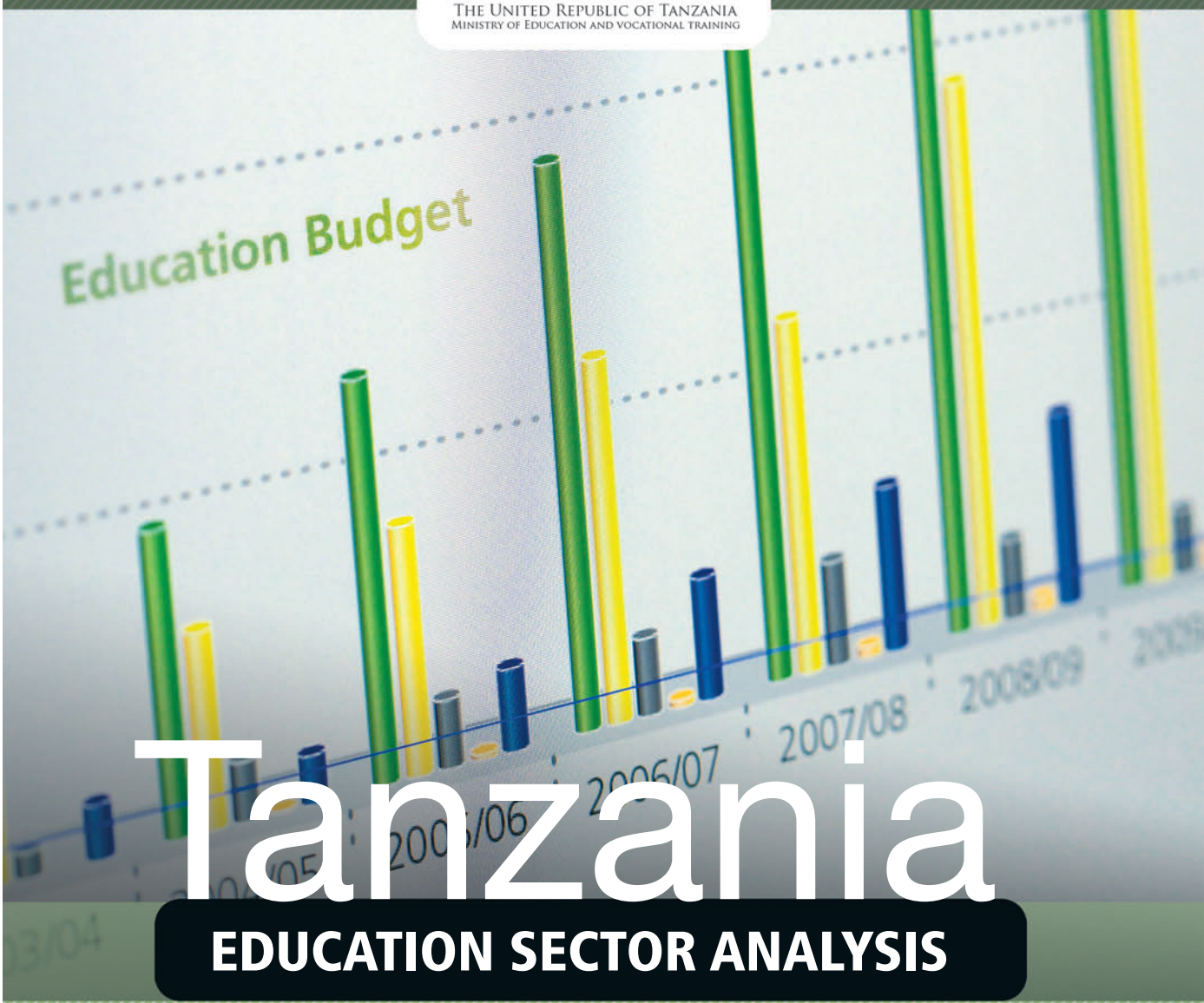
THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF EDUCATION AND VOCATIONAL TRAINING



Tanzania

EDUCATION SECTOR ANALYSIS

Beyond Primary Education, the Quest for Balanced and Efficient Policy Choices for Human Development and Economic Growth

EXECUTIVE SUMMARY

United Nations Educational, Scientific and Cultural Organization

Dakar Office
Regional Bureau for Education in Africa

Dar es Salaam Cluster Office

Pôle de Dakar
EDUCATION SECTOR ANALYSIS

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Acknowledgments

This Education Sector Analysis was prepared through a close collaborative effort by the government of Tanzania, the Pôle de Dakar (UNESCO/BREDA), the UNESCO Institute of Statistics, and the UNESCO Dar es Salaam cluster office.

The government team consisted of staff from the different ministries in charge of education, led by the Ministry of Education and Vocational Training (MoEVT), as well as other ministries and departments, including the Ministry of Community Development, Gender and Children (MCDGC), the Ministry of Finance and Economic Affairs (MoFEA), the Prime Minister's Office for Regional Administration and Local Government (PMO-RALG), the National Examinations Council of Tanzania (NECTA), the National Council for Technical Education (NACTE), the Tanzania Commission for Universities (TCU), the Vocational Education and Training Authority (VETA), the National Bureau of Statistics (NBS) and the Bureau for Educational Research and Education of the University of Dar es Salaam (BERE/UDSM), which was instrumental in facilitating all theoretical workshops.

The government team was successively led by Cyprian Miyedu, former Chief of the Monitoring and Evaluation (M&E) Section, Department of Policy and Planning of MoEVT, the late George Maliga, Chief of the M&E Section of MoEVT, and Muhwela Kalinga, Acting Chief, M&E Section, under the overall leadership of Professor H.O. Dihenga, the Permanent Secretary of MoEVT. Related administrative issues were handled by Mr Malili and Ms Levira. For Chapters 1 and 3, the government ESA team consisted of Ms Baitwa (Chapters head, Budget and Finance Division, MoEVT), Ms Elinzu (NBS), Mr Kitali (PMO-RALG), Ms Luena (EMIS, MoEVT), Mr Minja (Administration and Personnel, MoEVT), Mr Mtyama (MoEFA), Ms Omolo (TMC-DPLO/LGA Temeke District Council) and Mr Zullu (Administration and Personnel, MoEVT). Mr Pambe (Chapters head, Primary Education, MoEVT), Ms Kiisheweko (TCU), Ms Levira (Adult Education, MoEVT), Mr Maiga (Adult Education, MoEVT), Mr Mchunguzi (Higher Education, MoEVT), Ms Sigwejo (NACTE), Mr Saro (FDC, MCDGC) and Mr Wilberforce (EMIS, MoEVT) constituted the government team for Chapters 2 and 5. The team for Chapter 6 included Mr Mhagama (Chapter head, VETA Division, MoEVT), Mr Misana (Technical Education, MoEVT), Mr Malili (Higer Education, MoEVT), Mr Mwakapalala (NBS), Mr Ndamgoba (FDC, MCDGC), Mr Petro (EMIS, MoEVT) and Mr Sunday (MIS, MCDGC). The government team for Chapters 4, 7 and 8 was composed of Mr Mwenda (Chapters head, Secondary Education, MoEVT), Mr Gabriel (LGA Bagamoyo, PMO-RALG),

Mr Kinunda (Higher Education, MoEVT), Mr Nzoka (Teacher Training, MoEVT), Mr Mbowe (NECTA), Ms Mrigo (Administration and Personnel, MoEVT), Mr Pambe (Primary Education, MoEVT), Mr Ponera (EMIS, MoEVT) and Mr Shauri (Primary Education, MoEVT). Chapter 7 received additional inputs from staff from the Inspection Department of MoEVT.

The Pôle de Dakar (UNESCO/BREDA) team consisted of Borel Foko (Team Leader, Education Policy Analyst) and Diane Coury (Education Policy Analyst), under the overall guidance of Jean-Pierre Jarousse (former Head of the Pôle de Dakar) and Mohammed Bougroum (Head of the Pôle de Dakar). Inputs were also provided by Pôle's members, Alain Patrick Nkengne Nkengne, Mireille Harivola Ravelojaona and Ibrahima Dao.

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Foreword

This education sector analysis (ESA) for mainland Tanzania is a detailed analytical document that offers a comprehensive picture of mainland Tanzania's education sector. The main purpose of an ESA (also known as Country Status Report, or CSR) is to provide an evidence-based diagnosis of an education sector, to enable decision-makers to orient national policies. It also provides relevant analytical information to nourish the dialogue between the government and education sector stakeholders, including development partners. In the current development context, marked by the necessity for countries to develop sound, sustainable and credible strategies and plans in which education is embedded, ESAs represent a valuable and essential tool.

This is the second ESA for Tanzania; the first one having been conducted in 2001. Although its main objective is to provide a comprehensive picture of the education system in 2009 (the last year for which statistics were available), it also provides some analysis of the evolution of the system over the decade, when feasible and relevant. This second report is also more than an update. It provides more in-depth analysis on certain aspects of the system: detailed unit costs by subsector, external efficiency, quality and out-of-school, and technical education and vocational training and higher education in particular. It provides key monitoring and evaluation inputs on the education sector as a whole, that are particularly valuable in the framework of the implementation of the Education Sector Development Programme.

This 2011 ESA was carried out between February 2009 and November 2010 by a multi-ministerial national team with the support of the Pôle de Dakar (UNESCO/BREDA) and the UNESCO Institute of Statistics. It was part of the activities conducted under the Education Sector Management Information System (ESMIS) Programme,[1] one goal of which is to support the development of capacities in data analysis using data generated by the ESMIS and other sources to strengthen sector-wide planning and policy reforms. The ESA process contributed to the strategy for building capacities in data analysis through a combination of: (i) learning-by-doing, through a series of workshops, and (ii) theoretical training sessions, offered in parallel to the workshops by the Bureau of Educational Research and Evaluation of the University of Dar es Salaam (BERE/UDSM), based on the SAMES[2] materials provided by the Pôle de Dakar.

The analyses presented in this ESA were made possible by using existing data and information from multiple sources, and more particularly: school administrative surveys conducted by the Ministry of Education and Vocational Training (BEST, TCU and NACTE data); household budget, labor force, demographic and health surveys conducted by the National Bureau of Statistics; and SACMEQ data on learning achievements, including examination data from NECTA. Macroeconomic data and government finance statistics were provided by MoFEA, and specific data were made available from VETA and the HESLB. Obtaining timely (household surveys, SACMEQ, and payroll data) and reliable key data (EMIS data were fraught with flaws) was a major constraint that has heavily limited the scope of some analyses. Nevertheless, some important conclusions have been reached, both on the achievement front, and on the major challenges faced by the education system.

The 2011 ESA has highlighted some interesting achievements, including:

- *Sustained economic growth and greater public resources have translated into a relatively higher education budget.* The government spent 4.3 percent of GDP on education in FY 2008/09 (from a low 2.5 percent in FY 2000/01), much more than countries with similar levels of development. Education has also been given high budget priority. The sector benefited from 26.5 percent of recurrent government expenditure after debt service in FY 2008/09, well above the African low-income countries' average of 21.4 percent;

- *Tanzania is on track to achieve the millennium development goal of universal primary education.* Access is almost universal and the primary completion rate is close to 90 percent. The fee-free primary education policy has had a positive impact by boosting both access and retention. Tanzania's preprimary gross enrollment ratio is close to 37 percent, compared with just 20 percent on average for comparable African countries. Tanzania's administration of this level, using similar teaching approaches as for the primary cycle and similar school premises, has helped to lower unit costs and increase enrollment;

- *Enrollment has increased for all cycles, and particularly in higher education,* allowing Tanzania to rapidly catch up with the levels of comparable developing countries: in 2009, the number of higher education students in Tanzania was 36 percent lower than the average, down from 50 percent in 2006. This trend is likely to continue as a direct consequence of the expected development of secondary education;

- *The Tanzanian higher education and TVET sectors are well positioned to adequately manage the development and diversification of supply.* Existing policies and regulatory bodies provide a sufficient, solid and modern institutional framework for the system to build upon for its future development;

- *Education has a significant impact on social and human development,* particularly on literacy, poverty, fertility, and maternal and child health. Primary education is the level that has the greatest impact on social outcomes: it contributes to almost 60 percent of the total impact, which further reinforces the justification for sustained efforts to ensure that all Tanzanian children complete at least the primary cycle; and

- *Education responds to labor market needs.* Greater levels of education lead to higher incomes. The wage premium for workers with secondary education is particularly significant, suggesting that there is a severe shortage of individuals with secondary qualifications. There is also a strong connection between vocational training and graduates' employment. In general, the income of VET graduates compares favorably with that of self-employed individuals with primary education or O-Level secondary.

The 2011 ESA also points to key challenges in the coming years for the development of the education sector in Tanzania, including:

- *Achieving greater efficiency gains (or implementing cost-saving strategies)* in the use of public education resources. Indeed, it is unlikely that the current level of budget priority given to the education sector will be maintained over the next decade, due to competing demands by health, agriculture and infrastructure;

- *Increasing the public resources allocated to secondary education.* Tanzania's secondary cycle receives 35 percent less funding than countries who are equally close to achieving universal primary education. This situation should be carefully reviewed to avoid affecting quality as the sector expands. Secondary schools already display high pupil to teacher ratios (49 to 1);

- *Ensuring children enter primary school at the right age.* Approximately 13 percent of primary school-aged children were still out of school in 2006, 88 percent of which had never attended. Although poverty is a constraint, age appeared to be the main reason for nonattendance. Late primary entry is common (only 36 percent of Standard I students were of official school age – seven years – in 2006) and is known to have a detrimental impact on schooling paths;

- *Improving access to and retention in secondary cycles.* Although considerable improvements in access to secondary school 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, up from just eight percent in 2003. A-Level access is still strikingly low, at five percent. Whereas lack of supply is a major hindrance to O-Level and A-Level access, economic difficulties and cultural issues among certain population groups also contribute to fragile school demand. The policy to have a secondary school in each ward has had a very positive impact on secondary access and on primary retention rates;

- *Supporting pro-poor schooling.* Important disparities in access exist according to gender and area of residence, and they increase with successive levels of education, but the most discriminatory factor in schooling patterns is families' level of income. It has also been shown that households' contributions to education are still significant at the primary level (equivalent to a quarter of public resources), despite the fee-free primary education policy. Furthermore, disadvantages tend to be cumulative. Poor rural girls face the worst access and retention conditions;

- *Taking affirmative action to enhance girls' participation in school to ensure gender parity at postprimary levels.* Insistence on girls fulfilling their traditional role in society, early marriage and pregnancy all favor dropout. Trends could be reversed by: (i) awareness raising campaigns to sensitize parents on the value of educating girls beyond primary, and on the negative impact of early marriage and pregnancy on schooling and female health; (ii) greater numbers of female teachers and the provision of community-based hostels to avoid girls the long journeys to and from school, addressing security concerns; and (iii) scholarships and cash transfers targeting bright girls, reducing direct and opportunity costs, mirroring the government's programme targeting the most talented primary graduates from poorer backgrounds;

- *Improving pedagogical management* to raise the quality of basic education. Although the improvement dynamic observed in primary education learning outcomes between 2000 and 2007 is very encouraging, and better than in neighboring countries, learning achievements are still modest by international standards. In addition, national examination pass rates are dropping, and the results of those who graduate are low, especially at primary and O-Level;

- *Reducing disparities between regions, districts and schools,* that persist despite decentralization, highlighting the need for effective planning and monitoring tools to allocate education inputs more efficiently. A decentralized information and monitoring system could help by providing decision makers with timely, accurate and reliable data on the education sector. In addition to an EMIS system, financial and human resource management systems would improve fiscal management and accountability. A first response to this challenge was given in 2009, with the development of a pilot decentralized Basic-Education Management Information System (BE-MIS). Tested in 28 district councils in 14 regions, the BE-MIS is to be scaled up to all councils nationwide by 2014; and

- *Adequate planning of TVET and higher education expansion.* The increase in primary and secondary school enrollments is already placing much strain on secondary, TVET and higher education institutions. An urgent response is required to ensure the smooth and manageable development of these subsectors.

The challenges faced by higher education are of particular importance:

- *It is essential that funding mechanisms be improved.* Higher education is blatantly inefficient, paying little attention to potential economies of scale. In addition, approximately 28 percent of the level's budget is devoted to badly targeted social expenditures, particularly loans transferred directly to students: 48 percent of students benefit from a loan, yet less than 10 percent come from the poorest quintiles, which calls for an improvement in the loan targeting mechanisms; and

- *Students' career objectives and the distribution of graduates by subject area must be adjusted,* to achieve better relevancy of higher education programmes to the labor market and enable Tanzania to keep abreast of rapid technological development and needs. Science subjects in particular attract too few students (only 24 percent of students for the 2007/08 academic year, down from 34 percent in 2003/04). Adequate analytical tools should be implemented, such as labor market tracer surveys.

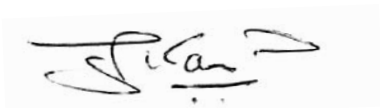
Technical education and vocational training will also be key to Tanzania's development. Some of the key required actions that this ESA highlights for the subsector include:

- *Strengthening the subsector's coordination mechanisms.* Although regulatory and quality assurance bodies provide important guarantees for the controlled development of the TVET subsector, it still faces a series of challenges, including: (i) the diversity of training demand linked to the heterogeneity of the target population; (ii) the institutional fragmentation of technical education, under the umbrella of various ministries; (iii) the fragmentation of vocational education and training service delivery, involving two ministries and a parastatal agency; and (iv) the practical continuity between vocational and technical curricula and programmes, although theoretically bridges do exist, as defined by the national qualifications' framework;

- *Revising subsector budget trade-offs.* The Tanzanian TVET system as a whole is not as underfunded as in many other African countries. However, technical nonhigher education absorbs almost 57 percent of all TVET resources, against just 37 percent for vocational training, and six percent for folk education. This funding imbalance should be reduced in order to scale-up vocational education and training activities; and

- *Defining a funding formula to rationalize the allocation of resources among technical institutions.* Surprisingly, it has been noticed that planning and welfare courses are twice as expensive as health and allied science courses. However, even for a given subject area, and among institutions with comparable levels of enrollment, variations in the resources allocated are sizeable. This situation merits an improved funding formula and for more coordination in planning and budgeting among parent ministries.

More broadly, this ESA offers valuable and comprehensive resources to anyone interested in the education sector in Tanzania. It is however a snapshot of the system at a particular time. As the sector makes progress in implementing its sector plan, this report's findings are therefore likely to become outdated, although many features will remain valid. It is the hope of both the Ministry of Education and development partners that this document will be of use to all stakeholders in the education sector.



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1 The Education Sector Management Information System (ESMIS) Programme is implemented by the government of Tanzania with the financial and technical support of development partners (the European Union, UNESCO, UNICEF, and UNFPA), within the overall framework of the Education Sector Development Programme for 2008-17. The UNESCO Institute of Statistics is providing technical assistance through its permanent Dar es Salaam cluster office.

2 The Sectoral Analysis and Management of the Education System (SAMES), also known as the PSGSE (Politiques Sectorielles et de Gestion des Systèmes Educatifs) is a masters degree offered by the University Cheikh Anta Diop of Dakar (Senegal) with the support of the Pôle de Dakar, targeting Ministry of Education staff and other actors working in the field of education in Africa. The training is currently available in French. An English course is currently under development with the University of The Gambia. For the purpose of this ESA, all training modules were translated into English and made available to BERE.

Abbreviations

ACSEE	Advanced Certificate of Secondary Education Examination
AE/NFE	Adult Education and Nonformal Education
BE-MIS	Basic Education - Management Information System
BERE	Bureau of Educational Research and Evaluation
BEST	Basic Education Statistics in Tanzania
BREDA	Regional Bureau for Education in Africa
CBET	Competence Based Education and Training
COBET	Complementary Basic Education in Tanzania
CSEE	Certificate of Secondary Education Examination
ESA	Education Sector Analysis
ECCD	Early Childhood Care and Development
EMIS	Education Management Information System
ESMIS	Education Sector Management Information System
FDC	Folk Development College
GDP	Gross Domestic Product
GER	Gross Enrollment Rate
IIEP	International Institute for Educational Planning
ILFS	Integrated Labor Force Survey
HBS	Household Budget Survey
HESLB	Higher Education Student Loan Board
HLI	Higher Learning Institution
LGA	Local Government Authority
LIC	Low-Income Country
MCDGC	Ministry of Community Development, Gender and Children
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
NGO	Nongovernmental Organization
PEDP	Primary Education Development Plan
PMO-RALG	Prime Minister's Office - Regional Administration and Local Government
PSLE	Primary School Leaving Examination
PTR	Pupil to Teacher Ratio
SACMEQ	The Southern and Eastern Africa Consortium for Monitoring Educational Quality
SADC	Southern African Development Community
TCU	Tanzania Commission for Universities
TDHS	Tanzania Demographic and Health Survey
TE	Technical Education
TVET	Technical and Vocational Education and Training
UDSM	University of Dar es Salaam
UIS	UNESCO Institute of Statistics
UNESCO	United Nations Educational, Scientific, and Cultural Organization
VET	Vocational Education and Training
VTC	Vocational Training Center

Executive Summary

1. In a context of high demographic pressure, Tanzania has mobilized important public resources to adequately address the growing demand for education.

The total population is expected to grow by 32 percent between 2010 and 2020. Over the same period, the under 15 years age-group will remain constant at 44.2 percent of the total. The primary school-aged population (seven to 13 years) is projected to reach 10.2 million by 2020, corresponding to an additional 1.8 million children compared with 2009.

Demographic Trends and Projections, 1967-2020

	Census-Years		NBS-Projections	
	1967	2002	2010	2020
Population (million)	12.3	34.4	43.2	57.1
Annual Growth Rate (%)	n.a.	3.0	2.9	2.8
Sex Ratio (number of boys per 100 girls)	95.2	96.0	96.9	98.6
Population Under 15 Years (% of total)	—	46.5	44.4	44.2
Urban Population (% of total)	6.4	23.1	26.3	29.7

Source: NBS data and projections (NBS, 2006; URT, 2005); and authors' estimates.

The government has given high budget priority to the education sector: in FY 2008/09, education was allocated about 26.5 percent of government recurrent expenditure after debt service, higher than the East African Community average (25.1 percent), and than the other African low-income countries' average (21.4 percent). In terms of GDP, the increase is significant: from 2.5 percent of GDP in FY 2000/01 to 4.3 percent of GDP in FY 2008/09, a value that is also higher than the average for all African low-income countries (3.3 percent).

Percentage of Actual Public Expenditure Allocated to Education

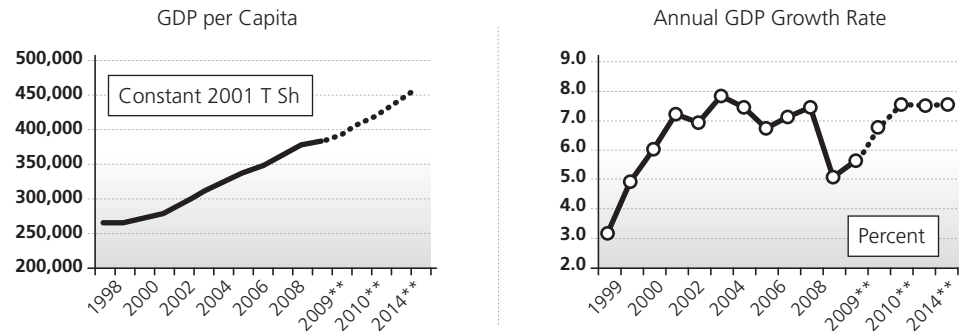
	Recurrent Expenditure		Development Expenditure		Total Expenditure	
	% of Total, (after debt)	% of GDP	% of Total	% of GDP	% of Total	% of GDP
2000/01	24.3	2.5	—	—	—	—
2004/05	23.3	3.1	16.6	1.19	20.4	4.3
2008/09	26.5	4.3	6.1	0.56	18.2	4.9

Source: Authors' calculations based on Tables 1.3, 1.4, 1.5 and 1.6.

Along with the high budget priority given to the education sector, this positive evolution was also made possible following:

- *Impressive and sustained economic growth* registered over the last decade. Over the 2000-08 period, the average annual economic growth rate was estimated at 7.1 percent, a higher figure than the African low-income countries' average, of 6.2 percent. This trend is likely to strengthen given that average GDP per capita (about US$ 565 in 2010) remains lower than the African low-income countries' average (US$ 800).

GDP Trends (FY) 1998/99-2008/09 and Projections



Source: Based on Table 1.3.
Note: **Projections.

- *Improved government capacities to mobilize significant resources directly from national income.* This has indeed allowed domestic revenues to increase from 9.2 percent of GDP in FY 1998/99 to 15.9 percent of GDP in FY 2008/09. It is imperative that the government supports this favorable trend in domestic revenue collection, to reduce its dependency on foreign aid, which has represented almost 40 percent of total public resources since FY 2002/03.

2. The allocation and use of public education resources is still not optimal however.

The increase in recurrent public education expenditure has been followed by significant changes in subsector allocations. Over the decade, the share of primary education (including preprimary education) has decreased from 58 percent to 48 percent, a level similar to that of other countries close to achieving universal primary education. Most primary education savings have benefited higher education, whose share of resources has increased to 27 percent of the total education budget, making the subsector one of the best financed among African countries.

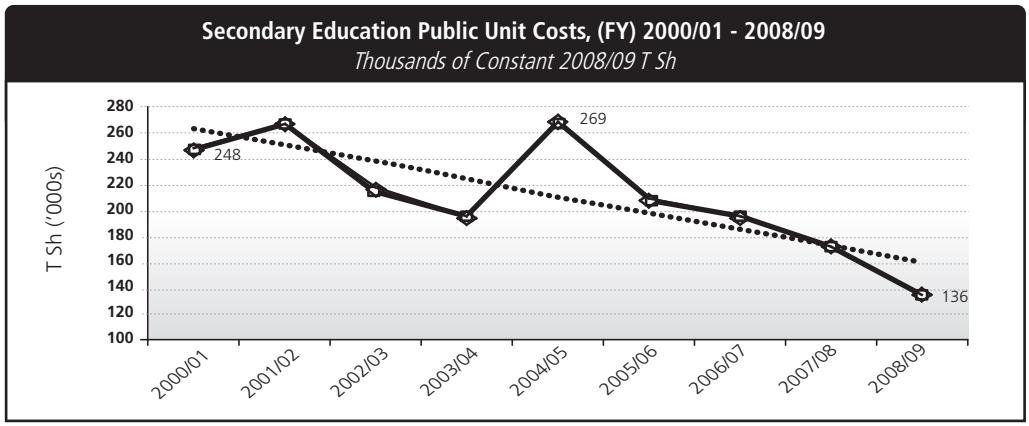
Secondary education continues to be heavily underfunded. In 2008/09, it absorbed 13.5 percent of education public resources; a level far below countries that are equally close to achieving universal primary education.

Comparison of the Allocation of Public Recurrent Education Expenditure, by Cycle, Tanzania and Selected African Countries' Average, 2006 or MRY		
	Mainland Tanzania (2008/09)	**Comparable African Countries' Average**
Primary	44.2	43.6 *
Secondary	13.5	26.3 **
TVET	*7.0*	*5.0* ***
Technical Nonhigher	4.0	—
VETA	2.6	
Folk Education	0.4	
Higher Education	*26.9*	*20.8* ***
University Education	23.6	—
Technical Higher	3.4	
Other	*8.3*	*4.8* ***
Preprimary	4.5	—
Teacher Training	2.5	
Adult and Nonformal Education	1.3	
Total	**100.0**	**100.0**

Source: Tables 3.2 and 3.3 and authors' calculations based on MoFEA and EMIS data for Tanzania; and Pôle de Dakar/UNESCO-BREDA for other countries.
Note: * Based on countries with similar primary school duration (7 years) and closer to UPE; ** Based on countries with similar secondary school duration (7 years) and closer to UPE; *** Based on the averages of all African low-income countries for which data were available.

This situation has led to a sharp 50 percent reduction in public spending per student at the secondary level, while it has increased in all other subsectors. The Tanzanian secondary unit cost is only two-thirds of the African LIC average, while the higher education unit cost (the average for university and higher technical education) is 20 percent higher. While the government's strategy to expand secondary education is not matched by current budget trade-offs within the sector, options to increase secondary education funding must be explored to ensure the quality of the service delivered is not harmed. Although it may not be possible to reallocate funds from higher education to secondary, the government should look for efficiency gains and/or potential cost-saving measures within the higher education sector.

The TVET system is better funded than in many African countries, receiving seven percent of public education resources, against five percent on average for the latter. However, main allocation issues stem from funding imbalances amongst its different subsectors. Indeed, while technical nonhigher education absorbs almost 57 percent of all TVET resources, vocational training receives just 37 percent, against a low six percent for folk education. This funding imbalance should be reduced in order to scale-up vocational education and training activities. For technical education, the high level of randomness in resource allocation among institutions is a problem, that is mainly linked to striking unit costs in specific programs.



Source: Authors' calculations based on MoFEA and BEST and EMIS data.

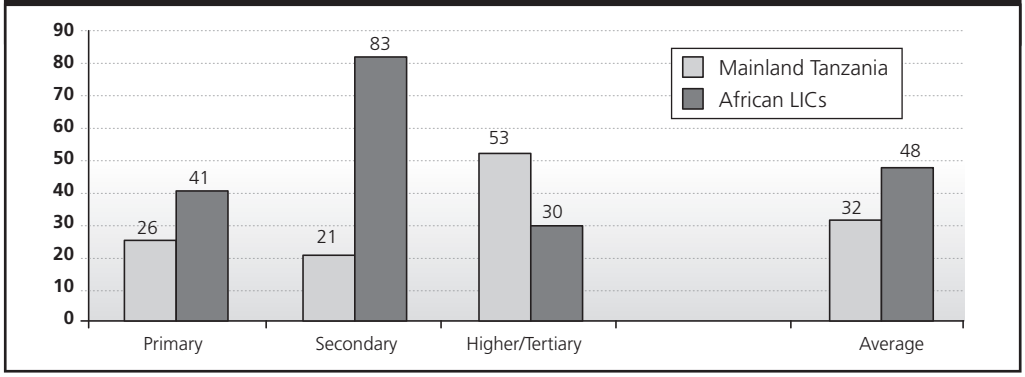
The way resources are used highlights potential room for improvement. Indeed, evidence shows that:

- Basic education focuses too little on spending that directly improves the quality of the service delivered;
- In secondary education, capitation grant spending is 40 percent lower than the norm, and student meals absorb four times as much of the budget;
- Teacher training colleges also overspend on student meals, to the tune of 90 percent of nonsalary expenditures;
- Preprimary and primary pupil to teacher ratios are excessively high, partly because high salaries constitute a constraint to further recruitment. Secondary PTRs are also well above par, due to a quantitative and qualitative shortage of teachers; and
- In higher education, social spending is excessive (28 percent of higher education unit costs not including scholarships for study abroad), and inequitable (almost 48 percent of students receive a loan, although less than 10 percent are from the poorest quintiles).

3. Households and the private sector contribute considerably to the cost of schooling, at varying degrees according to the level of education.

Households contribute significantly to education funding; their spending is equivalent to 32.1 percent of public education expenditure. This is however comparatively lower than in other LICs (48 percent on average). Despite the fee-free primary policy, household contributions remain important: a quarter of primary public education costs are covered by households. This raises some concern as for the poorest households, as it might be a major obstacle to send their children to schools. At the higher education level, the cost-sharing mechanism seems to be effective, reducing the government's financial burden. But its effectiveness over the long run will very much depend on the capacity of the HESLB to recover loans.

International Comparison of Household Spending on Education, by Level, 2009 or MRY
Percentage Equivalent of Public Recurrent Education Expenditure



Source: Table 3.5 for Tanzania; Rwanda CSR, 2010 and Brossard et al., 2008 for 17 African low-income countries.
Note: 18 African low-income countries are considered here: Benin, Burkina Faso, Cameroon, Chad, Congo, Côte d'Ivoire, Djibouti, Guinea Bissau, Madagascar, Malawi, Mali, Mauritania, Niger, Rwanda, Senegal, Sierra Leone, Togo and Uganda.

The role of the private sector varies greatly across sectors. On the one hand it is marginal at the preprimary and primary levels (where expansion has mainly been supported by the public sector), and decreasing at O-Level and to a lesser extent at A-Level, following the government's policy of increasing secondary access. On the other hand, the expansion of the teacher training and higher education subsectors increasingly relies on cost-sharing, favoring the development of private sector contributions. In 2009, 39 percent of students were enrolled in private Teacher Training Colleges, against five percent in 2004. In technical education, all folk development courses are government-run, but those delivered through vocational centers are increasingly private, reflecting the ministry's policy of diversification to promote the subsector.

Share of Students Enrolled in Nongovernmental Institutions, 2004-09
Percent

	Tanzania				Average LIC
	2004	2006	2008	2009	2009 or MRY
Preprimary	1.3	2.3	7.8	5.0	—
Primary	0.6	1.0	1.3	1.5	16.7
O-Level	38.0	26.6	14.2	10.8	20.4
A-Level	48.6	38.6	36.4	32.3	27.7
Teacher Training	5.4	9.3	23.7	38.6	—
Technical Education *	—	15.5	16.2	—	—
VET (VTC Long Courses)	—	67.8	—	—	—
Higher Education	7.4	19.4	23.9	28.2	19.5

Source: BEST, NACTE, TCU, various years; authors' computations for Tanzania. World Bank and Pôle de Dakar/UNESCO-BREDA for other countries.
Note: * Refers to NACTE-registered institutions.

4. School enrollment has increased at all levels.

The preprimary sector is comparatively well developed. The policy to mainstream the provision of preprimary teaching through primary schools (thus controlling unit costs) has enabled a growing number of young children to benefit from this level. Coverage at the preprimary level reached 37 percent in 2009, up from 26 percent in 2004. This is a very reasonable level of preschool attendance compared with the 20 percent average of other countries in the region.

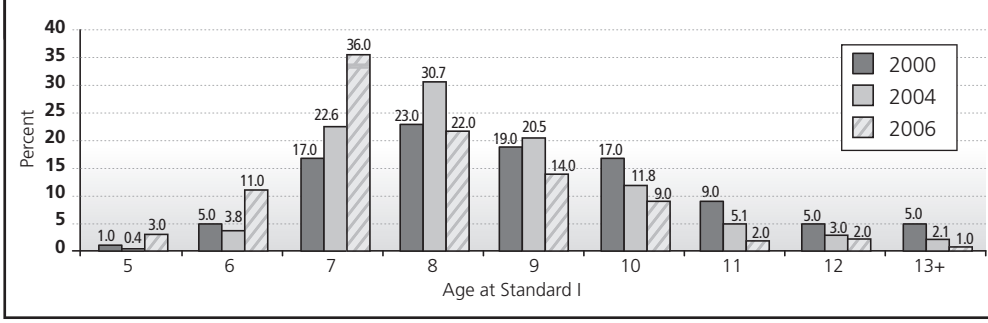
Schooling Coverage, by Level, 2003-09
Percent, and Students per 100,000 inhabitants

	Preprimary	Primary	Secondary			TVET *	Higher Education **
			O-Level	A-Level	All		
	GER (%)					Per 100,000 inhabitants	
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 for Tanzania.
Note: * TVET includes VTC and FDC long courses, and nonhigher technical education; ** Higher education includes universities, university colleges and higher technical education.

Tanzania is on the way to reaching universal primary education, but late entry still remains a major challenge and many children are still out of school. Access to Standard I is almost universal, although 5.5 percent of children did not have access to primary school in 2006. The primary completion rate has steadily increased over the past decade, to reach at least 89 percent in 2009. The fee-free primary education policy and extensive classroom construction have had positive impacts on both primary access and retention levels. The system is still marked by considerable late entry however: only 36 percent of Standard I students were of official school-age in 2006.

Age Distribution of Standard I New Entrants, 2000, 2004 and 2006
Percent



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

This situation tends to inflate out-of-school statistics. Indeed, among the 925,000 estimated out-of-school (representing 13 percent of primary school-aged children in 2006), 88 percent had never attended. Should all children enter on time, the number of children estimated to never attend school would drop to 425,500. Given its detrimental impact on schooling paths (exposing them to greater risk of early dropout), ensuring that children attend school at the correct age should be a priority. MoEVT may address both supply and demand constraints, for instance through sensitization campaigns to alter parents' perceptions about the appropriate age for school attendance, assisted further by the expansion of ECCD programmes.

School coverage at secondary and higher education levels is still low compared with other African countries, but is rapidly increasing, especially at the higher education level. School coverage is particularly low 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.

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 30 percent over 2005-09, among the highest annual growth rates registered for all subsectors (although it started with lower enrollment), allowing Tanzania to rapidly catch up with the levels of comparable developing countries. In 2009, the number of higher education students in Tanzania was 36 percent lower than the average, down from 50 percent in 2006. However, university and technical higher education coverage remains low, at 335 students per 100,000 inhabitants in 2009/10, against 381 students per 100,000 in other low-income countries.

International Comparison of Enrollment, by Level, 2008 or MRY
Percent, and Students per 100,000 inhabitants

	Preprimary	Primary	Lower Secondary	Upper Secondary	TVET *	Higher Education **
	GER (%)				Per 100,000 inhabitants	
Tanzania (2008)	**36.7**	**115.4**	**33.0**	**3.6**	**252**	**291**
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
East African Community Average	**23.5**	**122.8**	**42.4**	**13.7**	**212**	**337**
African Low-income Countries						
Average	**20.4**	**103.1**	**43.4**	**17.2**	**228**	**381**
Min – Max	0.8 – 141	56.9 – 157.7	15.9 – 94.6	2.6 – 39.6	35 – 484	61 – 1009

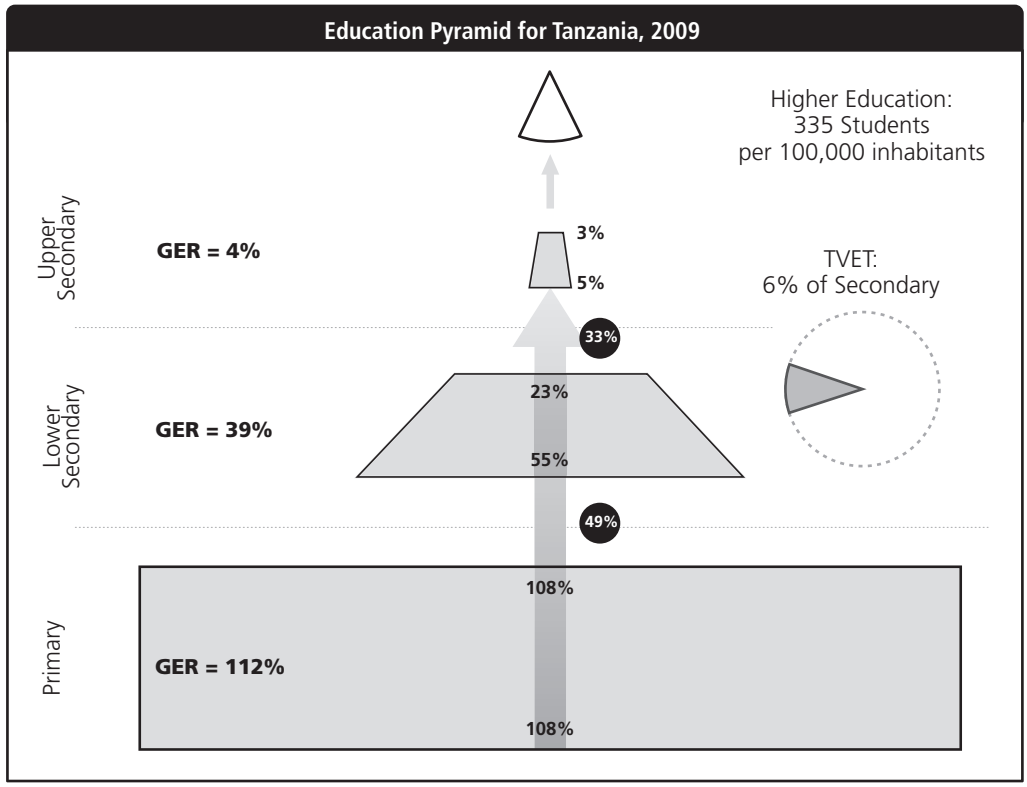
Source: Table 2.8 for Tanzania; World Bank and Pôle de Dakar/UNESCO-BREDA for other countries.
Note: To allow for international comparisons: * TVET includes VET and FDC long courses and NACTE-registered technical nonhigher education; and ** Higher education includes universities, university colleges and technical higher education.

TVET education coverage in Tanzania is higher than in other low-income countries (250 students per 100,000 inhabitants in 2009, compared with 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. The sector still falls short of the huge needs in TVET programmes for primary and secondary school leavers. The current annual flow of students into vocational education represents less than five percent of the potential demand for VET services, while technical nonhigher education covers about 22 percent of potential demand. This underlines the urgency for the diversification of TVET provision, offering more short and tailor-made courses to enhance productivity and the quality of products and services.

The number of teacher trainees has increased over the decade, with the exception of 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). 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.

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.

Access to postprimary levels still remains challenging for many children. 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, at 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.



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).

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. An urgent and well-planned response is required to ensure the smooth and manageable development of the system and that it remains in line with labor market needs. This raises both financial and practical challenges (teacher requirements, classroom supply). A sectorwide financial simulation model may help to explore policy options, assessing both facilities and required resources.

5. Dropout is still a problem at postprimary levels however, despite generally good internal efficiency levels.

While internal efficiency is generally good, dropout remains a problem, particularly at postprimary levels. Tanzania's education system is comparatively efficient at both primary and O-level, and its A-Level efficiency is in line with the African low-income countries' average. The primary IEC was estimated at 88 percent in 2007, implying that 12 percent of resources are wasted due to repetition or dropout. Repetition being generally low (2.4 percent in primary and under two percent in secondary, on average in 2009), dropout is the main source of

inefficiency, especially at O-Level and A-Level. More efforts are needed to reduce dropout in order to improve the overall internal efficiency of the system, and reduce resource wastage.

Primary and Secondary Schooling Internal Efficiency Coefficients, 2000-09
Percent and Number of Years

	2000	2007	2009
Primary			
Internal Efficiency Coefficient	67	88	— *
Dropout-Related (no Repetition)	69	92	—
Repetition-Related (no Dropout)	97	96	—
Years Required to Completion	10.5	7.9	—
O-Level			
Internal Efficiency Coefficient	82	83	81
Dropout-Related (no Repetition)	83	85	82
Repetition-Related (no Dropout)	98	98	98
Years Required to Completion	4.9	4.8	5.0
A-Level			
Internal Efficiency Coefficient	—	83 **	72
Dropout-Related (no Repetition)	—	84	73
Repetition-Related (no Dropout)	—	99 **	99
Years Required to Completion	—	2.4	2.8

Source: BEST, various years.
Note: * Not provided as 2009 primary schooling patterns are highly affected by the multicohort phenomenon, which tends to underestimate dropout; ** Because 2007 A-level repetition data were not available, the proportion observed in 2009 was assumed to have remained constant over the period. The change in the A-Level IEC is therefore only related to the rise in dropout.

Improving retention will necessarily require addressing both supply and demand constraints. This could entail:

- *Alleviating schooling direct and opportunity costs.* Although most of the interventions cited above (regarding the expansion of secondary education for instance) should also favor primary school retention, special attention should be given to costs borne by parents, that increase with successive grades and levels. School feeding programmes and cash transfer programmes are being implemented to compensate, but further cost-benefit analysis is necessary before expanding them, mainly because of their notoriously high cost;

- *Further improving school supply.* Schools with incomplete cycles are known to negatively affect retention. Although this issue appears to be marginal in Tanzania, scope for improvement nevertheless exists at the primary level: satellite schools, known to offer incomplete cycles, could possibly be converted into full-cycle schools through multigrade teaching. At postprimary levels, building more schools will prove decisive; and

- *At the primary level, closely monitoring repetition would be helpful,* especially for Standard I, that has the highest proportion of repeaters. However, as ECCD programmes expand and the school preparedness of children improves, this issue should resolve itself. Assessing the relevance and quality of teaching would be worthwhile, as dropout is often justified by a lack of interest in school.

6. Important disparities persist in access to formal schooling according to gender, area of residence and especially families' income levels; and, they tend to be cumulative.

Beyond the primary level, girls' participation in education is systematically lower than that of boys. Gender parity indexes decrease from 1.04 (girls' enrollment is greater than boys') in primary school to 0.65 at the higher/tertiary level. TVET is still slightly gender-oriented: male students accounted for 55 percent of trainees in 2008. At the higher education level, female enrollment has barely reached 34 percent: girls are doubly prejudiced by their lower chances of reaching secondary school, and by their comparatively lower results in the ACSEE exam.

GERs and Parity Indexes, by Socioeconomic Characteristic, 2006

	Preprimary	Primary	O-Level	A-Level	Higher
Gender					
Male	29.9%	114.6%	31.7%	7.2%	2.9%
Female	27.2%	118.8%	30.2%	6.0%	1.9%
Gender Parity Index (Female/Male)	0.91	1.04	0.95	0.83	0.65
(Memo: Index, 2000)	0.89	0.95	1.13	0.95	0.75
Area of Residence					
Urban	45.9%	119.6%	56.6%	16.2%	
Rural	23.8%	115.8%	21.9%	2.6%	
Location Parity Index (Rural/Urban)	0.52	0.97	0.39	0.16	
(Memo: Index, 2000)	0.53	0.79	0.13	0.09	n.a. *
Income Group					
Q5 (The wealthiest)	48.1%	125.3%	64.8%	26.8%	7.9%
Q1 (The poorest)	23.0%	117.1%	19.1%	1.6%	0.0%
Wealth Parity Index (Q1/Q5)	0.48	0.93	0.30	0.06	0.00
(Memo: Index, 2000)	0.21	0.82	0.23	0.19	0.15
Total Tanzania	28.6%	116.6%	30.9%	6.6%	2.4%

Source: HBS, 2007, authors' calculations.
Note: The location parity index is irrelevant to higher learning institutions, that are all located in urban areas.
Reading Note: A gender parity index of 0.83 (2006, A-Level) indicates that for every 100 boys enrolled, there were 83 girls.

Schooling inequalities are particularly unfair to children from rural areas. Children from urban areas have better access probabilities to all levels of education than their rural peers, in part due to the inadequate supply of rural schools. The gap in the probability of access reaches 23 percentage points for O-Level entry, and eight percentage points for A-Level entry.

The unavailability of a school nearby is often a major hindrance (in some rural areas, 22 percent of children live over five kilometers away). There is clearly potential to build more schools in underserved areas, compensating the cost by offering multigrade teaching under close supervision. Lack of interest in school is also a major reason for nonattendance (mentioned by 12 percent) that might be counter arrested by improving the relevancy and quality of teaching.

Disparities in access increase sharply with successive levels of education, especially those related to income. Wealth parity indexes decrease from 0.94 in primary school to 0.09 at A-Level, and are virtually nil at the higher/tertiary level. Retaining the poorest students in primary schools and ensuring their transition to postprimary cycles is a major challenge. Although the abolition of school fees has been a major measure in alleviating education expenses, the poorest households still face prohibitive schooling costs (uniforms, stationery, books, and so on). Interventions specifically targeting these households, such as cash transfers, may help to remove economic and financial barriers. Better coverage of the scholarship grants and remedial classes should make schooling more equitable for the poor.

Cumulated Disparities in Schooling Profiles, by Extreme Group, 2006
Percent

	Male/Urban/Q5	Female/Rural/Q1	Parity Ratio
Primary Access	98.8	92.5	0.94
Primary Completion	94.2	50.1	0.53
O-Level Access	55.4	7.1	0.13
O-Level Completion	36.5	1.1	0.03
A-Level Access	21.3	0	—
A-Level Completion	12.8	0	—

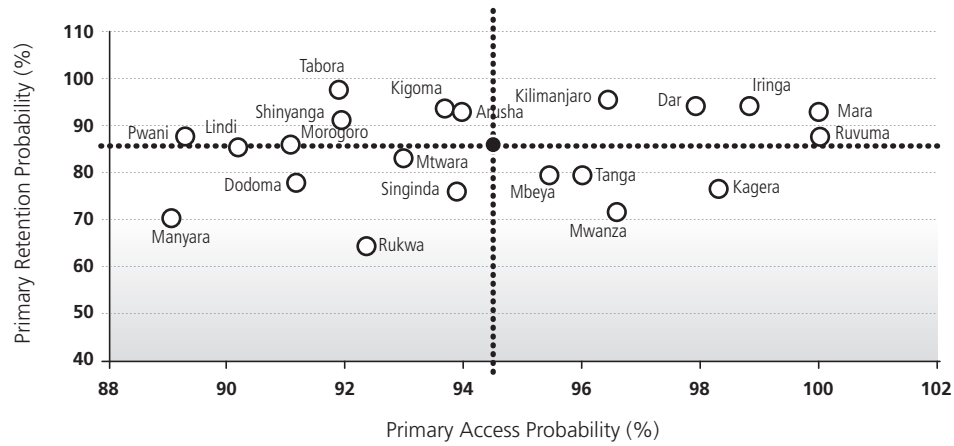
Source: HBS, 2007: authors' calculations.

Furthermore, disadvantages tend to be cumulative. Poor rural girls face the worst access conditions, and disparities tend to broaden as of the end of primary (for every 100 rich urban boys completing primary, only 53 poor rural girls do). They then explode at postprimary levels, leaving poor rural girls with virtually no opportunities to pursue secondary education.

Finally, literacy programmes targeted at parents should give positive results, mainly by gradually overcoming cultural barriers to education. The encouragement of families and schools to ensure that all children have birth certificates (although not strictly an education sector intervention), may also have a positive impact on school access and retention.

Access disparities by region are equally marked. For instance, primary access and retention are particular issues in Rukwa, Tabora and Dodoma regions. Beyond school supply constraints, economic, cultural and environmental issues (agro-pastoral activities, cultural beliefs, tobacco production and climate conditions) shape demand and keep children out of school. In 2006, secondary access probabilities were as low as four percent in one region, and were just 16 percent in five others, well below the national average of 27 percent. Extensive primary and secondary school construction has contributed to loosen school supply constraints in many of those regions since.

Regional Disparities in Primary Access and Retention Probabilities, 2006



Source: Authors' calculations based on probabilistic profiles using HBS, 2007 data.

TVET and higher education opportunities are also unequal across areas and regions. Just five regions (Dar es Salaam, Iringa, Arusha, Kilimanjaro and Mwanza) are home to almost 55 percent of VTCs. HLIs are also particularly present in cities and the eastern part of the country. The expansion of open distance learning will be crucial in breaking the urban/rural fracture.

Benefit Incidence of Public Education Resources, by Level of Income, Area of Residence, and Gender, 2009
Percent, and Appropriation Index

	Share of the Population (%) (a)	Public Resources Absorbed (%) (b)	Appropriation Ratio (b)/(a)	Appropriation Index
Socioeconomic Status				
Q1	27.0	12.7	0.5	1.0
Q2	23.8	15.4	0.6	1.4
Q3	20.0	21.1	1.1	2.2
Q4	17.3	18.0	1.0	2.2
Q5	11.9	32.8	2.8	5.9
Area of Residence				
Rural	74.0	47.1	0.6	1.0
Urban	26.0	52.9	2.0	3.2
Gender				
Girls	52.3	45.7	0.9	1.0
Boys	47.7	54.3	1.1	1.3

Source: Authors' calculations based on Annex Table 5.8.

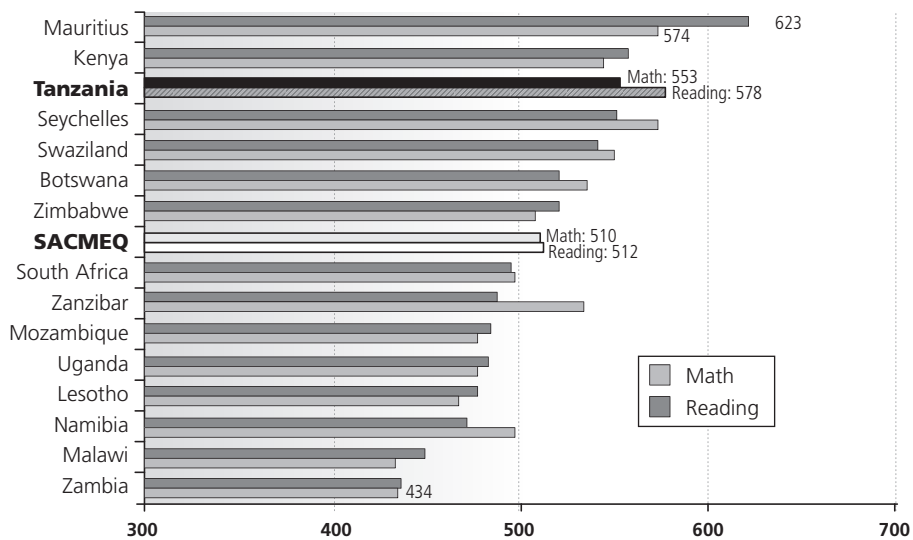
The distribution of public education resources is therefore unequal, benefiting the most privileged students. Indeed, the 10 percent most educated benefit from 47 percent of public education resources, in line with the LIC average. The benefit incidence analysis further shows that boys benefit from 30 percent more public education expenditure than girls. Due to longer schooling, 33 percent of public resources are allocated to the 12 percent of students from the most privileged households, and those belonging to the poorest families only benefit from 13 percent of these resources, despite representing 27 percent of the population.

Further action is required to support pro-poor schooling, ensure a more equitable development of the education system and ultimately of society. The opportunity cost may be to favor future iniquities and the intergenerational transmission of poverty.

7. Quality continues to represent an important challenge to the sector, as demonstrated by the modest level of learning outcomes.

Although the dynamic of improvement in learning outcomes observed in primary education between 2000 and 2007 is very encouraging, and good compared to neighboring countries, learning achievements are modest by international standards.

SACMEQ Reading and Mathematics Scores, 2007
SACMEQ Scores

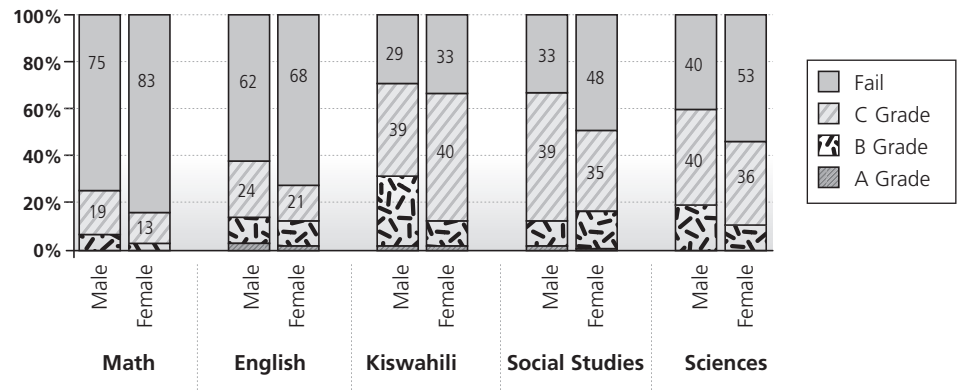


Source: SACMEQ 2007 data; IIEP, 2010.

National examination pass rates are dropping, and the results of those who graduate are low, especially at primary and O-Level, implying that too few leave the cycle with an adequate level of mastery of the programme. In 2009, barely 50 percent of candidates passed the PSLE, down from 70 percent in 2006. This could be explained by the increase in the number of students with learning difficulties following the implementation of the fee-free primary education policy, that was not followed by adequate measures (no sufficient classes and remedial courses, rising PTRs, lack of textbooks) or by the more strict secondary school access criteria. At O-Level, the share of graduates is also declining, and reached 66 percent in 2009.

Scores are skewed toward Grade C at PSLE, and toward Division IV (the minimum level) for 81 percent of O-Level graduates. Performance is particularly poor in mathematics and sciences.

PSLE Core Subjects' Grade Distribution, by Gender, 2009



Source: NECTA statistical yearbooks; authors' computations.

O-Level results were also found to be strikingly poor in community schools, which enroll the majority of students, and represent the pillar of MoEVT's policy to increase secondary school access. More analysis is required to adequately assess O-Level quality issues, for which improved EMIS data will first be required.

School Candidates' CSEE Pass Rates and Score Distribution, by Type of School, 2009

	Number of Candidates	Pass Rate (%)	Distribution of Pass Grades/Divisions (%)			
			I	II	III	IV
Public	12,046	82.2	6.8	9.2	22.9	61.1
Community	161,277	67.7	1.1	4.3	13.6	81.0
Nongovernmental	52,131	82.0	4.5	8.5	19.5	67.5
Seminaries	5,223	89.3	13.7	15.4	25.4	45.5
Total Mainland	230,677	72.2	2.6	6.0	16.1	75.3

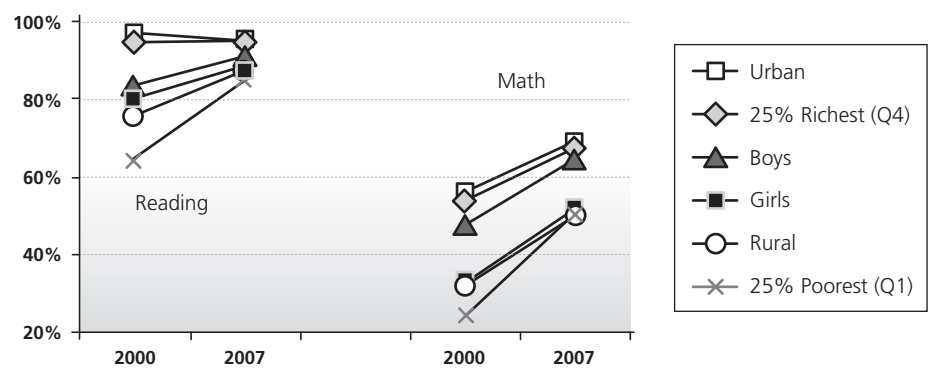
Source: Department of Secondary Education - MoVET, 2010; authors' computations.
Note: Divisions I to IV are considered as a pass.

At A-Level, the situation is generally better, although pass rates have fallen slightly, to 89 percent in 2009. School candidates systematically outperform private ones, both in quantity (with respective pass rates of 93 percent and 74 percent in 2009), and in quality (12 percent and 38 percent reached the minimum level). Half of school candidates score a Division III grade, a quarter scores a Division II grade and 14 percent a Division I grade, a result almost never attained by private candidates. Gender disparities are minimal. The globally good scores could be due to only the best and most fortunate students reaching A-Level. Implementing mechanisms to adequately monitor learning outcomes will be important given the rising number of O-Level graduates to enroll and the introduction of the new A-Level curriculum in 2010.

In VET, 78 percent of long course students completed their year in 2008; 58 percent entered an exam, 80 percent of whom passed. As far as technical education and higher education examination results are concerned, high levels of success (above 82 percent) are observed, although the low number of candidates sitting the exam implies that those who do are the best performers. The fact that many students bear the cost of their studies has probably encouraged greater care in the choice of courses, and greater responsibility in learning. No gender differences are apparent in success rates or the quality of results, although relatively fewer girls sit higher examinations, and their participation drops the higher the award involved.

The objective that all children should achieve acceptable levels of learning is made all the more elusive by the disparities in achievements, although these have narrowed over the years. At both primary and O-Level, disparities in results exist according to gender, wealth and area of residence. Although the analysis of SACMEQ scores over 2000-07 shows that disparities are narrowing, it also pinpoints that: (i) the poorest children's performance is starkly below that of their wealthier peers; and (ii) disadvantages tend to be cumulative: poor rural girls perform the worst. Girls underperformance at CSEE is of particular concern.

Share of Students Reaching Minimum SACMEQ Levels in Reading (Kiswahili) and Math, by Socioeconomic Characteristic, 2000-07



Source: SACMEQ, 2000, 2007 data; MoEVT.

Raising the quality of basic education will require a multipronged strategy. Based on the factors found to have a significant impact on learning, and pending further data on and analysis of learning outcomes and the school/class environment, some policy orientations can be formulated.

Potential Measures to Improve Basic Education Learning Achievements

	Primary		O-Level	
	Impact	**Cost**	**Impact**	**Cost**
Increase student learning time	++	$ (1)		
Set up remedial classes to reduce repetition	+++	$		
Promote preschool attendance	++	$ to $$$ (2)		
Support poorer children	++	$ to $$$ (3)		
Involve communities in school management	+++	$		
Favor girls' education activities	+++	$		
Upgrade teachers' qualifications to set standards	++	$ to $$ (4)	+++	$ to $$ (4)
Provide students with textbooks in key subjects	+++	$	+++	$
Improve the coherence of teacher allocation			+++	$ to $$$ (5)
Equip schools with latrines			+++	$$

Source: Synthesis of Tables 4.5 and 4.8.
Note: + Low impact, ++ medium impact, +++ high impact; $ low cost, $$ costly, $$$ very costly. The level of impact has been assessed based on the regression results; the level of cost is based on estimated unit costs. Costs may vary greatly according to the type of services offered. (1) Improving teacher and student attendance records could reduce absenteeism at a fairly low cost; (2) Community-based preschool attendance will be much cheaper than enrollment in the regular preschool system; (3) Depending on the type and amount of support/transfers provided; (4) In-service training would be a low-cost option; (5) costs may be very much inflated whether the incentive packages require the construction of teachers' quarters or not, or if the recruitment of additional teachers is needed.

A national student learning assessment system will also prove crucial in the current context of curricula changes and decentralization. This should track individual exam results and link data to past performance and school/class inputs. Setting clear benchmarks for early grades core learning outcomes (especially in math and literacy) will help teachers and parents to monitor pupils' progress and weaknesses, and enable timely remedial measures.

Finally, the use of English as the main teaching language in secondary education could be reviewed in favor of a more gradual phasing in throughout schooling careers, to ensure that students master the language adequately by the level they are expected to use it to learn.

8. Education does nevertheless have an important impact on social and human development.

Education, especially primary education, has an important impact on literacy, poverty, fertility, and maternal and child health. From 7.7 percent for uneducated individuals, the probability of being literate increases to 87.3 percent for those with full primary education and to 99 percent for O-Level leavers. Women who have never attended school benefit from antenatal care from a health professional for only 73 percent of pregnancies, whereas

those who have completed primary education are assisted in 81 percent of all cases, and those who have completed O-Level do so for 85 percent of pregnancies. Age at first childbirth ranges from 18 years for uneducated women to 21 years for those with complete secondary, a three year difference.

Simulated Net Impact of Education on Social Behavior, 2004/05

	Average	Highest Level Completed			
		None	Primary	O-Level	A-Level
Literacy	81.9%	7.7%	87.3%	98.8%	99.7%
Extreme Poverty	23.3%	62.9%	21.9%	9.1%	5.6%
Woman's Age at First Childbirth (Years)	19.0	17.9	19.5	20.5	20.9
Total Births (Number)	4.0	4.5	3.8	3.4	3.2
Probability of Receiving Antenatal Care	80.8%	73.5%	81.2%	84.8%	86.3%
Probability of Professionally Assisted Birth Delivery	47.4%	31.6%	53.3%	75.5%	85.3%
Probability of Receiving Vitamin A Treatment	22.1%	8.7%	18.6%	27.3%	32.5%

Source: Authors' calculations based on TDHS, 2004/05 data.
Note: * Literacy: based on 5,107 men and women aged 22 to 44 years, assessing the probability of being literate; ** Poverty: based on 6,838 household heads, assessing the relationship between the probability of a household belonging to the first poverty quintile (Q1) and the level of schooling of the head of household. The poverty measure is based on a wealth index derived from available assets in the household; *** Child health: based on 6,650 children aged under five years, assessing the relationship between women's schooling and the probability that their child is given vitamin A; # Other indicators: based on 4,020 to 5,684 women aged 15 to 49 years, with at least one childbirth for the probability of being assisted at delivery by a qualified health professional, and at least two childbirths otherwise.
Reading Note: Figures are not simple descriptive statistics of the different phenomenon according to the highest education level completed; they result from econometric models that identify the net impact of education with all other variables (gender, age, area of residence, income level) held constant. So, the simulated net probability of literacy for a person having completed A-Level is 99.7 percent. This rate being simulated means that it is for a theoretical individual with the same socioeconomic characteristics as an average Tanzanian person, but with complete secondary education.

The primary level thus has the greatest impact on social outcomes, contributing to almost 60 percent of the total impact of education on social development, which further reinforces the justification for efforts made to ensure that all Tanzanian children complete at least the primary cycle. At equal investment, the efficiency of the primary cycle in enhancing human development is 2.4 times higher than that of the secondary cycle.

9. The sector also has a direct connection to labor market requirements.

Tanzania's labor force has a better education profile today than in 2001, although highly qualified human capital remains limited. The share of individuals aged 15 to 60 years with secondary education and above increased from 5.6 percent to just seven percent between 2001 and 2006. Although progress is slow, the number of individuals with tertiary or higher education has more than doubled over the period. Over the same period, the average number of salaried jobs created has increased by about 10.3 percent per year, casting some doubts on the absorptive capacity of the salaried employment sector (the main supplier of jobs for higher education leavers), to adequately absorb the growing number of higher education leavers. To maintain this growth rate, policy makers should assess the ability of

higher education leavers to join the nonwage sector and become self-employed, for instance. Indeed, according to the regional pattern, Tanzania should have about 570,000 higher education students in 2025. This should require enrollment growth of 8.8 percent per year, much lower than in recent years. These issues should be discussed in the framework of a simulation model relating the development of secondary education to that of higher education.

Employment Status of the Labor Force (25-35 Years), by Level of Education, 2006
Percent

	No Schooling	Average	Secondary		Tertiary/ Higher	Total
			O-Level	A-Level		
Labor Force	*97.6*	*98.4*	*98.1*	*95.7*	*100.0*	*98.2*
Employed	*97.3*	*97.5*	*96.2*	*88.0*	*100.0*	*97.3*
Public Sector - Salaried	0.2	0.7	**16.8**	**37.5**	**53.3**	2.1
Private Sector - Salaried	2.1	8.8	**21.6**	**33.6**	**27.2**	8.8
Self-Employed or Family Business	14.6	24.5	**37.7**	13.2	4.0	23.6
Agriculture and Other	**80.4**	**63.5**	20.1	3.7	15.5	62.8
Unemployed	0.3	0.9	1.9	**7.7**	0.0	0.9
Inactive	2.5	1.6	1.9	4.3	0.0	1.8

Source: Authors' computations based on ILFS, 2006 data.

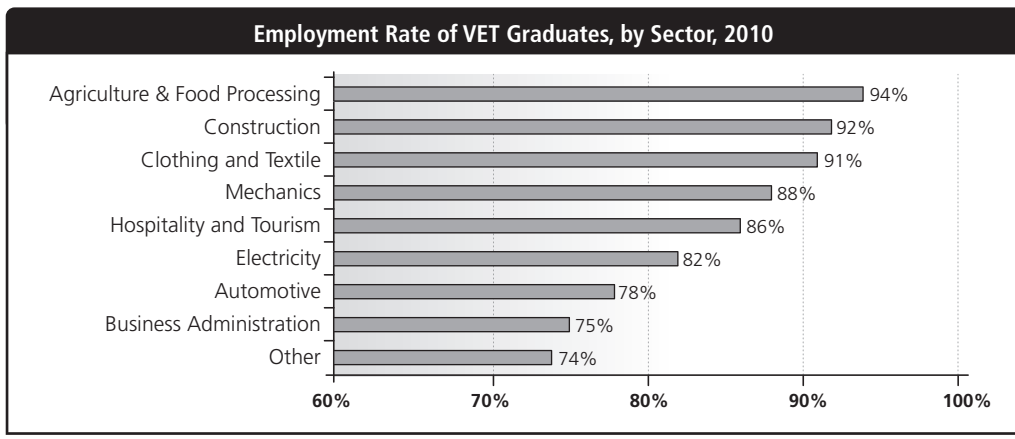
Nevertheless, improved education leads to higher income. The wage premium for workers with secondary education is particularly high, especially among A-Level leavers. This pattern suggests that there is a severe shortage of secondary qualifications in the economy. The average income of tertiary education (technical nonhigher) leavers depends very much on their sector of employment, being close to that of O-Level leavers in the public sector, but 30 percent higher in the private sector (although still barely half the income of an A-Level leaver). Individuals who never pursued their education beyond primary earn more in self-employment than in the private sector.

Annual Income, by Education Attainment and Employment Sector, 2006
Thousands of T Sh

	Wage Sector			Self-Employment (Nonagricultural)
	Public	Private	Average	
No Schooling	1,426	526	585	700
Primary	1,663	713	902	1,060
O-Level	2,125	1,453	1,831	1,548
A-Level	5,361	4,100	4,906	4,029
Technical Nonhigher	1,921	1,881	1,915	— *
Higher education	5,682	5,413	5,592	— *

Source: Authors' computations based on ILFS, 2006 data.
Note: * Too few individuals to compute reliable average income.

VET training is particularly valued by the market. A tracer study conducted in April 2010 by VETA documented the employment and income status of about five thousand VET graduates. It showed that VET leavers' average employment rate is close to 85 percent; their likelihood of finding permanent employment is slightly higher still, and in about 87 percent of cases, there was a direct connection between graduates' training and their job. These results suggest that the quality of skills and qualifications is reasonable, and that the main challenge is unemployment. Indeed, VET graduate unemployment is close to 15 percent, mainly attributed to a mismatch between training and the availability of related jobs and to the lack of resources to start a business. This situation calls for policies both on the supply-side (improving the relevance and professionalism of training for selected sectors) and the demand-side (assisting graduates in mobilizing the required resources and assets). The possibility of devoting a share of the skill development levy to business start-up funds should be assessed.



Source: Preliminary results of the April 2010 VET Tracer Study, on 4,569 VET graduates (VETA, 2010).
Note: Other sectors include: ICT, laboratory technology, printing, mining, education (pedagogy, adult learning strategies, training of trainers) and general subjects.

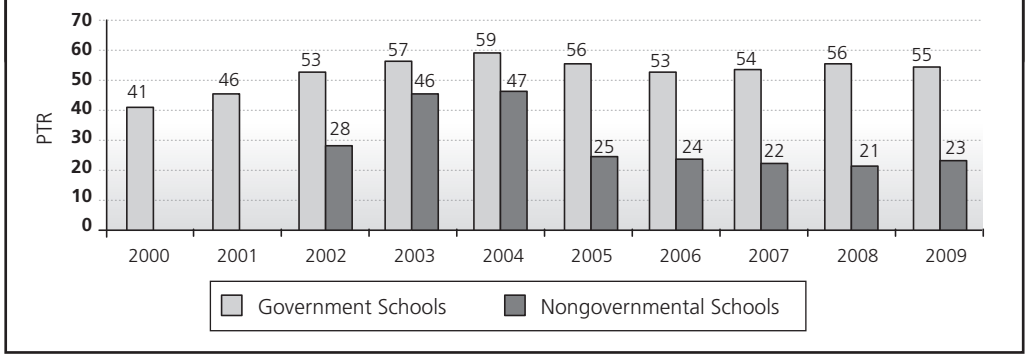
Strikingly, some VET education offers no significant added value over primary or O-Level. In general, the income of VET graduates compares favorably with that of self-employed individuals with primary education or O-Level. However, graduates with clothing and textile, and hospitality and tourism sector skills appear to earn at best the same amount as primary school leavers, which is worthy of more detailed analysis. On the other hand, VET courses have provided significant added value to electricity or agriculture and food processing graduates.

10. Education management needs to be improved, particularly on the administrative and pedagogical fronts.

Tanzania has a shortage of teachers at both the primary and secondary levels. The pupil to teacher ratio was 55 to 1 in government primary schools in 2009, well above the SADC average and the national target (45 to 1). On the basis of the latter, the accumulated shortfall of primary school teachers was 30,405. The secondary level PTR stood at 43 to 1,

up from a low 19 to 1 in 2004, government schools accounting for most of the increase, with the average PTR reaching 49 to 1 (against 23 to 1 in nongovernmental schools).

Primary Level PTRs, by School Type, 2000-09



Source: Regional BEST, 2000-07, BEST, 2008 and 2009.

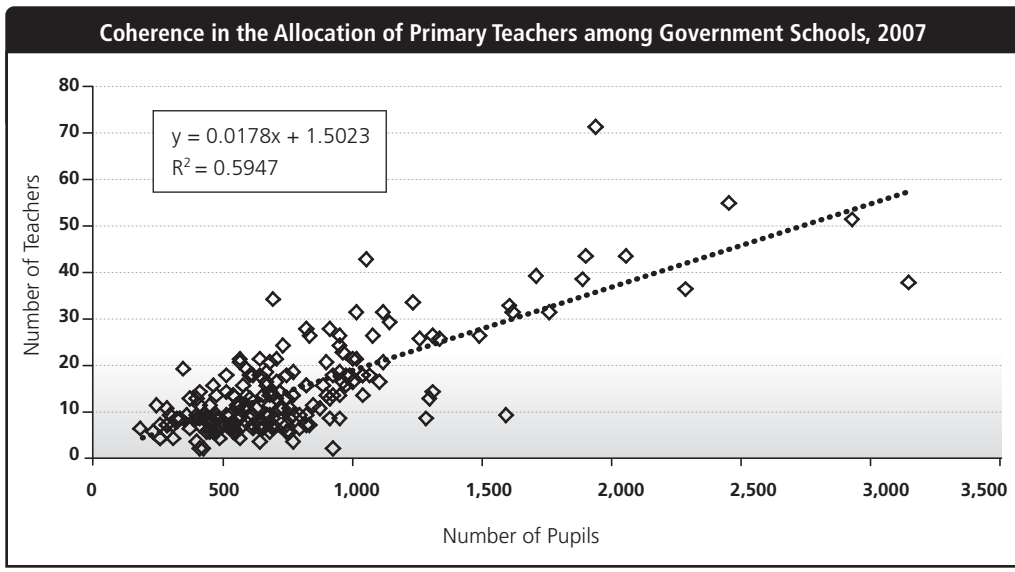
The proportion of qualified teachers has increased at the primary level, but has plummeted at the secondary level, reaching 90 percent and 76 percent in 2009, respectively. The teacher training system has shown difficulties to respond to the growing demand for teachers following the surge in secondary enrollment. The lack of language, mathematics and science teachers is a particular issue. Only 28 percent of teachers specialized in sciences in 2009 for instance, down from 40 percent in 2004.

Secondary Level PTRs and PqTRs, by Level and School Type, 2009

Schools offering	PTR			PqTR		
	Gvt.	Nongvt.	Total	Gvt.	Nongvt.	Total
O-Level Only	52:1	26:1	48:1	74:1	37:1	68:1
Both Levels	19:1	23:1	21:1	20:1	27:1	22:1
A-Level Only	20:1	23:1	21:1	21:1	24:1	22:1
Total	46:1	25:1	41:1	61:1	32:1	54:1

Source: BEST.

Analyses show poor consistency in teacher allocation across schools, both at the primary and secondary levels, highlighting management flaws. The average degree of consistency for school teacher allocation was 40 percent in 2007, meaning that 60 percent of teachers were allocated according to criteria other than the level of enrollment. The results underline the limits of current management practices and raise the issue of the need for new monitoring tools to ensure more equitable deployment.



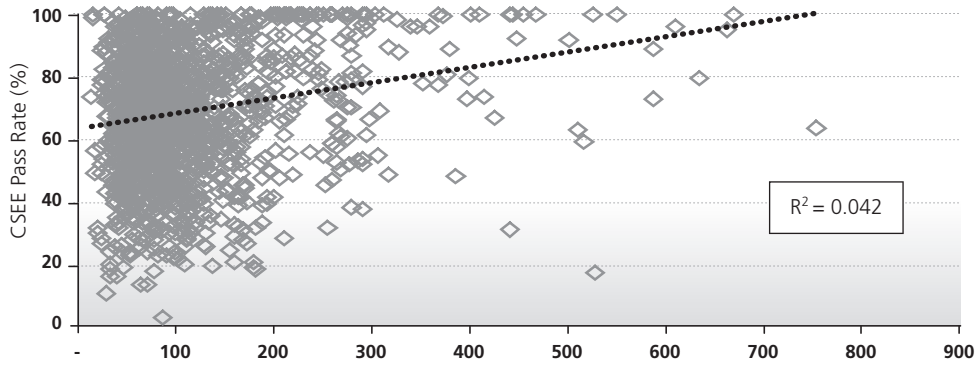
Source: SACMEQ, 2007, authors' computations.

The primary teaching profession is more financially attractive in Tanzania than in the subregion. A Tanzanian primary school teacher earns about US$ 6,560 per year (in 2005 purchasing power parity, or 6.1 times GDP per capita), against an average of US$ 4,320 for other African LICs (4.5 times GDP per capita). Although this should facilitate recruitment, it also imposes a constraint on resources. Tanzania is however close to achieving universal primary education, and as teacher requirements drop in line with the demographic pressure, reducing the primary PTR should be more feasible, improving learning conditions, and ultimately, the quality of service.

Secondary school teachers on the other hand are comparatively underpaid, despite their shortage. Their low compensation (5.9 times GDP per capita, against 7.5 times in comparable countries) is partly due to the high proportion of unqualified teachers at this level. MoEVT developed a multipronged Teacher Development and Management Strategy in 2008, focusing mainly on supply-side issues. The attractiveness of the profession should also be reviewed to better retain candidates, inspired by labor market surveys and cross-country comparisons.

The loose school-level relationship between learning outcomes and school resources points to weaknesses in pedagogical management. Students from schools that cost the most do not perform the best, and the least endowed schools do not always achieve the worst results. These patterns show that beyond the issue of resource allocation, the way resources are used seems to have a major influence on the level of learning outcomes. Improving supervision and accountability at the local level is known to be an effective remedy, through greater information on school inputs and performance, favoring school-based management and teacher incentives.

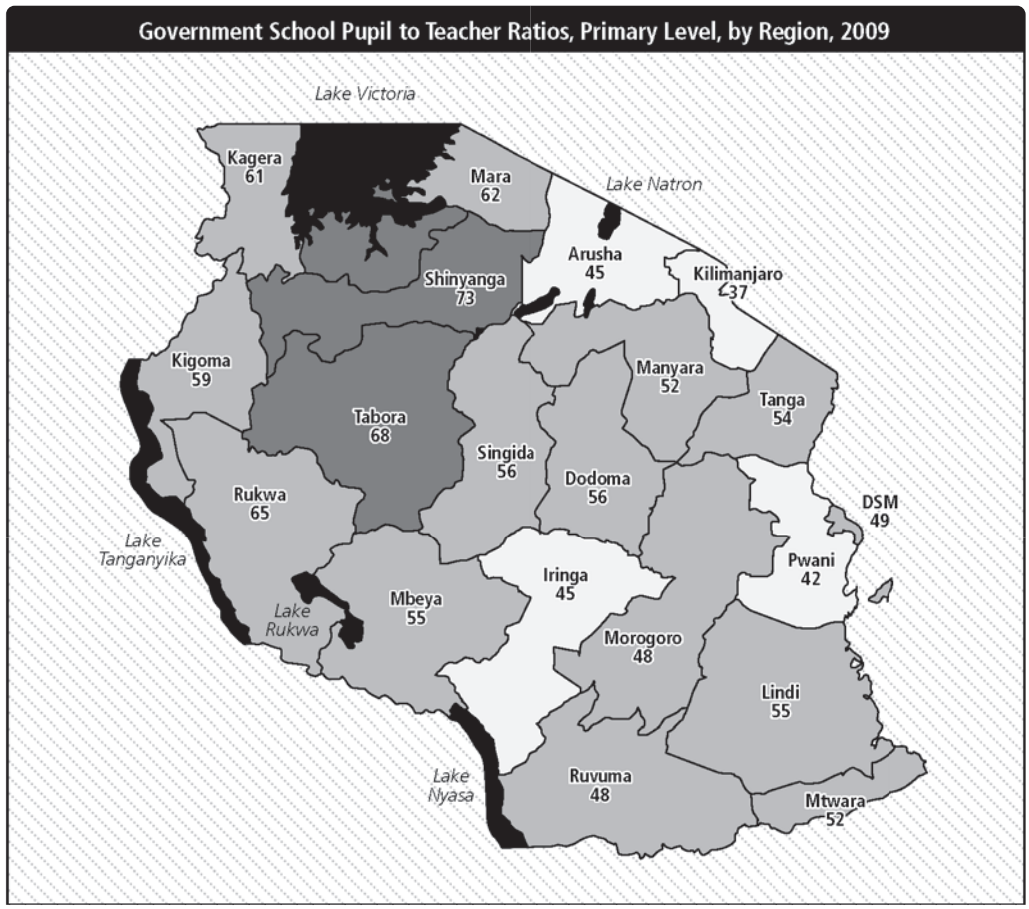
Relationship between CSEE Pass Rates and Secondary Level Unit Costs, 2009



Source: Cost of teachers and textbooks from BEST, 2009; Salaries from Table 3.18; CSEE results from NECTA.
Note: Unit costs for the CSEE analysis include teacher salaries and textbook prices.

11. The strong disparities in the allocation of education inputs further illustrates management shortcomings.

Significant geographical disparities exist in teacher deployment, with particular allocation issues in remote rural areas. This is striking at the district-level: primary PTRs range from a low 28 to 1 in Iringa district, to levels in excess of 80 to 1, such as in the districts of Ukerewe (129 to 1), Ilala (115 to 1), Chato (95 to 1), Manyoni (91 to 1) and Uyui (89 to 1). In the Sikonge district, one school reported an extraordinary PTR of 313 to 1 (PEDP II, 2009). The average urban district-level PTR was 43 to 1, compared with 60 to 1 in rural districts.



Source: BEST, 2009.
Legend: Light grey – PTR under 45:1; Medium grey – PTR between 46:1 and 65:1; Dark grey – PTR above 65:1.

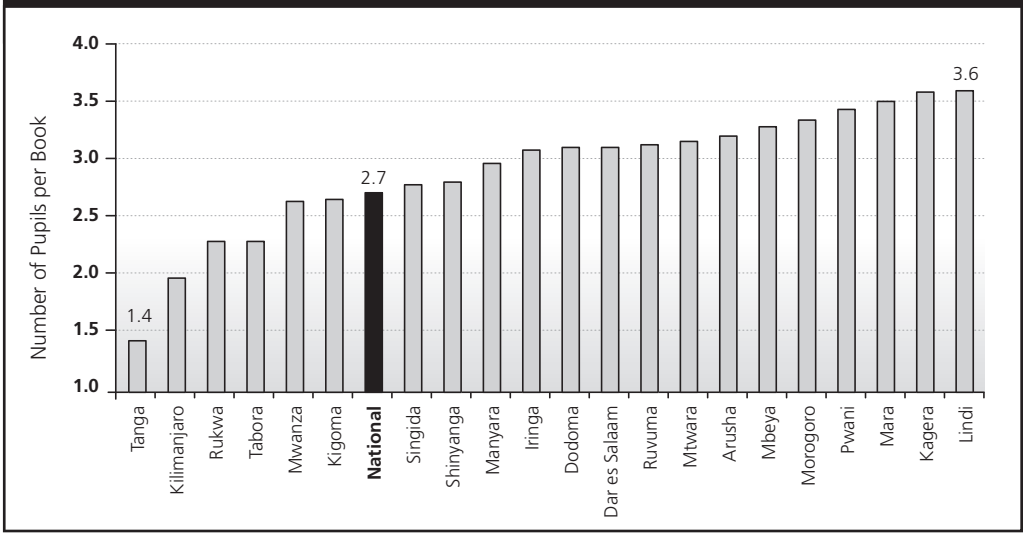
The situation is more critical still as far as qualified teachers are concerned. The pupil to qualified teacher ratio (PqTR) ranges from above 100 to 1 (Ilala, Bahi, Ulanga, Nanyumbu, Ukerewe, Manyoni, Urambo and Uyui districts) to under 35 to 1. This situation implies a very heavy workload for some teachers, potentially negatively affecting their motivation and willingness to stay in remote areas. This major issue will need to be adequately addressed through the implementation of an incentive package that could include cash benefits, a hardship or relocation allowance, fast-track career progression, and/or preferential access to training and learning materials and improved school environment facilities (including teachers' quarters).

Textbooks are generally in short supply in government schools, especially at the secondary level, and suffer from misallocation. One textbook is shared by three students on average in primary and between four to nine students at O-Level, according to the subject. Although many possible explanations exist, the timely transfer and amount of school capitation grants are definitely related to the lethargic supply. Regional disparities reveal the kind of extremes

that averages can conceal, showing ratios of more than 3.6 pupils per textbook in Kagera and Lindi regions, against 1.3 in Tanga region. The coherence of textbook availability across districts is weak, with R^2 values ranging from 57 percent for math books to 67 percent for English books.

Availability of English Books in Government Primary Schools, by Region, 2009

Pupil - Textbook Ratio



Source: BEST, 2009.

The allocation of capitation grants is also fraught with inefficiencies. They are mainly due to amounts allocated often being lower than planned budgets, and to delays in the reception of funds by schools. The allocation formula is currently based on expected enrollment; a more equitable formula would take the different needs of schools into account. Timely fund transfers might be facilitated by the option of sending block grants for nonwage spending directly to schools. Finally, to ensure that the funds are spent as planned, a reliable and sustainable accounting system is to be implemented. School management committees and boards could provide valuable oversight of such functions. Strengthening their capacity in planning, budgeting, monitoring and evaluation is becoming critical.

These disparities highlight the need for effective planning and monitoring tools to allocate education inputs more efficiently. In addition to an EMIS system, financial and human resource management systems would improve fiscal management and accountability. A first response to this challenge was given in 2009, with the development of a pilot decentralized Basic-Education Management Information System (BE-MIS), which was tested in 28 district councils in 14 regions, and is to be scaled up to all councils nationwide by 2014.

12. Higher education is in a favorable position to adequately manage the development and diversification of the subsector's supply.

The government has deployed a series of strategies to ensure the adequate and more concerted development of both higher education and the TVET subsectors, to supply the economy with the increasing number of skilled and knowledgeable professionals it needs to sustain its growth. A solid and modern institutional framework has been established for higher education's development: the sector was integrated into MoEVT in 2008 to promote more integration across education subsectors, and the Tanzania Commission for Universities has been strengthened to comply with quality assurance requirements. Various mechanisms have been implemented or are under consideration to improve equity and access, including: (i) a streamlined admissions procedure and centralized admissions system; (ii) an extended national qualifications framework, building bridges between vocational and university education; (iii) cost-sharing policies; and (iv) student loans, provided to 81 percent of all higher education students via the HESLB.

Many HLIs are still not running at full capacity, allowing for the expansion of the system at limited cost. In the sample of HLIs used in this report, the total intake capacity was 50,508, of which only 37,142 places were effectively occupied, or 74 percent. Nevertheless, if the current enrollment trend continues, the need for greater capacity will require imminent attention, considering subject specializations.

University teaching conditions are favorable. Although staff are predominantly male, female teachers accounting for just a fifth of HLI teachers in 2009/10: (i) half are aged 40 years and under, and 30 percent are aged over 50 years; (ii) 25 percent of the teaching staff were highly ranked (professor, associate professor or senior lecturer); (iii) almost all lecturers had the required level of qualifications; (iv) 87 percent of teachers were full-time; (v) higher education teaching salaries were very attractive; and (vi) student to teacher ratios averaged 15 to 1.

However, the high level of administrative staff in higher learning institutions is an issue. The ratio of administrative staff to teaching staff in the sample used was 1 to 1 on average, in some cases reaching 2.4 to 1, underlining the scope for efficiency gains.

In theory, the country is today adequately equipped to cater for the expected growth in the intake of students. However, to ensure the smooth and coherent development of the sector, attention must be paid to course requirements, and to the likely timescale in which the subsector is going to expand. The existing state institutions and parastatal agencies should be able to orient this policy both from its supply and its demand side.

13. The TVET system is also endowed with an improved and solid institutional framework, including regulatory and quality assurance bodies.

TVET coordination is being improved through a new institutional set-up, incorporating vocational education and training and technical education under MoEVT. The sometimes incoherent development of trainings by individual institutions is being addressed through the development of a TVET development programme. Yet, technical and vocational education are still separately managed.

Quality assurance processes have been greatly improved under both NACTE and VETA, through:

- Registration and accreditation standards and procedures. At the end of 2009, 96 percent of the 221 physically recorded technical education institutions were fully or provisionally registered, up from 41 percent in 2002. Thirty nine percent were given accreditation;

Registration and Accreditation Status of Technical HLIs, 2009

Stage of	Number	
	Registered	Accredited
Preparatory / Candidacy	8	33
Provisional	35	36
Full	178	50
Total (Full + Provisional)	**213**	**86**
% (Out of 221 HLIs)	96%	39%

Source: NACTE.
Note: Includes Zanzibar. Out of a total number of 221 HLIs.

- Education qualification frameworks, including the National Technical Awards;
- An outcome-based training approach;
- The registration of all technical education teachers. In June 2009, 1,574 out of 2,970 had full or provisional registration (53 percent); and
- VETA's rigorous registration and accreditation guidelines. In 2008, 78 percent of VTC centers were registered (50 percent provisionally, and 28 percent fully), and underperforming or unoperational centers' registration was revoked.

An effective monitoring and evaluation mechanism to make the technical and vocational education more responsive to labor market demands has been put in place. Under VETA, zonal labor market analysts regularly collect data that is then compiled at the national level, and complemented with mini market surveys to track current and prospective industry needs. FDC training programmes are also demand-driven; curricula are developed after conducting community training needs assessments. However, labor market surveys are still limited by technical education institutions' capacities and resources, creating a mismatch between the development of needed skills and current institutional service delivery.

14. TVET nevertheless faces a series of challenges.

Technical and vocational education institutions are facing increasing pressure to support new socioeconomic developments and ensure that a growing number of basic and secondary school leavers are provided with adequate skills to enable them to develop their full potential in the workplace. Although regulatory and quality assurance bodies provide important guarantees for the controlled development of the TVET subsector, it faces a series of challenges:

(i) *The diversity of training demand linked to the heterogeneity of the target population* (school leavers, technicians wanting to upgrade or change jobs, low skilled/educated people from urban and rural areas);

(ii) *The variety of TVET programs and providers* (ministries, parastatal agencies, faith-based organizations, NGOs, private institutions, vocational training centers, Folk Development Colleges, and so on);

(iii) *The institutional fragmentation of the TVET system*, involving two ministries and three different parastatal agencies;

(iv) *The practical continuity between VET and TE curricula/programmes,* although theoretical bridges do exist between both sectors, as defined in the national qualifications' framework;

(v) *The lack of practical mechanisms for vertical academic promotion within VET.* The competency-based qualifications framework should facilitate the transition between levels. In 2008 however, only 13 percent of the 889 VTCs offered the CBET.

To date, the training of tutors has not been given enough attention and support. The training of vocational training centre staff is still a major challenge. The shortage of quality teaching staff and FDC tutors is acute. Trainers' competencies are focused on methodology, and their practical industrial competencies need reinforcing and updating. Preservice and in-service training opportunities will need to be adequately set up to improve teaching quality.

The TVET system seems to have adequate monitoring tools (such as labor market surveys and tracer surveys) to adequately develop and update curricula according to changing market demand and forthcoming economic needs. However, a dynamic connection between TVET training institutions and industry is desirable to sustain and facilitate the smooth and coherent development of relevant workforce skills.

Adequately diversifying the sources and level of funding will prove key to enable the TVET subsector and its institutions to meet their goals. Technical institutions particularly lack modern training equipment and sufficient and relevant learning materials. Cost-sharing mechanisms and granting trainees access to higher education loans should be considered. VET resources are also insufficient to adequately cater for institutions' operational needs. To complement trainee fees, government grants, the proceeds from fund-raising activities and the development and skills levy, the subsector could seek funds from the private sector or communities, and implement short-term cost-efficiency measures.

15. The way forward should involve more balanced and efficient sector policies.

Important progress has been registered as much on the institutional front (through coordination and piloting mechanisms) as on the school coverage one. This has been greatly helped by the additional resources devoted to education over the decade. The possibility that this trend not be sustained due to competing sectors' needs calls for more effective education policies and the removal of major inefficiencies. In this context, the Education Sector Analysis (ESA) has helped to identify the following options that are available to policy makers:

- Increase the public resources allocated to secondary education, especially for capitation grants and more teachers;
- Improve higher education funding mechanisms, by better targeting loan beneficiaries and better taking advantage of potential economies of scale;
- Ensure children enter primary school at the right age;
- Improve secondary access and retention;
- Support pro-poor schooling, starting at primary level;
- Take affirmative action to enhance girls' participation in school and ensure gender parity at postprimary levels;
- Improve pedagogical management to raise the quality of basic education;
- Reduce disparities in the allocation of education inputs between regions, districts and schools;
- Strengthen the development of literacy programmes targeted at parents, women and active adults;

- Revise TVET budget trade-offs and strengthen TVET coordination mechanisms to better respond to the strong and heterogeneous demand;

- Define a funding formula to rationalize the allocation of resources among technical institutions;

- Adequately plan the expansion of TVET and higher education. University students' career objectives and the distribution of graduates by subject area must be adjusted on the basis of the results of relevant tracer surveys;

- Strengthen the EMIS to further improve the coverage and quality of education data at school and district levels;

- Scale-up the BE-MIS, including decentralized financial and human resource databases to improve fiscal management and accountability systems.

Tanzania

EDUCATION SECTOR ANALYSIS

EXECUTIVE SUMMARY

This education sector analysis (ESA) for mainland Tanzania is a detailed analytical document that offers a comprehensive picture of mainland Tanzania's education sector. This ESA is part of an on-going series of education country-specific reports being prepared by government teams, technically supported by UNESCO, the World Bank and other development partners. The main purpose of an ESA (also known as a Country Status Report, or CSR) is to provide an evidence-based diagnosis of an education sector to enable decision-makers to orient national policies. It also provides relevant analytical information to nourish the dialogue between the government and education sector stakeholders, including development partners. In the current development context, marked by the necessity for countries to develop sound, sustainable and credible strategies and plans in which education is embedded, ESAs represent a valuable and essential tool.

This is the second ESA for Tanzania; the first one having been conducted in 2001. Although its main objective is to provide a comprehensive picture of the education system in 2009 (the last year for which statistics were available), it also provides some analysis of the evolution of the system over the decade, when feasible and relevant. This second report is also more than an update. It provides more in-depth analysis on certain aspects of the system: detailed unit costs by subsector, external efficiency, quality and out-of-school, and technical education and vocational training and higher education in particular. It provides key monitoring and evaluation inputs on the education sector as a whole, that are particularly valuable in the framework of the implementation of the Education Sector Development Programme.

United Nations Educational, Scientific and Cultural Organization
Dakar Office
Regional Bureau for Education in Africa
Dar es Salaam Cluster Office
The United Republic of Tanzania
Ministry of Education and Vocational Training
Pôle de Dakar
EDUCATION SECTOR ANALYSIS