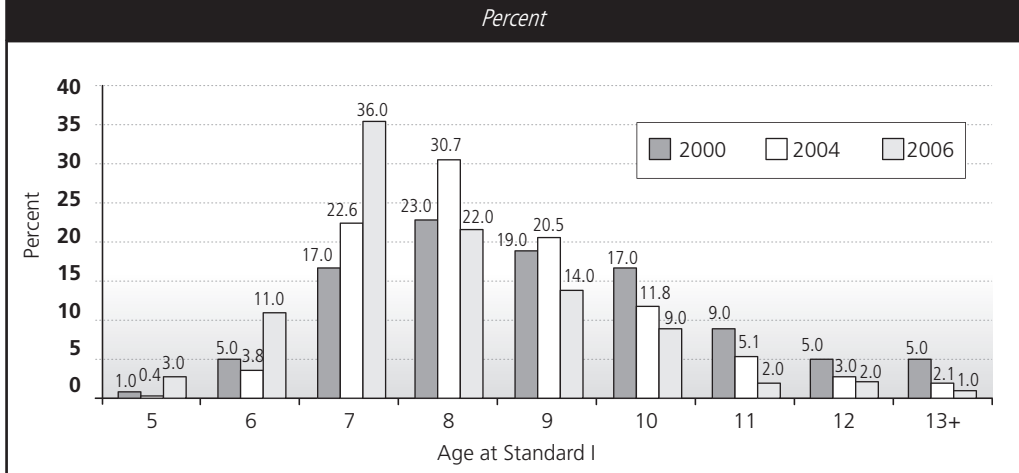
The transversal schooling profile allows the visualization of access rates at each level for a given school year, enabling a more refined analysis of schooling patterns. Figure 2.7 displays a simplified version of the transversal schooling profile.<sup>32</sup> The first point (Std I) provides the primary access rate for a given generation, whereas the last point (Form 6) refers to the secondary cycle completion rate.<sup>33</sup> The Std VII point provides the primary completion rate (PCR), the indicator used in the FTI framework and EFA goal. A first observation from Figure 2.7 is the global improvement in access to all levels over the period.



Source: BEST, various years; NBS-corrected population projections; authors' computations.

*Access rates to Standard I suggest quasi-universal access to primary school.* The fee-free primary education policy was implemented in 2002, and could explain the high primary intake rate in 2003, encouraging many non official school-aged children to attend. Yet, the multicohort phenomenon (linked to out-of-age children returning to school and late entry) tends to somewhat inflate the figure (See Figure 2.8 below). Since 2003 however, intake rates have followed a downward trend, from 139 percent in 2003 to 108 percent in 2009, as fewer out-of-school children return to school each year, and more enter at the official school-age. Late entry is still a problem however, with just a third (36 percent) of Standard I students being of official school-age (seven years) in 2006, although this is an improvement on 2000/01 (17 percent were of official school-age).

Figure 2.8: Age Distribution of Standard I New Entrants, 2000, 2004 and 2006



Source: DHS, 2004; HBS, 2000/01 and 2007; authors' computations.

*Tanzania is on track to reaching universal primary education.* The evolution of the gross access rate to Standard VII, proxy for the primary completion rate (PCR), measures the movement toward this goal. Tanzania's PCR reached 108 percent in 2009, up from 64 percent in 2003, thanks to the fee-free primary education policy (See Table 2.10). Caution is required when analyzing these figures however, as the multicohort phenomenon may inflate them: indeed, many Standard VII students are not of official school-age (in 2006, 80 percent were either overage or underage according to the HBS, 2007). Years 2008 and 2009 may be particularly affected by this phenomenon as 2008 was the completion year of the first cohort of children to access fee-free primary education, having entered the level in 2002. Providing an accurate figure for the 2009 PCR is therefore difficult. Nevertheless, the 2007 rate (89 percent) can be used as a reasonable floor for a possible scale of 2009 PCR values.

Table 2.10: Evolution of the Primary Completion Rate, 2003-09

*Percent*

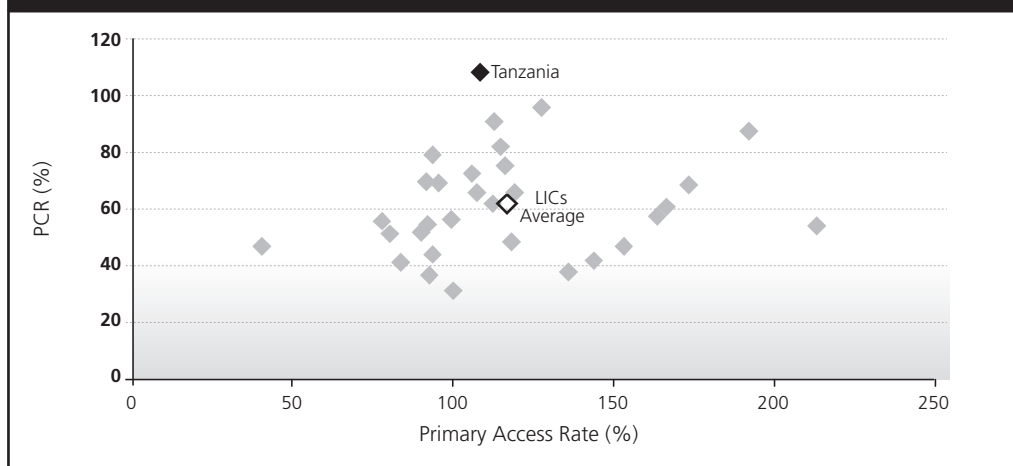
2003	2004	2005	2006	2007	2008	2009
64	64	60	78	<b>89</b>	112	<b>108</b>

Source: Authors' calculations based on data from BEST and NBS-corrected population projections.

Compared with other African low-income countries, Tanzania is among the very few countries that are close to achieving universal primary education (See Figure 2.9 below).



**Figure 2.9: Comparison of Various African LICs According to their Primary Access and Completion Rates, 2008 or MRV**  
Percent



Source: Pôle de Dakar-UNESCO/BREDA, 2009; Table 2.10 for Tanzania.

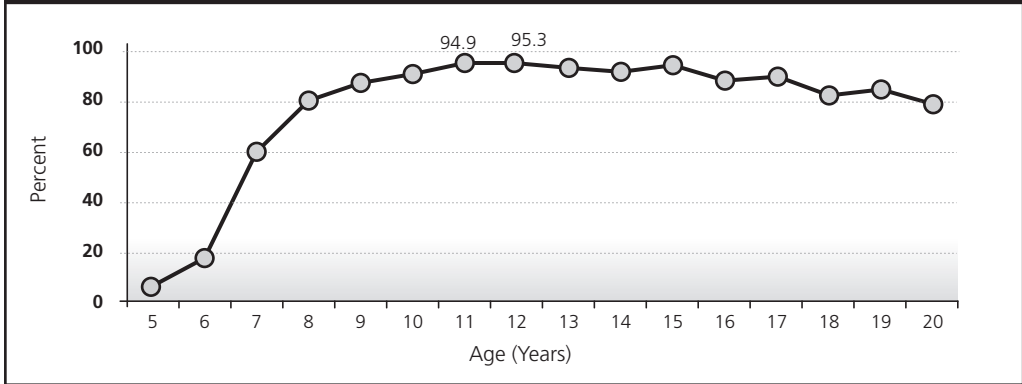
Access to secondary levels is still limited, although strong improvements have occurred, especially at O-Level. In 2009, 55 percent of children reached O-Level, compared with 12 percent in 2003. This upward trend may be related to the implementation of the SEDP I, that eased the transition to secondary school by favoring the construction of schools (one O-Level school per ward) and providing financial support to some poor students.<sup>34</sup> O-Level completion has also improved, although less dramatically, reaching 23 percent in 2009, up from eight percent in 2003. In 2009, five percent of children accessed A-Level and three percent completed the level: A-Level access is strikingly low, and reserved to a fortunate few.

### Probabilistic Schooling Profile

The major drawback of transversal schooling profiles is that they mix cohorts of children of different ages. The greater the multicohort phenomenon, the greater the overestimation of access and completion rates.<sup>35</sup> Probabilistic schooling profiles overcome that limitation by using intake rates that are unaffected by the multicohort phenomenon or other factors that introduce biases.

Figure 2.10 below illustrates the probability of a given generation of children having accessed primary school at a set point in time. The proportion of individuals that accessed Standard I reached its maximum value between the ages of 11 years (94 percent) and 12 years (95 percent), implying considerable late entry. The probability of accessing Standard I after the age of 12 years drops gradually.<sup>36</sup> The probability of a generation accessing primary education is estimated at 94.5 percent in 2006, which represents a substantial improvement over 2000, when the entry rate to Standard I was estimated at 85 percent (HBS, 2000/01).<sup>37</sup>

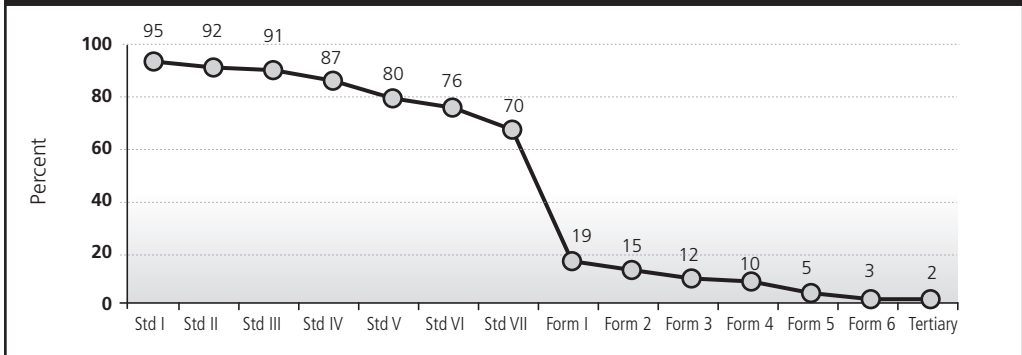
**Figure 2.10: Share of People Having Ever Attended Primary School, by Age, 2006**  
Percent



Source: HBS, 2007; authors' computations.

The computation of probabilistic schooling profiles, showing the probability that a generation gains access to each grade of education, are based on household surveys, an additional advantage. The probabilistic schooling profile based on the HBS, 2007 is presented in Figure 2.11. The probability of access to grades other than Standard I is slightly biased, as it computes the indicators for older generations, having already reached Standard II, Standard III, and so on. However, the probabilistic model is more reliable in terms of the intake rate. Figure 2.11 shows high primary access rates, with an estimated probability of access to Standard I of 94.5 percent in 2006, confirming that Tanzania is close to attaining universal primary education.<sup>38</sup>

**Figure 2.11: Probabilistic Schooling Profile, 2006**  
Percent



Source: HBS, 2007; authors' computations.

## Retention Patterns

The use of longitudinal and pseudo-longitudinal approaches are helpful to determine how a cohort of 100 children progress through grades and cycles. The results provide interesting insights on the internal functioning of the education system.

Primary level retention has been highly affected by the introduction of the fee-free primary education policy in 2002 and the abolition of Standard IV repetition in 2009. However, the retention rate for the cohort of students that reached Standard VI in 2009 (which entered school in 2003) is still only estimated at 76 percent. Using the pseudo-longitudinal approach, it is also possible to predict future retention rates. Should the transition rates observed between 2008 and 2009 remain stable over the coming years, the primary retention rate would be expected to reach 95 percent in 2015.

Although O-Level retention rates have improved from 76 percent in 2005 to 81 percent in 2009, A-Level retention has deteriorated from 90 percent to 58 percent.<sup>39</sup> However, probability projections unfortunately show that O-Level retention is set to worsen over the coming years: indeed, only 64 of 100 students entering O-Level in 2009 are expected to reach the end of the level, if current transition rates remain unchanged. The probability that a student who started A-Level in 2009 should reach the end of the cycle in 2011 is expected to remain stable, at 58 percent. Special attention will be required to ensure that retention rates are not affected by more students entering the cycle, as poor retention constitutes a major source of resource wastage for the system.

## Transition Patterns

Finally, the transition rate between the primary level and O-Level has followed a global upward trend over the period, despite a slight drop in 2008. In 2009, half of primary students progressed to O-Level. A similar trend is observed in the improvement of the transition rates between O-Level and A-Level, although only a third of O-Level students progress to upper secondary (See Table 2.11).

	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
Primary > O-Level	19	28	33	47	64	53	49
O-Level > A-Level	29	30	31	37	46	36	33

Source: BEST, various years; authors' computations.

Note: Effective transition rates are computed on new entrants only, over two consecutive years and grades.

Transition rates are affected by a series of factors: (i) the size of the cohort reaching the end of the cycle; (ii) the number of students passing the exam sanctioning the end of that cycle;

and (iii) the number of places available at the next level. The way these factors are interrelated will affect the level of transition (See Table 2.12).

**Table 2.12: Trends in Pass and Transition Rates, 2000-09**  
*Number of Students, and Percent*

	PSLE					% of Std VII Students who enter O-Level
	Students who sat the exam		PSLE Graduates			
	Number	%	Number	%	% who enter O-Level	
2000	389,706	92.9	85,550	22.0	—	—
2001	444,903	93.4	127,355	28.6	97.1	19.8
2002	492,472	94.1	133,663	27.1	76.2	20.4
2003	489,987	94.2	196,254	40.1	73.5	18.8
2004	499,241	93.1	243,028	48.7	74.1	28.0
2005	493,946	94.9	304,936	61.7	73.7	33.4
2006	664,263	95.2	468,279	70.5	79.6	46.6
2007	773,497	94.7	419,136	54.2	95.6	64.2
2008	1,017,967	95.5	536,672	52.7	103.4	53.1
2009	999,070	94.3	493,333	49.4	96.7	48.7
	CSEE				% of Form 4 Students who enter A-Level	
	Students who sat the exam		CSEE Graduates			
	Number		Number	%		% who enter A-Level
2000	77,890		48,898	62.8	—	—
2001	80,035		51,113	63.9	26.4	28.8
2002	74,455		57,270	76.9	27.3	28.5
2003	83,688		70,439	84.2	24.5	28.8
2004	91,605		79,838	87.2	24.1	30.2
2005	124,743		103,797	83.2	23.4	31.3
2006	141,728		116,647	82.3	26.4	36.9
2007	192,127		165,136	86.0	28.0	46.0
2008	233,848		168,420	72.0	22.6	35.7
2009	339,925		222,800	65.5	25.2	33.1

Source: BEST, NECTA, various years.

Table 2.12 shows that over the decade, the number of Primary School Leaving Examination candidates has increased to reach over a million candidates in 2008, corresponding to the first cohort of children who benefitted from the implementation of the fee-free primary education policy in 2002. Despite a recent drop in the PSLE pass rate, the number of PSLE graduates has globally followed an upward trend; although a slight regression occurred in 2009 following a decrease in both the number of candidates who sat the exam and the pass rate.<sup>40</sup> Over the same period, the share of PSLE graduates entering Form 1 increased to 97 percent in 2008/09. The expansion of O-Level has allowed to absorb the growing number of PSLE graduates, reducing the number of those who could not access the level due to the lack of available seats.<sup>41</sup>

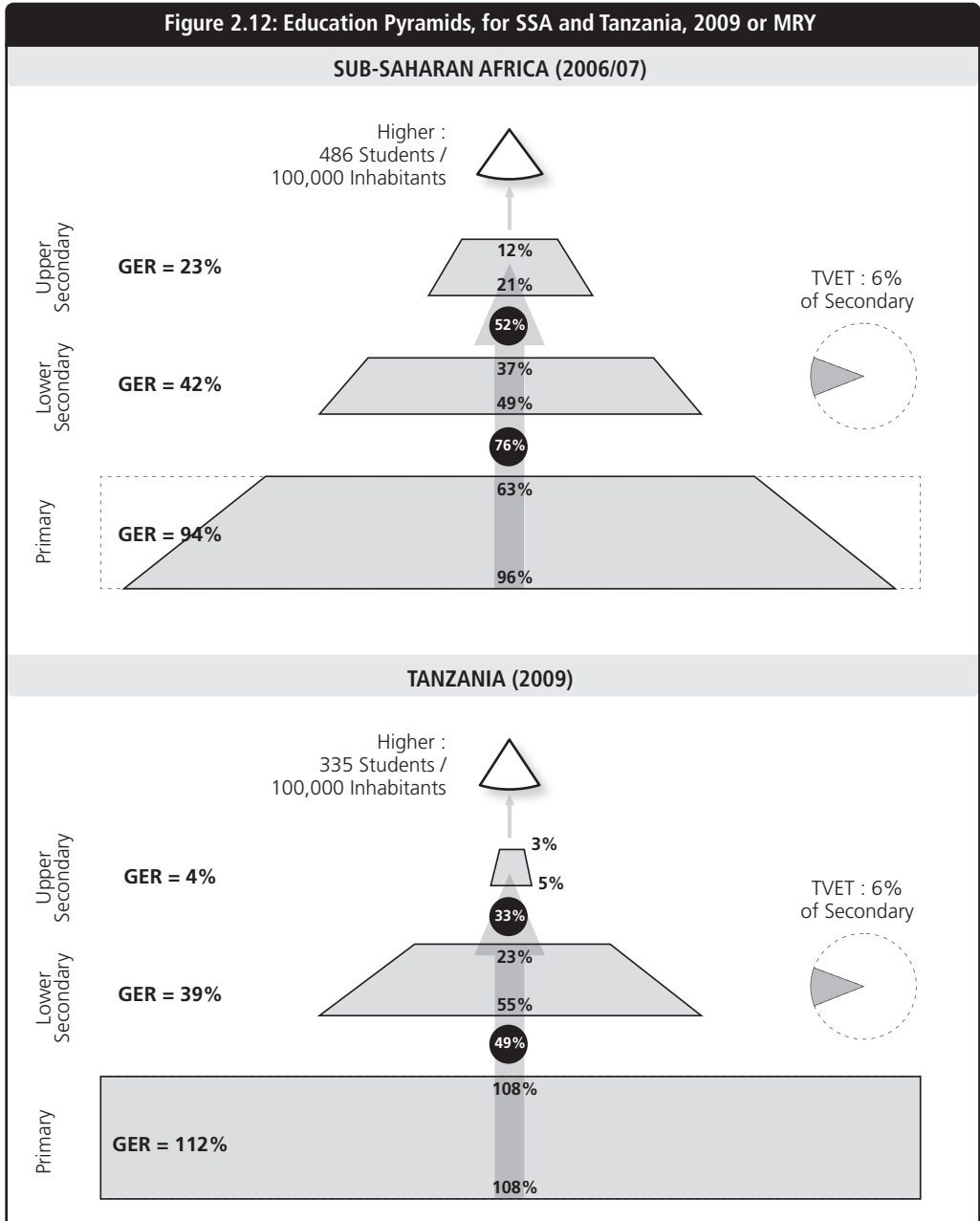
Conversely, the decline since 2008<sup>42</sup> in the proportion of students progressing from Standard VII to O-Level Form 1 could be partly explained by the limited availability of places at O-Level. Sustained building efforts to increase the availability of adequate O-Level schools are necessary to accommodate the growing number of primary school leavers, as PSLE pass rates improve. A similar but even greater constraint exists at A-Level, limiting the transition of students to this level: in 2009, 25 percent of CSEE graduates could expect to progress to Form 5. Here again, rapidly increasing the supply of A-Level schools will be necessary to guarantee access to an adequate number of students. A simulation model could help assess the timeframe, the financial, human and material resources required, and the sustainability and feasibility of such expansions.

## **Education Pyramids**

Tanzania's schooling profile is currently characterized by: (i) good preprimary coverage, compared with many African countries; (ii) almost universal primary access, although still marked by considerable late entry; (iii) good primary retention, with eight out of 10 children completing the cycle in 2009; (iv) increased although still limited O-Level access (in 2009, half of children gained access); (v) extremely limited A-Level access, due mainly to inadequate school infrastructure; (vi) strong regulation of students' transition between subsectors; (vii) growing TVET opportunities to accommodate the growing number of primary school and O-Level leavers; and (viii) a rapidly expanding higher education system, although small in size compared with other African countries.

Figure 2.12 below visually summarizes student flows throughout the formal education system, for Tanzania and Sub-Saharan Africa.

Figure 2.12: Education Pyramids, for SSA and Tanzania, 2009 or MRY

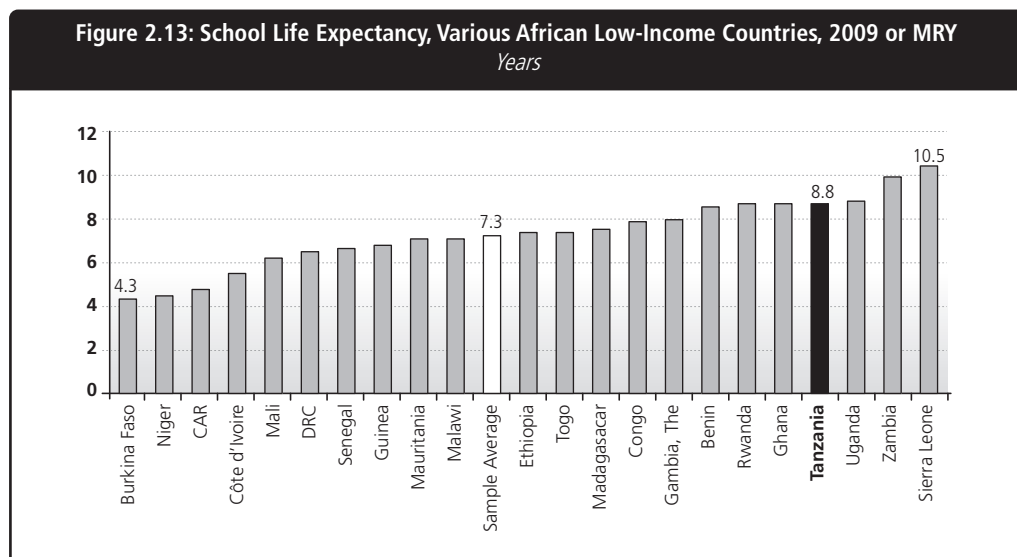


Source: Tables 2.8 and 2.11 and Figure 2.7.

Note: TVET refers to technical non-higher education and VET courses (both VETA and NACTE-registered).

*School life expectancy* is the average number of grades a child can expect to complete (not including repetition) given current schooling patterns. In 2009, the indicator was estimated at 8.8 years.<sup>43</sup> Similar values are observed in neighboring countries like Rwanda (8.7 years)

and Uganda (8.8 years). Compared with the African low-income countries' average (7.3 years), the Tanzanian education system is performing well (See Figure 2.13).



Source: HBS, 2007; authors' computations.

Tanzania is close to the goal of universal primary education that entails all children entering school and completing the cycle. The fee-free primary education policy has had a positive impact in boosting access to school. Now, the main challenge facing the country is to adequately improve the transition to and retention in secondary schools and TVET programmes, as increasingly large cohorts of students will reach the secondary level in the near future. The expansion of A-Level and higher education is to be adequately planned, to ensure it remains in line with labor market needs.

## Out-of-School Children

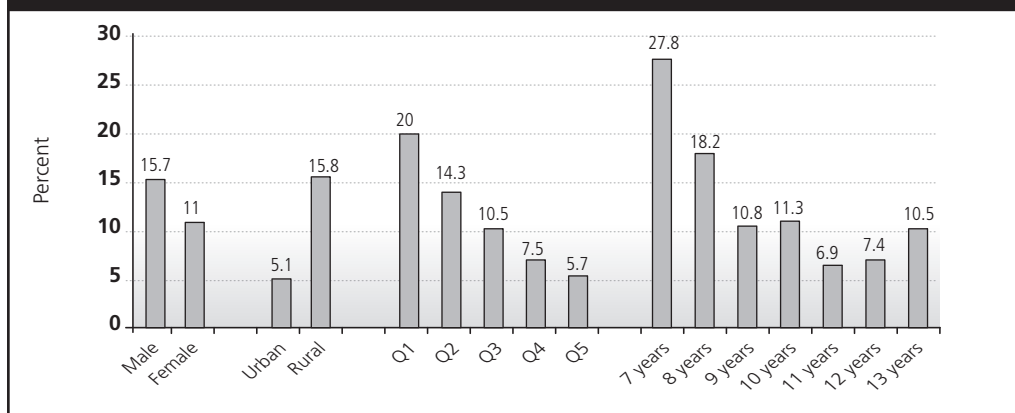
Information on out-of-school children is derived from the HBS, 2007, helping to provide a picture of the magnitude of the phenomenon for 2006. In that year, the number of out-of-school children was estimated at approximately 925,300, representing 13.4 percent of the primary school-aged population.<sup>44</sup>

Nonattendance affects more male (15.7 percent) than female children (11 percent) and more rural (15.8 percent) than urban children (5.1 percent). Children from poorer families are also more prone to be out of school than their wealthier peers (See Figure 2.14 below).<sup>45</sup> Nonattendance also tends to be more prevalent among children aged seven and eight years,

which may be related to the fact that many children tend to enter school late, some being as old as 12 years (See Figure 2.8 above).

**Figure 2.14: Incidence of Out-Of-School, Children Aged 7-13 Years, by Socioeconomic Characteristics, 2006**

Percent



Source: HBS, 2007; authors' computations.

Note: Q1 refers to the 20% poorest households, Q5 to the 20% richest ones.

The share of out-of-school children is three times higher in rural than in urban areas, and 1.5 times higher for the poorest two quintiles as for the other three. Combining these characteristics, the rural poor account for two-thirds of out-of-school children, and about half of them live in five regions: Tabora, Shinyanga Mwanza, Kagera and Kigoma (See Annex Figure 2.1 and Annex Table 2.1). Among out-of-school children, 88 percent have never attended school at all, whereas 12 percent are primary school dropouts. As a result of the late entry phenomenon, it is expected that nearly half of the 812,000 children who have never attended school will in fact enroll later, bringing the number of children estimated to never attend school down to 425,500.

**Table 2.14: Distribution of Out-of-School Children Aged 7-13 Years, by Socioeconomic Characteristic, 2006**

Percent

Characteristic	%	Characteristic	%	Characteristic	%
<b>Location</b>		<b>Age (Years)</b>		<b>Socioeconomic Background</b>	
Urban	8.6	7	31.7	Q1	45.2
Rural	91.4	8	17.1	Q3	26.5
<b>Gender</b>		9	11.7	Q3	15.9
Male	59.9	10	13.9	Q4	9.0
Female	40.1	11	5.5	Q5	3.4
<b>Schooling Status</b>		12	9.1		
Never attended school	87.8	13	11.0	<b>Total</b>	<b>100%</b>
Dropout	12.2			<b>Number of out of school</b>	<b>925,277</b>

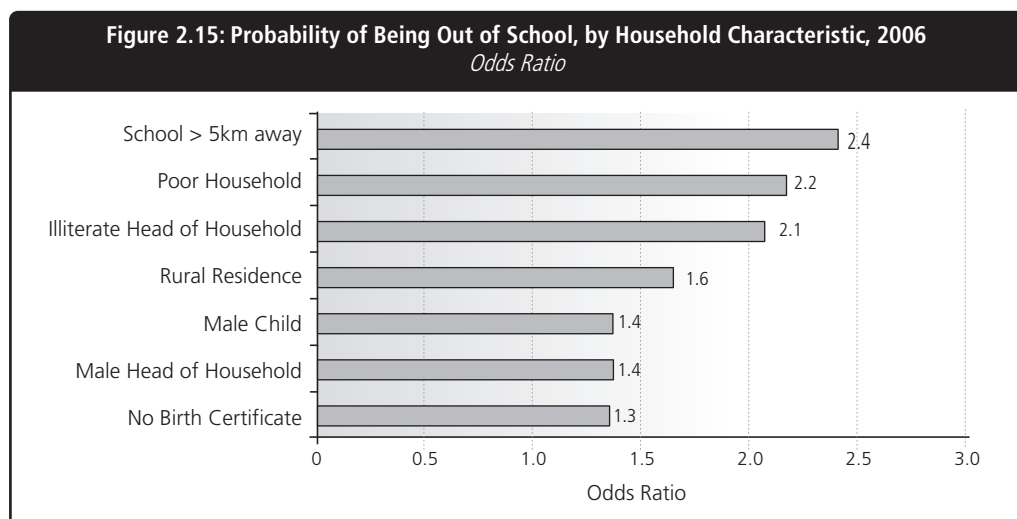
Source: HBS, 2007; authors' computations.

Note: Q1 refers to the 20% poorest households, Q5 to the 20% richest ones.



To better grasp the determinants of nonattendance, a logistic model has been run to establish the odds ratios for certain household characteristics (See Figure 2.15). The model confirms the previously observed disparities between male/female, urban/rural and poor/nonpoor, as well as showing that:

- (i) The distance to primary school remains the most discriminating factor: children living more than five kilometers away are 2.4 times more likely to be out of school than those living within three kilometers of a school;
- (ii) Having an illiterate household head is also penalizing, doubling the chance of being out of school;
- (iii) The absence of a birth certificate increases the likelihood of being out of school by 40 percent;<sup>46</sup> and
- (iv) Children living in households where the head is male are more prone to be out of school than those whose head of household is a woman.



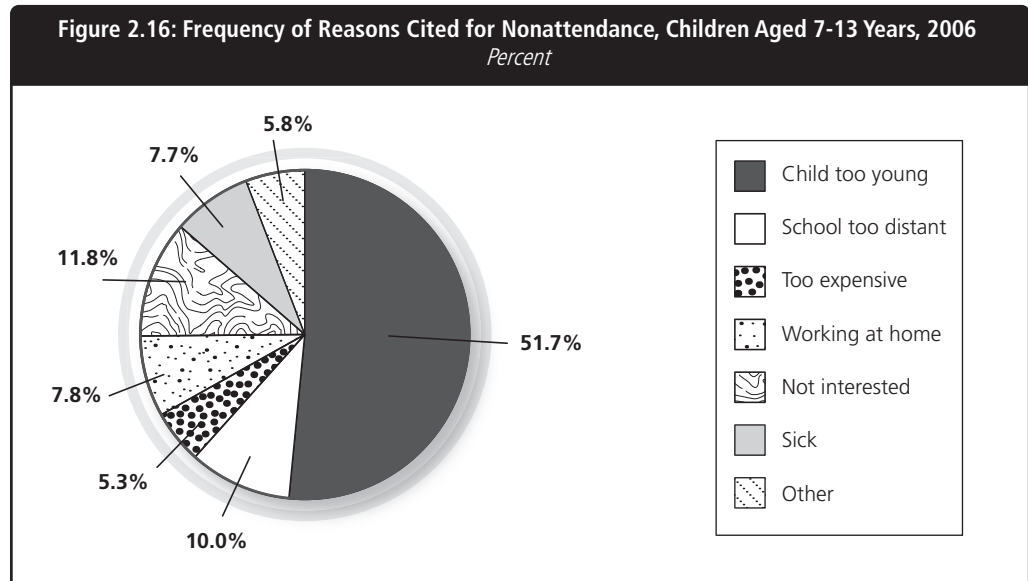
Source: Estimates from Annex Table 2.2; HBS, 2007; authors' computations.

Note: Covers primary school-aged (7-13 years) children.

*Age is nevertheless the main factor impeding school attendance for children aged seven to 13 years.* When asked about the reasons for having never attended school, age is evoked in half the cases (52 percent), followed by lack of interest (12 percent) and the distance to school (10 percent – See Figure 2.16 below). The fact that 52 percent of parents believe that starting school at the age of seven years is too early calls for more sensitization on the importance of starting school on time. Indeed, late entry is often associated with higher dropout rates, as the opportunity cost of staying in school tends to increase with children's age, especially in rural areas where the temptation or need for children to contribute to the household economy might be strong. The high prevalence of responses claiming "lack of

interest,” especially in rural areas (12 percent, against seven percent for urban children) could be related to both the low quality of education and to parents’ low perception of the importance of education in general.

Although few variations are apparent by gender and location, it is however noticeable that the need to work at home is a major issue for girls (10 percent of responses, against six percent for boys), who are often asked to support the mother in domestic chores. In rural areas the issue of schools being too distant from homes is raised by 11 percent of respondents, whereas it remains marginal in urban areas (one percent). The cost of schooling is however a greater deterrent among urban children (nine percent) than rural ones (five percent). Finally, illness is evoked as a reason for nonattendance by eight percent of respondents (See Annex Table 2.3). Although some schools provide adequate facilities for children suffering from certain handicaps (blindness, deafness, physical), they are insufficient. Also, the evidence suggests that malnourished children tend to delay their entry to school or to not enroll at all (Alderman et al., 2009).



Source: HBS, 2007; authors' computations.

Although incomplete, this analysis of nonattendance has nevertheless provided some interesting insights on potential factors increasing the risk of being out of school, associated with both supply-side constraints (the distance to school, the quality of education) and demand-side factors (poverty, illiteracy, orphanhood, age). Adequately addressing the nonattendance issue will therefore require a policy mix centered both on schooling supply and demand. Chapter 5 on equity further explores these issues through the analysis of access and retention patterns, providing additional insights on the influence of demand and supply-side factors, and offering policy recommendations.

## KEY FINDINGS

*Enrollment has increased for all education levels since 2000.* Strong increases have been recorded in preprimary and primary schooling. The latter level's enrollment has doubled in the course of the decade, following the implementation of the fee-free primary education policy in 2002, and has now stabilized, being driven mainly by demographic pressure. Some enrollment growth has occurred for other cycles, especially over the second half of the decade, pushed by the growing cohorts of primary school leavers and the development of secondary schools (under the SEDP) and TVET; however, further increases are desirable. Special emphasis has been given to higher education to adequately cater for the growing influx of secondary school leavers.

*However, school coverage is uneven from one level to another, and postprimary coverage is still low compared with other African countries.* Increased enrollment has translated into higher schooling coverage at all levels. The preprimary GER reached a high 37 percent in 2009 (against 26 percent in 2004), a level much higher than the low-income countries' average. Primary level GERs have structurally exceeded 100 percent, and stabilized at 112 percent in 2009. Despite the rapid development of later cycles, postprimary education coverage is still low, particularly at A-Level where only four out of 100 school-aged children were enrolled in 2009, one of the lowest rates of all African low-income countries. The situation is less problematic at O-Level, for which the GER reached 39 percent in 2009, up from a low 10.5 percent in 2003.

TVET education coverage in Tanzania (250 students per 100,000 inhabitants, in 2009) is better than in other low-income countries (228 students per 100,000). Seventy percent of TVET students are registered on vocational courses (in VTCs and FDCs), whereas 30 percent are in nonhigher technical learning streams.

*Adult and nonformal education programs are of limited relevance to the population's needs.* Literacy programmes cover just a quarter of the target population. Similarly, COBET programmes only cater for a small fraction of out-of-school children, and their efficiency in mainstreaming children's return to school is weak.

*Although higher education is the level that has registered the highest growth in relative terms, this is mainly due to its low initial coverage, and university and technical higher education coverage is still low, at 335 students per 100,000 inhabitants in academic year 2009/10, against 381 students per 100,000 in other low-income countries.* The sector is expanding quickly, compensating for its poor capacity, but its development should be carefully planned to ensure it responds to labor market needs and general economic development priorities. One of the present challenges is to influence the career objectives and the distribution of graduates by subject area. Indeed, science subjects attract too few students; worse still, their share in higher education enrollment continues to decline (they represented 34 percent in academic year 2003/04, and 24 percent in 2007/08). This might ultimately hamper Tanzania's ability to keep abreast of rapid technological development and needs, if no affirmative action is taken.

*The role of the private sector is extremely variable from one level to another: (i) it remains slight at the primary level, where barely 1.5 percent of students attend nongovernmental schools; (ii) it plays a greater role at postprimary levels, although its importance has decreased at O-Level and to a lesser extent at A-Level, following the government's policy of increasing access to the secondary cycle at a relatively lower cost to families. At O-Level, barely 11 percent of students were enrolled in nongovernmental institutions in 2009, against 42 percent in 2000. At A-Level, 32 percent of students are enrolled in nongovernmental institutions, down from 49 percent in 2004; (iii) the strategy at teacher training and higher education levels on the other hand focuses on cost-sharing approaches and an increased reliance on the private sector to broaden access. A system of student grants and loans has been set up in parallel to ensure that the poorer capable students are not left behind; and (iv) in technical education, all folk development courses are government run, however those delivered through vocational centers are increasingly offered by the private sector, reflecting the ministry's policy of diversifying service providers and sources of financing to support the development of the sector. By 2007, almost 80 percent of students enrolled in vocational long courses were in nongovernmental centers.*

*Tanzania is on track to reaching universal primary education. Access to Standard I is almost universal, although 5.5 percent of a generation of children did not have access to primary school in 2006. The fee-free primary education policy, by removing part of the households' financial burden, coupled with extensive classroom construction have had positive impacts on both primary access and retention levels. Nevertheless, the system is still marked by considerable late entry; only a third (36 percent) of Standard I students were of official school-age (seven years) in 2006 (up however from an even lower 17 percent in 2000-01).*

*The primary completion rate (PCR) (proxied by the Standard VII access rate), which measures progress toward universal primary education, has steadily increased over the past decade, and is estimated to have reached at least 89 percent in 2009. Demand for secondary education is growing as a result of the higher PCR, putting pressure on postsecondary enrollment. Although strong improvements in access to secondary have been noted, especially at O-Level, they are still limited. In 2009, half of children had access to O-Level and 23 percent were able to reach the last grade of the cycle, against just eight percent in 2003. A-Level access is still strikingly low (five percent). Whereas lack of supply is a major hindrance to O-Level and A-Level access, economic difficulties and cultural issues among certain groups also contribute to fragile school demand. With respect to the former, the policy to have a secondary school in each ward has had a very positive impact on secondary access and on primary retention rates. The pursuit of the policy is expected to improve both O-Level and A-Level access and retention in the coming years.*

*In 2006, out-of-school children represented 13 percent of the seven to 13 years age-group, 88 percent of which had never attended school. Given that supply issues are a major cause of nonattendance, the government has recently stepped up its efforts to improve school supply, under the primary and secondary education development programmes, and has had a degree of success in releasing the constraint. Beyond supply, demand-side factors also affect school nonattendance. Poverty also limits households' capacities to send their children*



to school and allow them to stay there. However age appears to be the main reason for families' reticence in sending their children to school. Given its detrimental impact on schooling paths, making sure that children are sent on school on time should be a priority for MoEVT. Adequately dealing with out-of-school issues will require a policy mix that addresses both supply and demand constraints.

*The increase in primary and secondary school enrollments is already putting a lot of strain on secondary, TVET and higher education institutions, and enrollment at these levels is expected to grow more rapidly still over the coming years, in response to greater demand. A rapid and well planned response is required, to ensure the smooth and manageable development of the entire education system, and that it remains in line with labor market needs. This raises both financial and practical challenges (teacher requirement, classroom supply, and so on). A sectorwide financial simulation model may help to explore policy options, assessing both education facilities and required resources, as well as their financial implication, and be a useful discussion tool.*

## Notes

- 10 Previously the Ministry of Education and Culture.
- 11 Preprimary is part of Early Childhood Care and Development (ECCD) which offers teaching to children aged zero to eight years. While MoEVT focuses on preprimary education for those aged five to six years, the Ministry of Health and Social Welfare is responsible for issues pertaining to health, social welfare and the protection and nutritional needs of younger children. An integrated ECCD policy is under development to allow for greater coordination among stakeholders and the coherent development of the subsector.
- 12 With the growing number of students, managing repetition was becoming too cumbersome. Since school year 2009, those who did not perform well were nevertheless promoted to the next level, but required to follow remedial classes to overcome any difficulties.
- 13 For the Grade A certificate candidates must obtain 28 points at CSEE; and for the diploma candidates must obtain passes in at least two main ACSEE subjects.
- 14 A version of this programme targeting secondary school dropout, the Complementary Secondary Education in Tanzania (COSET) programme is under preparation. Its development should be adequately planned alongside TVET development to increase the flexibility and coherence of programmes aiming to reduce secondary dropout.
- 15 According to the adult and nonformal education strategy (2003/04-2007/08), COBET and ICBAE should be financed by capitation grants, with communities supporting the building of the premises (ICBAE) and providing labor. COBET programmes rely on primary school premises.
- 16 Before 2008, HE was managed by the Ministry of Sciences, Technology and Higher Education.
- 17 The advanced diploma is being phased out.
- 18 School census data were not available in soft format until 2008. The report relies on reports for data until 2008, and Access databases for 2009. However, many flaws were noted; these were adjusted by the authors where possible.
- 19 A more in-depth analysis of teacher training is provided in Chapter 7 on basic education management.
- 20 In 2009, the PSLE pass rate for COBET Cohort II students was 34 percent, below the national average of 49.4 percent, and the Standard IV exam pass rate for COBET Cohort I students was 60 percent.
- 21 This is based on the percentage of the illiterate adult population (15-49 years), estimated at 21 percent in 2007 (HBS, 2007), assumed constant through 2009, and the NBS-corrected adult population projection, of 18,905,525 in 2009.
- 22 VTC enrollment figures are for 2008, as 2009 figures had not been released when finalizing the report.
- 23 Actually, over 2007-08, 57 new centers opened (mainly privately owned) while 105 closed down (mainly NGO owned). The practice of revoking the licenses of some VTCs is in line with VETA's policy to reduce the number of underperforming or unoperational centers.
- 24 In 2007, 168 institutions (including VETA centers) were public, and 770 were nongovernmental.
- 25 In 2009/10, 18 nongovernmental higher learning institutions were registered in mainland Tanzania, accounting for 28 percent of university students (32,480 students, of 115,306), a considerable increase over 2003/04, when just 10 nongovernmental institutions were operational, accounting for just seven percent of students (2,035 students) at the time. Ten and seven public institutions existed in these respective years (not including the Open University of Tanzania).
- 26 These figures include Zanzibar as data did not enable to differentiate with mainland Tanzania.
- 27 This is based on a subsample of universities and university colleges for which data was available for 2009/2010, including public institutions (the University of Dar es Salaam - UDSM, the Open University of Tanzania - OUt, the Mkwawa University College - MUCE), and private ones (International Medical & Technological University - IMTU, Iringa University College - IUCCO, Kilimanjaro Christ Medical College - KCMC, Mount Meru University - MMU, Muslim University of Morogoro - MUM, Mwenye University College - MWUCE, St. John's University of Tanzania - SJUT, Stefano Mushi Memorial University College - SMMUCO, University of Arusha - UoA and Weill Bugando University College of Health Sciences - WBUCHS). Jointly, they accounted for approximately half the HLLs of mainland Tanzania in 2009. However, science-based courses tend to be underrepresented in this sample, accounting for 12 percent of enrollment, just half their weight when all HLLs are considered.
- 28 Areas in Tanzania where the main activity is cattle breeding are known as "pastoralist," referring to pasture, or animals' grazing.
- 29 The analysis is based on the gross enrollment ratios (GER) given that net enrollment ratios do not provide an accurate picture of education coverage (See Box 2.1).
- 30 If repetition were not taken into account (obtaining then the mean enrollment rate), the GER would have been of just of 109 percent.

- 31 TVET includes students enrolled in vocational and NACTE-registered technical nonhigher courses. In 2009, the total number of TVET students was estimated at 101,529. Higher education enrollment includes universities, university colleges and higher technical courses. The total number of students in higher education in 2009 was 136,136. These reclassifications have allowed for international comparisons.
- 32 The transversal schooling profile, also known as the cross-sectional schooling profile, computes access rates to each grade by dividing the number of new entrants (nonrepeaters) by the population of official school-age for that grade. Information on nonrepeaters is obtained from administrative schooling data, and population data are drawn from the NBS-corrected population projections. Access rates above 100 percent may be due to the multicohort phenomenon (overage and underage enrollment). When repetition data were not available, estimates were performed based on the available repetition rates for other years.
- 33 Completion rates measure the proportion of children who attain the last grade of a given schooling cycle. Due to the unavailability of data on completion, enrollment in the last grade (excluding repetition) is used as a proxy. This may slightly overestimate the completion rate, as it does not consider last grade dropout.
- 34 A ward is a subdivision of a district. There are approximately 2600 in Tanzania.
- 35 Indeed, while the numerator considers new entrants attending a given grade regardless of their age, the denominator encompasses only the school-aged population for the given grade.
- 36 The quality of data per age may be weak due to the low prevalence of birth registration certificates in Tanzania.
- 37 Computed for children aged 11 to 13 years.
- 38 The probability of accessing Standard VII is 70 percent, a value close to the one observed when using administrative data for that same year (78 percent). In 2006, O-Level and A-Level access, as seen previously, were quite limited. However, recent schooling developments are making improvements on all of these fronts.
- 39 The 2009 values refer to a cohort of 100 students who started O-Level in 2006 and A-Level in 2008.
- 40 See Chapter 4 on quality for a detailed analysis of exam pass rates.
- 41 Although PSLE pass rates have decreased, the number of PSLE graduates (in absolute terms) is in fact increasing more rapidly than the number of Form 1 seats available.
- 42 For the 2007-08 transition.
- 43 The computation is based on average enrollment rates, adjusted to discount repetition.
- 44 The reference population is aged seven to 13 years, corresponding to the official primary school-age.
- 45 These patterns are in line with most of SSA (Maajgard and Mingat, 2011).
- 46 In 2006, 77 percent of primary school-aged children did not have a birth certificate on average: 83.5 percent of the out-of-school children, against 75.9 percent of those enrolled (Computations based on HBS, 2007 data).