

## **Annex J: Economic and Financial Analyses**

1. Tanzania's economy today is largely market oriented and has in place many elements required for private sector-led growth. However, it does not have an adequately qualified and trained work force essential for rapid economic growth, and effective diversification of the production and export bases. The combination of intermittent economic growth, fiscal constraints, and inadequate sector policies and programs constrained the performance of the education sector in the late 1980s and early 1990s. The reforms supported in primary education by PEDP have lifted the gross enrollment rate in primary schools, which had stagnated at around 77 percent during 1995-2000, to 100 percent in 2002. The secondary school gross enrollment rate, however, is still the lowest in Africa at just 7 percent of the relevant age group.

### ***Rationale for public intervention***

2. There is a strong case to be made for public intervention in secondary education in Tanzania on both market failure as well as redistributive or equity grounds. The first section below outlines some of the private as well as social benefits of education, in general, and secondary education, in particular. Given the existence of social benefits or externalities to secondary education, there is a role for public intervention in order to bring the supply of secondary education closer to the socially optimal amount. The second section below discusses the current inequities in secondary education enrollment (coupled with clear private returns to a secondary education), implying a role for public intervention to correct these inequities.

### ***Private and social benefits of education***

3. Investment in education is beneficial in a multiplicity of ways both for individuals and society as a whole. Education increases individual productivity, as measured by the well-documented link between the level of education and personal earnings. On the national level, education plays an important role in fostering economic growth. Today's rapidly growing economies depend more on the creation, acquisition, distribution, and use of knowledge, and one of the pillars of the knowledge-based economy is an educated and skilled populace that can create and use knowledge. In addition, there is growing evidence that perhaps half (if not more) of aggregate economic growth is driven by increases in factor productivity rather than by factor accumulation in either capital or labor.

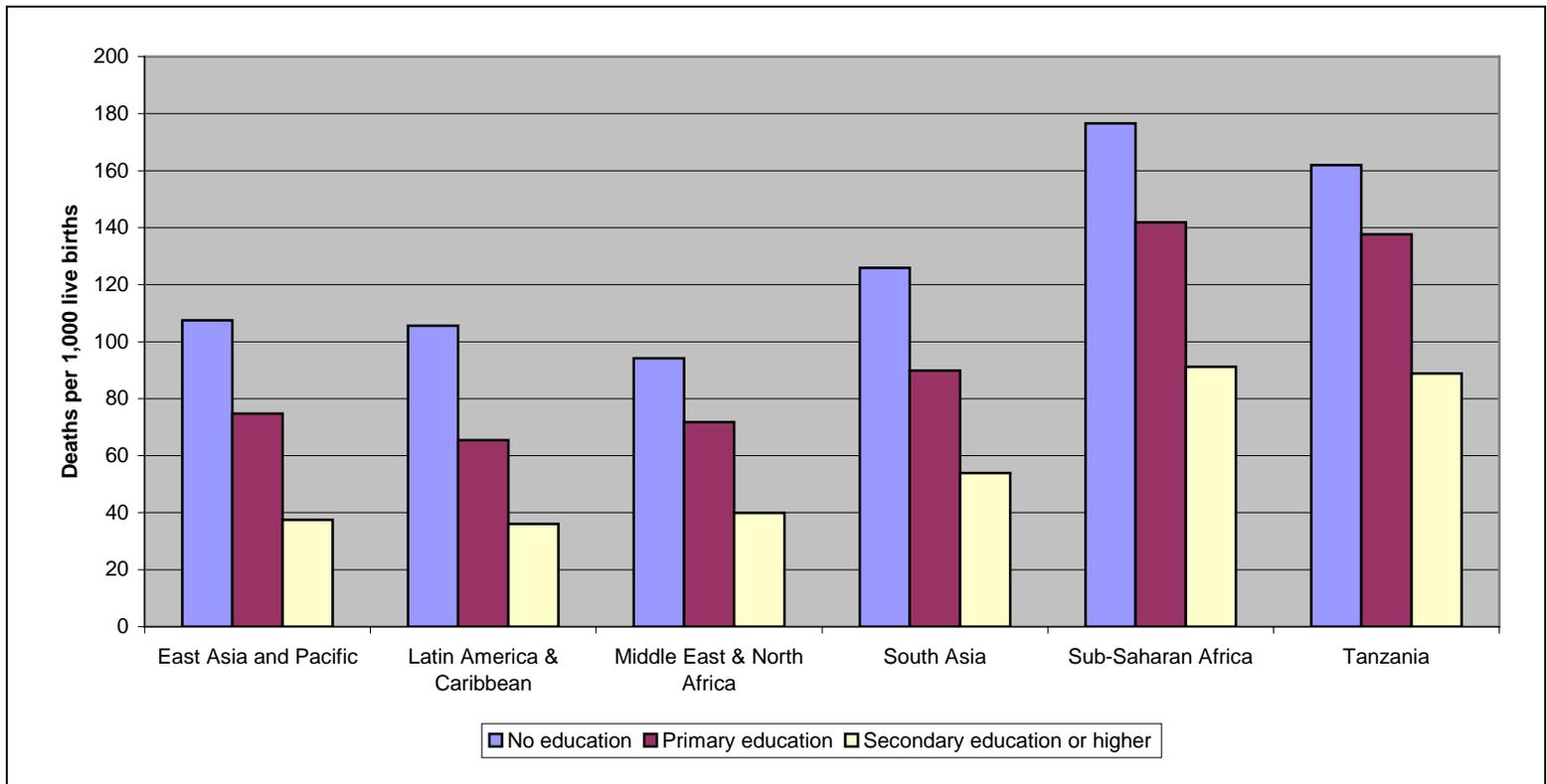
4. Secondary education plays a particularly important role in this regard. In an increasingly globalized economy, developing countries may be able to attain increases in factor productivity through technology transfer from the global "leaders". Such technology transfer can happen through trade, foreign direct investment, and through learning across international supplier-producer chains. However, much of the technology developed in the leader countries is very skill intensive and therefore "inappropriate" for developing countries without a minimum threshold level of skills. Many studies have

concluded that a large pool of workers with *secondary* education is indispensable to attracting imports of technologically-advanced goods and foreign direct investment (Borensztein, De Gregorio and Lee 1998; Caselli and Coleman 2001; Xu 2000). For example, one finding is that the bulk of the difference in computer penetration between Latin America and the East Asian “tigers”, which have much larger computer coverage, can be explained by differences in the degree of trade with the OECD, and in the fraction of the workforce with secondary school (De Ferranti et al. 2003).

5. Of course, the benefits of education span a wide range of areas beyond economic productivity. Indeed, for both men and women, one important private benefit of increased education is its positive impact on personal health. In both developed and developing countries, a strong correlation exists between schooling and good health, whether measured using mortality rates, morbidity rates, or self-reported health status (Case 2001). Indeed, education appears to have an effect on health independent of income, race, or social background (OECD 2001). In particular, for boys and girls, education has been proven to provide protection against HIV infection (World Bank 1999). A basic education has a general preventive impact: it can inform children and youth, equipping them to make decisions concerning their own lives and bringing about long-term behavioral change (World Bank 2002). Secondary education plays an important role here again: a study in Zambia found a marked decline in HIV prevalence rates in 15-19-year-old boys and girls with a secondary to higher level education, but an increase among those with lower educational levels (Kelly 2000).

6. Female education, in particular, results in a wide array of private as well as social benefits. Thus, investments in female education have a positive impact on gender equality, women’s empowerment, and their well-being (Malhotra et al. 2003). Furthermore, the evidence indicates that relatively high levels of education – secondary or above – are consistently positively related to most aspects of gender equality, pointing to a “threshold” effect of secondary schooling whereby women themselves are much more likely to be the agents of change. In addition, the positive effect of female education on economic output extends to the next generation: higher education levels of mothers enhance children’s intellectual achievement, partly since better-educated mothers are better able to guide their children. Thus, in India, children of more literate mothers study nearly two hours more a day than children of illiterate mothers in similar households (World Bank 2001). Better-educated women are also more likely, compared with their peers, to delay marriage and childbearing and have fewer children and healthier babies. According to one estimate, a 10 percentage point increase in female primary enrollment lowers the infant mortality rate by 4.1 deaths per 1,000 live births, and a similar rise in female secondary enrollment is associated with another 5.6 fewer deaths per 1,000 live births (World Bank 2001). In addition, recent Demographic and Health Surveys in 49 developing countries (including Tanzania) show that the mortality rate of children under five is highest in households where mothers have no schooling, and lowest where mothers have some secondary schooling or higher (see Figure 1).

**Figure 1: Under-5 mortality, by mother's education level**



Source: Author's calculations based on 49 recent Demographic and Health Surveys.

Note: Regional averages are population-weighted.

### *Inequities in secondary education enrollment*

7. The value of secondary education to the individual Tanzanian is clearly apparent from an analysis of the 2000/2001 Integrated Labor Force Survey. In a sample of over 3,000 wage earners between the ages of 18 to 65 years, over half had completed primary education, a quarter completed lower secondary (Form IV), and a further 5 percent completed upper secondary (Form VI); 33 percent were female; and 23 percent resided in rural areas. The average hourly wage for these wage earners amounted to approximately 400 TSh, but was roughly 200 TSh for those with primary education as compared to over 700 TSh for those with secondary education, with sizeable rural-urban and gender disparities (see Table 1). The size of the earnings differential between those with primary and those with secondary education, combined with their shares amongst wage earners described above, further highlight the scarcities in the supply of those with secondary education that the SEDP aims to counter.

**Table 1: Hourly wages by education level, wage earners aged 18-65 years (2001 TSh)**

Education level attained	Overall	Male	Female	Rural	Urban
Never attended school	104 (142)	122 (100)	62 (42)	64 (70)	143 (72)
Incomplete primary (Standard I-VI)	152 (206)	165 (173)	81 (33)	104 (70)	177 (136)
Complete primary (Standards VII or VIII)	201 (1,544)	226 (1,028)	151 (516)	175 (368)	209 (1,176)
Incomplete lower secondary (Forms I-III)	247 (78)	259 (58)	211 (20)	310 (20)	225 (58)
Complete lower secondary (Form IV)	732 (790)	884 (470)	507 (320)	378 (138)	806 (652)
Incomplete upper secondary (Form V)	560 (6)	924 (3)	195 (3)	788 (2)	445 (4)
Complete upper secondary (Form VI)	743 (137)	759 (99)	698 (38)	375 (20)	805 (117)
University	1,405 (114)	1,502 (91)	1,021 (23)	418 (1)	1,414 (113)
Overall	404 (3,017)	454 (2,022)	302 (995)	209 (689)	462 (2,328)

Source: Author's calculations based on 2000/01 Integrated Labor Force Survey data.

Notes: Number of observations in brackets.

The wage earners included here are those who stipulated paid employment as their main or only economic activity, excluding those who have a secondary activity that is also wage employment (i.e. 19 observations). This was necessary since hours of work are reported for the main economic activity only while wages are reported only as a total.

8. Table 2 reports on the returns to a year of schooling controlling for individual characteristics such as experience (proxied by age), geographic location, and gender<sup>1</sup>. These private returns represent, in percentage terms, the present discounted value of the average stream of earnings for an additional year of schooling. Thus, the returns to an additional year of schooling amount to 16 percent; urban residence is associated with a 47 percent increase in wages relative to residence in rural areas; and females earn 16 percent less than males with the same education and characteristics. Table 3 compares the returns to education by level of education completed, again controlling for experience, geographic location, and gender. Here the private returns represent, in percentage terms, the present discounted value of the average stream of earnings of those with the level of education under analysis minus the average stream of earnings for the preceding level. Thus, a wage earner with a complete primary education earns 75 percent more than an uneducated wage earner; an employee with complete lower secondary makes 163 percent more; and one with a complete upper secondary education earns 181 percent more than a salaried worker with no education. Table 3 further reports much the same findings as Table 2 on the effects of geographic location and gender on returns to education.

<sup>1</sup> Reported returns are based on Mincerian regressions and as such depict private returns that do not take into account the direct costs of education.

**Table 2: Mincerian earnings function, wage earners aged 18-65 years**  
(dependent variable = ln hourly wages)

Variable	Coefficient	Standard error	t-statistic
Years of education	0.160 *	0.0047	33.99
Age	0.153 *	0.0085	18.01
Age squared	-0.002 *	0.0001	-13.34
Urban	0.468 *	0.0363	12.92
Female	-0.162 *	0.0327	-4.95
Constant	0.290 **	0.1448	2.95
Number of observations	3,017		
Adjusted R-squared	0.542		

Source: Authors' calculations based on 2000/01 Integrated Labor Force Survey data.

Notes: Age and age squared are used as proxies for experience and experience squared, respectively.

\* significant at 1%; \*\* significant at 5%; \*\*\* significant at 10%

Years of education derived from attendance and completion of individual grades, except for university where 4 years of education were assumed for the first degree and a further 2 years for those who went beyond that. As such, years of education does not account for grade repetition.

Omitted categories are rural and male.

**Table 3: Extended earnings function, wage earners aged 18-65 years**  
(dependent variable = ln hourly wages)

Variable	Coefficient	Standard error	t-statistic
Education level attained:			
Incomplete primary	0.273 *	0.0876	3.12
Complete primary	0.747 *	0.0716	10.43
Incomplete lower secondary	1.034 *	0.1134	9.12
Complete lower secondary	1.630 *	0.0758	21.49
Incomplete upper secondary	1.785 *	0.3334	5.35
Complete upper secondary	1.810 *	0.0981	18.45
University	2.286 *	0.1038	22.02
Age	0.144 *	0.0085	16.94
Age squared	-0.001 *	0.0001	-12.28
Urban	0.481 *	0.0359	13.41
Female	-0.189 *	0.0326	-5.81
Constant	0.744 *	0.1553	4.79
Number of observations	3,017		
Adjusted R-squared	0.553		

Source: Author's calculations based on 2000/01 Integrated Labor Force Survey data.

Notes: Age and age squared are used as proxies for experience and experience squared, respectively.

\* significant at 1%; \*\* significant at 5%; \*\*\* significant at 10%

Educational attainment derived from attendance and completion of individual grades.

Omitted categories are "never attended school", rural, and male.

9. Given the returns to education outlined above, it is important to understand the distribution of education in Tanzania by household welfare, gender, and geographic location, in order to ascertain who is garnering these returns. To this end, data from the 2000/2001 Household Budget Survey were analyzed for three age groups, roughly corresponding to primary, lower secondary, and upper secondary schooling, i.e. 7-13, 14-18, and 18-21 year-olds, respectively. Table 4 reports the findings for primary schooling: enrollment rates are lower in rural than in urban areas, with an overall difference of approximately 15 percentage points; the gender disparity broadly favors girls in the poorer quintiles, and boys in the upper quintiles, and is therefore probably related to male overage persistence in schooling. Finally, across the board, enrollment rates in the richer quintiles are higher than in the poorer quintiles, resulting in an overall rate for the richest quintile in Mainland Tanzania that is 1.5 times the rate for the poorest quintile, for example.

**Table 4: Enrolment rate of 7-13 year-olds in primary education (percentage)**

Quintile	Urban areas			Rural areas			Mainland Tanzania		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>Poorest</b>	58.4	58.1	58.3	46.3	52.8	49.5	47.3	53.1	50.2
<b>2</b>	60.3	67.1	64.0	57.7	58.4	58.1	58.0	59.7	58.8
<b>3</b>	71.3	80.6	76.3	54.2	62.0	58.0	57.3	65.9	61.5
<b>4</b>	80.3	73.6	76.7	61.2	70.0	65.6	67.0	71.2	69.1
<b>Richest</b>	79.5	73.3	76.4	76.7	66.9	71.9	78.1	70.1	74.2
<b>Total</b>	70.8	71.5	71.1	53.9	58.5	56.2	56.8	60.8	58.8

Source: Authors' calculations based on 2000/01 Household Budget Survey data.

Note: Total sample size of 19,777, of which 12,078 in urban and 7,699 in rural areas.

10. The above disparities in enrollment in primary education by geographic location, gender, and household welfare are arguably familiar from similar analyses in other developing countries. Tables 5 and 6 present enrollment rates in lower and upper secondary schooling, respectively, again by geographic location, gender, and household welfare. Again, male overage persistence in schooling seems to underlie the gender disparity broadly favoring females. However, the geographic and household welfare disparities are far more stark at the secondary than at the primary level of education. For example, in lower secondary schooling, the total urban enrollment is on the order of 7 times the enrollment rate in rural areas; and for Mainland Tanzania, the enrollment rate for the richest quintile is again on the order of 7 times the enrollment rate for the poorest quintile. Of course, the enrollment rate of 17 percent for the richest quintile remains remarkably low. These disparities are yet more stark for upper secondary education: the total urban enrollment is approximately 12 times the total rural enrollment rate (indeed, the rural enrollment rate is so low as to be almost negligible, rendering upper secondary education accessible only to the urban population); and for Mainland Tanzania, an 18-21 year-old belonging to the richest quintile is roughly 16 times more likely to be enrolled in upper secondary school than a cohort member from the poorest quintile.

**Table 5: Enrollment rate of 14-18 year-olds in Forms I-IV, by quintile (percentage)**

	Urban areas			Rural areas			Mainland Tanzania		
Quintile	Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>Poorest</b>	5.9	9.7	7.7	0.7	2.5	1.7	1.3	3.1	2.3
<b>2</b>	10.4	14.5	12.5	1.5	1.8	1.6	2.8	4.0	3.4
<b>3</b>	17.0	9.6	13.0	3.3	4.1	3.7	6.5	5.5	6.0
<b>4</b>	18.4	18.9	18.6	3.1	4.7	4.0	9.2	10.4	9.9
<b>Richest</b>	22.4	28.3	26.2	2.6	2.3	2.4	14.0	18.0	16.5
<b>Total</b>	14.8	17.3	16.2	1.7	2.8	2.3	4.4	6.2	5.3

Source: Authors' calculations based on 2000/01 Household Budget Survey data.

Note: Total sample size of 13,024, of which 8,523 in urban and 4,501 in rural areas.

**Table 6: Enrollment rate of 18-21 year-olds in Forms V-VI, by quintile (percentage)**

	Urban areas			Rural areas			Mainland Tanzania		
Quintile	Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>Poorest</b>	0.1	1.3	0.7	0.0	0.0	0.0	0.0	0.1	0.1
<b>2</b>	0.8	0.4	0.6	0.1	0.0	0.0	0.2	0.1	0.1
<b>3</b>	3.4	0.2	1.5	0.5	0.5	0.5	1.3	0.4	0.7
<b>4</b>	1.3	1.5	1.4	0.0	0.0	0.0	0.5	0.5	0.5
<b>Richest</b>	2.5	1.6	1.9	0.0	0.0	0.0	1.6	0.9	1.1
<b>Total</b>	1.7	1.1	1.3	0.1	0.1	0.1	0.5	0.3	0.4

Source: Authors' calculations based on 2000/01 Household Budget Survey data.

Note: Total sample size of 9,502, of which 6,393 in urban and 3,109 in rural areas.

11. The above-mentioned disparities in secondary enrollment rates raise the question of affordability of secondary education. Table 7 reports on education and medical expenditures (combined) based on data from the 2000/01 Household Budget Survey, showing an increase in per capita monthly amounts by consumption expenditure quintile, with the richest quintile spending around 5 times the amount spent by the poorest quintile. This translates into a ratio of education and medical expenditures to total expenditures of roughly 4-5 percent for all quintiles. However, in order to assess the affordability of these expenditures, a more useful measure is the ratio to discretionary or non-food per capita expenditures. This is greatest for the poorest quintile at 22 percent and implies a greater burden for the poorer households. For illustrative purposes, the last column in Table 7 demonstrates the burden of the government day school annual fee of TSh 40,000 per student, by quintile. This fee not only constitutes a far greater burden on poorer households (for the poorest, on the order of 3 times the burden for the richest) but is arguably unaffordable across the board. These findings highlight the need for alleviating the private expenditures of households on secondary education by reducing school fees as well as other direct costs of education (see below).

**Table 7: Education expenditures, by quintile**

Quintile	Mean per capita monthly education and medical expenditures (TSh)	Ratio to total expenditures (percentage)	Ratio to non-food expenditures (percentage)	Ratio of TSh 40,000 secondary fee to non-food expenditures (percentage)
Poorest	184	5.0	21.8	104.7
2	254	4.1	18.6	73.5
3	370	4.1	16.4	53.9
4	509	3.9	17.7	49.4
Richest	1085	4.2	13.2	32.6
Total	455	4.3	17.7	64.7

Source: Author's calculations based on 2000/01 Household Budget Survey data.

Note: Total number of households 22,176.

### *Financial Sustainability*

12. *Primary Education.* In order to discuss the future expansion and quality improvement for secondary education in Tanzania and the associated costs, projections for primary education are necessary as this level provides the entrants into the secondary level and its financing must be guaranteed first and foremost. The reforms of primary education initiated in 2000/2001 (including implementation of PEDP) have resulted in an increase in the primary GER from 78 percent in 2000 to over 100 percent in 2004. Table 8 shows enrollment and GER projections for primary schooling, based on current trends in intake, repetition, and drop-out rates, as well as an annual growth rate of 2.5 percent for 7-13 year-olds. The table demonstrates the “wave” of enrolments currently making its way through the primary education system as a result of the afore-mentioned reforms, leading to a peak in total enrollments and GER in 2007. Although all children of primary school age will be enrolled, enrollments fall after 2007 (until 2013, when they begin to grow again) since the wave created by entry into primary school of overage children during the period of rapid expansion subsides, and almost all children enrolling in Standard I are at the appropriate age.

13. A reduction in the pupil-teacher ratio from the current 57:1 to 45:1 by 2010 is envisioned. This change is more than offset by the trends in primary enrollments so that the required number of new primary teachers (who complete one-year Certificate A courses in colleges) falls from over 21,000 in 2004 to less than 2,000 in 2010 (assuming a 3 percent teacher attrition rate<sup>2</sup>), thereby releasing capacity in the college system for teacher training for secondary education. Finally, Table 8 indicates the projected primary education development expenditures<sup>3</sup> for classroom construction, based on a cost of 5 TSh millions per classroom, of which 70 percent is publicly financed and the remainder

<sup>2</sup> Teaching force attrition rates are assumed to take into account teacher morbidity and mortality (e.g. as a result of HIV/AIDS), retirement, as well as pursuit of alternative employment.

<sup>3</sup> Note that development expenditures for primary teacher training purposes will be small in the foreseeable future as the expansion in primary education enrollment will peak shortly and then decline, leading to a falling demand for new teachers.

**Table 8: Primary Education Projections**

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Enrollment:</b>													
Standard I	1,481,354	1,349,827	1,291,437	1,237,513	1,185,898	1,136,437	1,162,475	1,191,465	1,221,250	1,251,781	1,283,076	1,315,153	1,348,031
Standard II	1,491,987	1,437,126	1,311,078	1,253,087	1,200,699	1,150,617	1,102,628	1,126,404	1,154,420	1,183,276	1,212,858	1,243,179	1,274,259
Standard III	1,061,325	1,438,614	1,394,042	1,273,405	1,215,901	1,164,982	1,116,385	1,069,824	1,091,480	1,118,529	1,146,483	1,175,144	1,204,523
Standard IV	888,855	1,054,686	1,414,642	1,380,339	1,257,303	1,192,825	1,142,517	1,094,842	1,049,178	1,068,381	1,094,654	1,121,998	1,150,047
Standard V	551,798	810,751	969,857	1,308,172	1,288,406	1,182,176	1,125,880	1,082,882	1,042,114	1,002,908	1,024,991	1,050,171	1,076,400
Standard VI	567,403	540,918	791,838	948,680	1,278,414	1,262,538	1,159,336	1,103,697	1,061,432	1,021,465	983,035	1,004,072	1,028,707
Standard VII	520,050	549,907	524,780	765,412	918,387	1,236,461	1,224,401	1,125,206	1,070,801	1,029,683	990,903	953,623	973,445
Standards I-VII Total	6,562,772	7,181,830	7,697,674	8,166,608	8,345,006	8,326,035	8,033,622	7,794,320	7,690,675	7,676,023	7,735,999	7,863,340	8,055,412
<b>Gross Enrollment Ratio</b>	109	117	122	126	126	123	115	109	105	102	101	100	100
<b>Pupil-Teacher Ratio</b>	57	54	52	50	48	47	46	45	45	45	45	45	45
<b>Total Teachers</b>	115,136	132,997	149,469	163,332	173,854	177,150	176,563	173,207	170,904	170,578	171,911	174,741	179,009
<b>New Teachers</b> (3% attrition rate)		21,315	20,462	18,347	15,422	8,511	4,728	1,941	2,893	4,802	6,450	7,987	9,510
<b>Recurrent Expenditures</b> (TSh millions)	234,619	269,588	303,399	337,976	362,627	379,893	384,878	392,084	406,214	425,712	450,490	480,801	517,172
<b>Recurrent Unit Cost</b> (TSh)	35,750	37,538	39,414	41,385	43,454	45,627	47,908	50,304	52,819	55,460	58,233	61,145	64,202
<b>Development Expenditures</b> <sup>a</sup> (TSh millions)		60,186	55,215	54,285	22,588	0	0	0	0	0	10,855	24,200	38,326
<b>o/w Public Financing</b> <sup>b</sup> (TSh millions)		42,130	38,651	37,999	15,812	0	0	0	0	0	7,599	16,940	26,828

<sup>a</sup> The average cost of constructing a classroom is estimated at TSh 5,000,000 in 2003.

<sup>b</sup> It is assumed that communities would contribute 30% of the cost of a classroom, leaving 70% to be publicly financed.

by communities. These expenditures are substantial until 2006, after which they fall rapidly as enrollments drop. The 2004 primary education development expenditures are fully funded by the ongoing PEDP, which closes by 2005. The Poverty Reduction Support Credit planned for negotiation in 2005 will address primary education development expenditures, amongst other issues.

14. *Secondary Education Enrollments.* By contrast to the primary enrollment rates, analysis of the 2000/2001 Household Budget Survey indicates that only 5 percent of 14-21 year-olds are enrolled in secondary education. The most recent administrative data point to a 2003 GER of 7 percent in government schools and an additional 4 percent in non-government schools. The stated intention of the Government of Tanzania is to increase participation rates at the secondary level so as to narrow the gap between Tanzania's GER and the average GER for Sub-Saharan Africa (27 percent in 2000<sup>4</sup>). At the same time, enrollments at the secondary level cannot simply grow at the rate of increase of primary graduates. Instead, the flow into government secondary schools will continue to be regulated, as has been the practice in the past, to reflect the number of places available<sup>5</sup>. Nonetheless, the rate of expansion of secondary enrollments will be rapid: government secondary school entrants into Form I are to grow by 30 percent in 2004 and 20 percent annually over 2005-2008 (see Table 9). Entrants into non-government secondary schools are projected to increase at a lower rate of 15 percent annually over 2004-2008, given the high costs to households of non-government schools.

15. The above-described expansion rates result in an increase in the Forms I-IV GER from 11 percent in 2004 to 15 percent in 2006 and 23 percent in 2009, more than doubling total enrollments in Forms I-IV over the 2004-2009 period (enrollments rise from roughly 380,000 in 2004 to 896,000 in 2009). The Government of Tanzania is, however, interested in entertaining a high growth scenario in which total enrollments in Forms I-IV reach 1.9 million by 2010, i.e. almost double the 2010 total enrollments in the current projections. This high growth can be achieved if the necessary institutional arrangements are put in place and the required resources mobilized. For purposes of this discussion, the implications of this high growth scenario on teachers and development and recurrent expenditures, for example, will be mentioned for purposes of comparison but are presented in more detail in Appendix 1.

16. *Secondary Education Teachers.* Secondary schools are staffed by Diploma and Degree-level teachers, the former currently trained for two years in colleges, the latter for four years largely in the Faculty of Education of Dar es Salaam University. As a result, the cost for training a Degree-level teacher averages 15-20 times the cost for a Diploma teacher, and rapid expansion of secondary education implies a diminishing share of Degree holders in the teaching cadre until 2010 (see Table 10). This is further necessary

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<sup>4</sup> Source: World Bank EdStats (<http://www.worldbank.org/education/edstats/>)

<sup>5</sup> Enrollments in non-government secondary schools are not regulated in this manner. The main constraints on expansion in the non-governmental sector are likely to be a combination of affordability and the fact that non-government schools tend to be urban or peri-urban, i.e. concentrated in areas of higher population density.

**Table 9: Secondary Education Enrollment Projections**

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Overall</b>													
Forms I-IV GER (%)	11	11	13	15	18	22	23	26	28	30	33	35	38
Forms V-VI GER (%)	2	2	2	3	3	4	5	7	8	10	11	12	13
Standard VII Pass Rate (%)	30	40	40	60	70	80	90	95	100	100	100	100	100
Transition Rate SVII/FI (%)	20	26	29	36	29	29	24	27	32	36	41	46	50
Transition Rate FIV/FV (%)		27	29	31	34	37	38	40	42	44	46	46	47
<b>Enrollment:</b>													
Form I	109,841	135,441	159,996	188,881	223,069	263,556	298,679	328,810	356,107	385,679	417,901	453,027	476,105
Form II	98,506	107,406	129,344	151,413	177,632	209,120	248,198	282,870	312,794	340,454	370,243	401,343	435,184
Form III	63,291	72,869	83,406	105,246	129,662	160,120	190,842	229,081	264,336	295,740	325,702	354,473	384,514
Form IV	57,303	63,818	72,779	82,980	103,783	128,005	157,788	188,128	225,449	260,381	291,509	320,911	349,036
Form V	16,725	15,740	18,689	22,880	28,122	38,100	49,212	63,482	79,078	98,960	119,453	134,773	149,749
Form VI	13,259	16,551	15,780	18,544	22,663	27,849	37,587	48,631	62,739	78,261	97,925	118,377	133,953
Forms I-IV Total	328,941	379,534	445,524	528,520	634,145	760,802	895,507	1,028,889	1,158,686	1,282,255	1,405,355	1,529,755	1,644,839
Forms V-VI Total	29,984	32,291	34,470	41,424	50,786	65,949	86,799	112,112	141,817	177,221	217,378	253,150	283,702
Forms I-VI Total	358,925	411,825	479,994	569,944	684,931	826,751	982,307	1,141,002	1,300,503	1,459,476	1,622,733	1,782,905	1,928,542
<b>Government Secondary Schools</b>													
Change in Entrants (%)		30	20	20	20	20	15	10	10	10	10	10	5
Share in Enrollment (%):													
Forms I-IV Total	59	60	61	62	63	65	65	66	67	67	68	69	69
Forms V-VI Total	62	63	62	61	63	67	69	71	72	73	74	74	74
Forms I-VI Total	60	60	61	62	63	65	66	67	67	68	69	70	70
<b>Non-government Secondary Schools</b>													
Change in Entrants (%)		15	15	15	15	15	10	10	5	5	5	5	5
Share in Enrollment (%):													
Forms I-IV Total	41	40	39	38	37	35	35	34	33	33	32	31	31
Forms V-VI Total	38	37	38	39	37	33	31	29	28	27	26	26	26
Forms I-VI Total	40	40	39	38	37	35	34	33	33	32	31	30	30

**Table 10: Secondary Education Teacher Projections**

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Overall</b>													
Student-teacher ratio	22	24	26	28	30	30	30	30	30	30	30	30	30
Share of Degree-level Teachers (%)	18	18	18	18	17	16	15	13	14	14	15	16	16
Share of Diploma Teachers (%)	82	82	82	82	83	84	85	87	86	86	85	84	84
Number of Degree-level Teachers	2,997	3,129	3,288	3,556	3,738	4,208	4,637	4,977	5,753	6,530	7,703	8,945	10,053
Number of Diploma Teachers	13,471	13,903	14,801	16,228	18,470	22,614	27,216	31,975	36,292	40,546	44,526	48,326	51,795
Total Teachers	16,468	17,033	18,089	19,785	22,209	26,822	31,853	36,952	42,045	47,076	52,228	57,271	61,848
New Degree-level Teachers (15% attrition rate)		582	631	762	716	1,030	1,060	1,036	1,522	1,640	2,153	2,398	2,450
New Diploma Teachers (5% attrition rate)		1,106	1,593	2,167	3,053	5,068	5,733	6,120	5,916	6,069	6,007	6,027	5,885
Total New Teachers		1,688	2,224	2,929	3,769	6,098	6,792	7,156	7,438	7,709	8,159	8,424	8,335
<b>Government Secondary Schools</b>													
Share of Degree-level Teachers (%)	14	14	14	14	13	12	11	10	10	10	11	12	13
Share of Diploma Teachers (%)	87	86	86	86	87	88	89	90	90	90	89	88	87
Number of Degree-level Teachers	1,314	1,440	1,575	1,769	1,881	2,139	2,371	2,530	2,914	3,306	4,089	4,959	5,860
Number of Diploma Teachers	8,422	8,848	9,676	10,866	12,588	15,688	19,183	22,766	26,227	29,754	33,081	36,368	39,214
Total Teachers	9,737	10,289	11,252	12,635	14,469	17,827	21,554	25,296	29,142	33,060	37,169	41,328	45,073
New Degree-level Teachers (15% attrition rate)		323	351	430	377	540	553	514	764	829	1,278	1,484	1,644
New Diploma Teachers (5% attrition rate)		847	1,271	1,674	2,265	3,729	4,280	4,543	4,599	4,838	4,814	4,942	4,664
Total New Teachers		1,170	1,621	2,104	2,642	4,269	4,832	5,057	5,363	5,667	6,093	6,426	6,308
<b>Non-government Secondary Schools</b>													
Share of Degree-level Teachers (%)	25	25	25	25	24	23	22	21	22	23	24	25	25
Share of Diploma Teachers (%)	75	75	75	75	76	77	78	79	78	77	76	75	75
Number of Degree-level Teachers	1,683	1,689	1,712	1,787	1,857	2,069	2,266	2,448	2,839	3,224	3,614	3,986	4,194
Number of Diploma Teachers	5,048	5,055	5,125	5,362	5,882	6,926	8,033	9,208	10,065	10,792	11,445	11,958	12,581
Total Teachers	6,731	6,744	6,837	7,149	7,739	8,995	10,299	11,656	12,903	14,016	15,059	15,943	16,775
New Degree-level Teachers (15% attrition rate)		259	280	332	338	490	507	522	758	811	874	914	806
New Diploma Teachers (5% attrition rate)		259	322	493	788	1,339	1,453	1,577	1,317	1,231	1,192	1,085	1,222
Total New Teachers		518	603	825	1,126	1,829	1,960	2,099	2,075	2,042	2,066	1,998	2,027

given the higher attrition rate exhibited by Degree-level teachers (estimated at 15 percent), who are more likely to find alternative employment than Diploma teachers (with an estimated 5 percent attrition rate). An increase in the student-teacher ratio from the current 22:1 to 30:1 by 2007 is also envisioned in order to keep the demand for new teachers within realistic levels<sup>6</sup>. The combination of expanded secondary enrollments, teacher attrition, and increased student-teacher ratios leads to the need for roughly 2,170 new Diploma and 760 new Degree-level teachers in 2006, for example.

17. These numbers are of such magnitude that existing teacher training programs need to be modified: Diploma training would be reorganized along the lines of one year in college followed by one year mentored school practice; and Degree-level training would revert to three years, also possibly followed by one year mentored probation (Lewin and Osaki 2004). The projections on recurrent costs below, which include the costs of teacher training, assume the above restructuring of teacher training programs. Finally, a constraint on teacher supply may be the output of qualified Form VI leavers, particularly since teaching is rarely a first choice for the best qualified. The share of Form VI graduates who would have to opt for teacher training starts at roughly 13 percent in 2004, reaching a high of 27 percent in 2008, so that recruitment of teacher trainees is a key concern<sup>7</sup>.

18. *Secondary Education Capital Investments and Development Expenditures.* Assuming an average class size of 40 throughout in order to facilitate the rapid expansion<sup>8</sup>, Table 11 reports on the number of new classrooms to be built each year to absorb increased secondary enrollments. In 2006, for example, roughly 2,000 new classrooms (1,360 government, 640 non-government) will be needed. These new classrooms would be built either as part of existing schools or in new schools. They are currently assumed to be evenly divided between those in existing schools (the most cost-effective way of creating new capacity) and those in new schools (the most effective way of improving access to excluded populations). With this division, government would need to build over 180 new secondary schools over the period 2004-2006 and close to 480 schools over 2004-2009. Significant numbers of government secondary school classrooms would also be refurbished, and construction of teacher housing will be necessary for schools in remote rural areas.

19. Communities are assumed to contribute a quarter of the cost of building the classrooms and schools in the government sector. The resulting public portion of required construction expenditures is projected to reach 54 TSh billions in 2006 and 87 TSh billions in 2009 (all values are assumed to grow at a real rate of 5 percent annually). Additional capital requirements include development programs for new curricula, examinations, learning materials, inspection, and ICT, and are costed at 5.7 TSh billions

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<sup>6</sup> Under the high growth scenario, the student-teacher ratio would reach an upper limit of 35:1 to further reduce the necessary rate of increase in demand for new teachers.

<sup>7</sup> Note that under the high growth scenario, at peak demand for new teachers as many as 43 percent of Form VI leavers would need to enter teacher training, which seems unlikely given the alternative opportunities available to them.

<sup>8</sup> Under the high growth scenario, average class size is 45.

**Table 11: Secondary Education Capital and Development Expenditure Projections**

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Overall</b>													
Total No. of Classrooms (avg. class size=40)	7,976	9,152	10,667	12,665	15,221	18,372	21,829	25,356	28,900	32,433	36,061	39,620	42,856
New Classrooms		1,176	1,515	1,999	2,555	3,152	3,457	3,527	3,544	3,533	3,628	3,559	3,236
of which in existing schools		588	757	999	1,278	1,576	1,728	1,763	1,772	1,766	1,814	1,780	1,618
New Schools		76	89	107	124	140	139	129	130	130	133	131	119
<b>Government Secondary Schools</b>													
Total No. of Classrooms (avg. class size=40)	4,760	5,487	6,501	7,862	9,646	11,885	14,369	16,864	19,428	22,040	24,779	27,552	30,049
New Classrooms		727	1,014	1,361	1,784	2,239	2,485	2,495	2,564	2,612	2,739	2,772	2,497
of which in existing schools <sup>a</sup>		364	507	681	892	1,119	1,242	1,247	1,282	1,306	1,370	1,386	1,249
Refurbished classrooms		73	101	136	178	224	248	249	256	261	274	277	250
New Schools		48	61	74	89	101	102	93	96	98	102	104	93
Average school size	309	340	374	411	452	498	547	602	602	602	602	602	602
<b>Non-government Secondary Schools</b>													
Total No. of Classrooms (avg. class size=40)	3,216	3,664	4,166	4,803	5,575	6,488	7,460	8,492	9,472	10,393	11,281	12,068	12,808
New Classrooms		448	501	638	771	913	972	1,032	981	920	889	787	739
of which in existing schools <sup>a</sup>		224	251	319	386	457	486	516	490	460	444	394	370
New Schools		28	28	32	36	38	37	36	34	32	31	27	26
Average school size	333	366	403	443	488	536	590	649	649	649	649	649	649
<b>Development Expenditures (TSh millions)</b>													
Government Secondary Schools <sup>b</sup>		37,830	52,853	71,857	93,870	108,748	115,347	123,189	130,494	142,361	149,310	141,678	140,243
of which public financing <sup>c</sup>		28,373	39,640	53,893	70,402	81,561	86,510	92,392	97,871	106,771	111,983	106,258	105,182
Non-government Schools for Disabled		2,878	3,816	4,810	5,937	6,592	7,300	7,241	7,092	7,149	6,612	6,488	6,528
Distance Education		2,878	3,816	4,810	5,937	6,592	7,300	7,241	7,092	7,149	6,612	6,488	6,528
Additional Capital for Government Schools <sup>d</sup>		4,599	6,791	5,662	3,675	3,113	2,850	2,063	2,063	2,063	2,063	2,063	1,313
In-service Training for Non-government Schools		1,533	2,264	1,887	1,225	1,038	950	688	688	688	688	688	438
Teacher Training Institutions <sup>e</sup>		1,396	1,641	2,530	1,531	1,324	821	1,141	1,000	750	750	750	250
University Teacher Training		390	267	539	323	180	627	209	597	350	156	335	358
Total		51,504	71,447	92,095	112,498	127,587	135,195	141,771	149,026	160,508	166,190	158,488	155,656
of which public financing <sup>f</sup>		42,046	58,234	74,130	89,030	100,400	106,358	110,974	116,402	124,918	128,863	123,069	120,595

Note: All values increase by 5% annually in real terms.

Development expenditures are forward shifted by 1 year to allow enough time for implementation.

<sup>a</sup> The share of classrooms in new schools is 50% throughout, leaving 50% of classrooms to be added to existing schools.

<sup>b</sup> The cost of constructing an additional classroom in an existing school is estimated at TSh 7,000,000 in 2003.

The cost of constructing a new school is estimated at TSh 7,000,000 multiplied by 5 (based on known building costs and specifications).

Laboratories, special purpose rooms, libraries, administrative infrastructure, and sports facilities are costed within school building costs.

<sup>c</sup> It is assumed that communities would contribute one quarter of the cost of classrooms and schools, leaving three quarters to be publicly financed.

<sup>d</sup> Includes development costs associated with system infrastructure e.g. curriculum/examinations/inspection, data system infrastructure, in-service development, book stocking, additional hostel fund, disability provision, research and monitoring studies, management development etc.

<sup>e</sup> Includes classrooms in colleges at an average cost of TSh 25,000,000 and in universities at an average cost of TSh 25,000,000.

<sup>f</sup> Includes public financing portion for government secondary schools, government schools additional school capital, and total costs for teacher training institutions.

in 2006 and falling to 2.9 TSh billions in 2009<sup>9</sup>. Finally, hostel construction in conjunction with teacher training institutions will be necessary to accommodate the expansion in the secondary teaching force and is estimated at a cost of 3.1 TSh billions in 2006 and 1.4 TSh billions in 2009. Thus, the public portion of development expenditures for secondary education amounts to roughly 42 TSh billions in 2004, 74 TSh billions in 2006, and 106 TSh billions in 2009, and is assumed to require external financing (see Table 11).

20. *Secondary Education Public Recurrent Expenditures.* Table 12 demonstrates the substantial growth in the secondary education recurrent budget necessary in order to achieve desired expansion and quality improvements, with annual growth rates over the period 2004-2015 averaging 23 percent. Teacher salaries remain the main component of the recurrent budget, exhibiting a secular increase in absolute value throughout the projection period. However, teacher salaries per student show a decline until 2008, reflecting the efficiency gains from an increase in the student-teacher ratio to a high of 30:1 by 2008. Although non-salary recurrent expenditures include some expenditure on educational materials and supplies, Table 12 includes projections for the costs of a new system of capitation grants paid to schools that is to ensure education quality improvement through provision of learning materials, curriculum development, and in-service support. These projections are based on a 2004 capitation grant of 2,500 TSh per month per student for all students in government schools and 1,250 TSh per month per student for 80 percent of students in non-government schools (growing at 5 percent annually in real terms). The capitation grant is aimed at improving the quality of education in secondary schools without the need for schools to raise funds towards this end from their students, a current practice detrimental to the poorer students (e.g. the use of caution money or “fees for improving education”, amounting to an annual 5,000 TSh and 10,000 TSh respectively in some schools). The capitation grant quickly captures a sizeable share of the secondary education recurrent budget, at 18 percent in 2006, for example.

21. In addition to the capitation grants, a 20,000 TSh fee subsidy is envisioned for all students in government schools, reducing the current annual fee from 40,000 TSh to 20,000 TSh for day schools, and from 70,000 TSh to 50,000 TSh for boarding schools. Further targeted bursaries of 20,000 TSh annually to the poorest students (estimated at 15 percent of the government schools’ secondary student population) will render their secondary education free. An additional allocation for needy girls (at 50 percent of the total allocation for the poorest) and a subsidy to mentally or physically disabled students at so-called disadvantaged schools (amounting to 1,250 TSh per student per month and reaching 15 percent of government school students) are planned further. The government school fee subsidy constitutes by far the largest of these items in terms of share of the secondary education recurrent budget, amounting to 13 percent in 2006 and 15 percent in 2009.

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<sup>9</sup> Laboratories, special purpose rooms, libraries, etc. are included in the school costing.

**Table 12: Secondary Education Recurrent Expenditures Projections**

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Amount in TSh millions</b>													
Teacher Salaries	11,999	13,327	15,303	18,044	21,653	27,958	35,424	43,567	52,700	62,775	74,252	86,857	99,660
Non-teacher Salaries <sup>a</sup>	2,400	2,665	3,061	3,609	4,331	5,592	7,085	8,713	10,540	12,555	14,850	17,371	19,932
Non-salary Recurrent Expenditure <sup>b</sup>	10,121	11,667	13,823	15,045	16,408	17,689	18,332	17,929	20,654	23,431	26,344	29,291	31,946
Govt. Schools Student Capitation Grant <sup>c</sup>		7,778	9,215	11,144	13,673	16,846	20,368	23,905	27,539	31,242	35,125	39,055	42,594
Non-govt. Schools Student Capitation Grant <sup>d</sup>		2,078	2,362	2,724	3,161	3,679	4,230	4,815	5,371	5,893	6,397	6,843	7,262
Govt. Schools Fee Subsidy <sup>e</sup>		4,939	6,143	7,801	10,050	13,001	16,505	20,339	24,603	29,307	34,597	40,391	46,254
Targeted Bursaries <sup>f</sup>		1,111	1,382	1,755	2,261	2,925	3,714	4,576	5,536	6,594	7,784	9,088	10,407
Forms V-VI Supplementary Capitation Grant <sup>g</sup>		390	421	462	548	680	901	1,202	1,563	1,989	2,488	3,054	3,543
Disadvantaged Schools Capitation Grant <sup>h</sup>		583	691	836	1,025	1,263	1,528	1,793	2,065	2,343	2,634	2,929	3,195
<b>Total</b>	<b>24,520</b>	<b>44,538</b>	<b>52,401</b>	<b>61,420</b>	<b>73,111</b>	<b>89,633</b>	<b>108,086</b>	<b>126,839</b>	<b>150,571</b>	<b>176,129</b>	<b>204,471</b>	<b>234,878</b>	<b>264,792</b>
<b>Year-on-Year % Change</b>		82	18	17	19	23	21	17	19	17	16	15	13
<b>Share of Total Recurrent Budget</b>													
Teacher Salaries	49	30	29	29	30	31	33	34	35	36	36	37	38
Non-teacher Salaries	10	6	6	6	6	6	7	7	7	7	7	7	8
Non-salary Recurrent Expenditures	41	26	26	24	22	20	17	14	14	13	13	12	12
Govt. Schools Student Capitation Grant		17	18	18	19	19	19	19	18	18	17	17	16
Non-govt. Schools Student Capitation Grant		5	5	4	4	4	4	4	4	3	3	3	3
Govt. Schools Fee Subsidy		11	12	13	14	15	15	16	16	17	17	17	17
Targeted Bursaries		2	3	3	3	3	3	4	4	4	4	4	4
Forms V-VI Supplementary Capitation Grant		1	1	1	1	1	1	1	1	1	1	1	1
Disadvantaged Schools Capitation Grant		1	1	1	1	1	1	1	1	1	1	1	1
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>						
<b>Amount in TSh</b>													
Unit Cost	114,473	180,369	179,123	173,606	168,430	167,598	167,156	167,139	172,229	177,585	183,370	189,444	195,823
Teacher Salaries/Student	56,018	53,970	52,309	51,002	49,884	52,276	54,783	57,410	60,280	63,294	66,589	70,056	73,702

Note: All values increase by 5% annually in real terms.

<sup>a</sup> Calculated as 20% of teacher salaries based on historical data.

<sup>b</sup> Calculated based on an initial 2001/2002 value derived from Treasury data.

<sup>c</sup> Allocated to 100 percent of students at a rate of 2500 TSh per student per month.

<sup>d</sup> Allocated to 80 percent of students at a rate of 1250 TSh per student per month.

<sup>e</sup> Allocated to 100 percent of government school students at an annual rate of TSh 20,000 per student.

<sup>f</sup> Allocated to the poorest 15 percent of government school students at an annual rate of TSh 20,000 per student.

An additional 50 percent of the total for the poorest students is allocated to needy girls.

<sup>g</sup> Allocated to Forms V-VI students at a rate of 1250 TSh per student per month in government schools and 625 TSh in non-government schools.

<sup>h</sup> Allocated to 15 percent of government schools at a rate of TSh 1250 per student per month

22. *Education Sector Financial Sustainability and Secondary Education Financing Gap.* Table 13 presents projected recurrent expenditures for all education sub-sectors. For primary and secondary education and teacher training, previously discussed expansions and/or quality improvements are utilized to derive recurrent expenditure projections. Administrative and adult education expenditures are allowed to grow at projected GDP growth rates. Tertiary education, on the other hand, grows below GDP growth rates (i.e. at only 4 percent annually at constant prices). This implies a drop in tertiary education's share in the education recurrent budget from 17 percent in 2003/04 to 14 percent in 2005/06 and 13 percent in 2008/09 (see Figure 2). Allocations to primary education are at 63-65 percent of the education recurrent budget throughout 2003/04-2008/09. The share of secondary education, however, more than doubles during this period (from 7 to 15 percent). Nonetheless, education sector recurrent expenditures are arguably financially sustainable when measured as a share of GDP or of total recurrent expenditures (see Table 13). While the share of GDP would have to increase from the baseline 3.6 percent in 2003/04, it would stabilize in 2005/06 at 4.1-4.3 percent for the next 10 years. Similarly, the share of the education sector in total recurrent expenditures would need to increase from the 2003/04 level of 25.6 percent to 29.3 percent in 2005/06 and 30.6 percent by 2008/09. Barring these increases, there is a sizeable financing gap for secondary education (see Table 13 and Figure 3) consisting of the resulting recurrent financing gap (calculated as the difference between projected needs and a secondary education budget growing merely at the GDP growth rate) and the required development expenditures. This financing gap (which takes into account secondary education teacher training recurrent and development expenditures) amounts to close to 270 TSh billions (equivalent to close to 243 million US dollars) over the next three fiscal years<sup>10</sup>.

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<sup>10</sup> Under the high growth scenario, the secondary education financing gap is on the order of 371 TSh billions (334 million US dollars) over the next three fiscal years.

**Table 13: Education Sector Public Recurrent Expenditures and Secondary Education Financing Gap Projections**

	2003/4	2004/5	2005/6	2006/7	2007/8	2008/9	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
<b>Recurrent Expenditures (TSh millions)</b>													
Administration & General Education	20,507	21,738	23,129	24,678	26,455	28,360	30,402	32,591	34,937	37,453	40,149	43,040	46,139
Primary Education	234,619	269,588	303,399	337,976	362,627	379,893	384,878	392,084	406,214	425,712	450,490	480,801	517,172
Secondary Education	24,520	44,538	52,401	61,420	73,111	89,633	108,086	126,839	150,571	176,129	204,471	234,878	264,792
Tertiary Education (excl. teacher training)	61,858	64,480	67,247	70,162	73,254	76,489	79,876	83,422	87,135	91,023	95,097	99,364	103,835
Primary Teacher Training	7,916	7,693	7,001	5,987	3,469	2,024	872	1,365	2,379	3,356	4,363	5,455	5,923
Secondary Teacher Training	5,462	6,720	10,105	11,311	12,671	18,634	21,047	27,769	32,157	34,374	38,846	43,690	48,999
Adult Education	4,875	5,167	5,498	5,866	6,289	6,741	7,227	7,747	8,305	8,903	9,544	10,231	10,968
Total	359,757	419,923	468,780	517,401	557,875	601,773	632,388	671,816	721,698	776,949	842,960	917,460	997,828
<b>Share in Total Recurrent Expenditures (%)</b>													
Administration & General Education	6	5	5	5	5	5	5	5	5	5	5	5	5
Primary Education	65	64	65	65	65	63	61	58	56	55	53	52	52
Secondary Education	7	11	11	12	13	15	17	19	21	23	24	26	27
Tertiary Education (excl. teacher training)	17	15	14	14	13	13	13	12	12	12	11	11	10
Primary Teacher Training	2	2	1	1	1	0	0	0	0	0	1	1	1
Secondary Teacher Training	2	2	2	2	2	3	3	4	4	4	5	5	5
Adult Education	1	1	1	1	1	1	1	1	1	1	1	1	1
Total	100	100	100	100	100	100	100	100	100	100	100	100	100
<b>Education Sector Financial Sustainability</b>													
GDP Growth Rate (%) <sup>a</sup>	6.0	6.4	6.7	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
Total Government Rec. Budget (TSh billions) <sup>a</sup>	1,407	1,497	1,597	1,712	1,836	1,968	2,109	2,261	2,424	2,599	2,786	2,986	3,201
Education Recurrent Exp. As % of GDP	3.6	3.9	4.1	4.2	4.2	4.3	4.2	4.1	4.1	4.2	4.2	4.3	4.3
Education Rec. Exp. As % of Total Rec. Exp.	25.6	28.1	29.3	30.2	30.4	30.6	30.0	29.7	29.8	29.9	30.3	30.7	31.2
Education Sector Rec. Financing Gap (TSh millions)		63,570	89,620	112,837	124,183	136,855	133,996	137,540	148,954	162,967	184,771	211,882	241,448
<b>Secondary Education Financing Gap (TSh millions)</b>													
Recurrent Financing Gap <sup>b</sup>		22,797	32,223	40,419	51,143	71,134	89,327	111,936	136,984	161,465	190,748	222,216	253,381
Development Expenditures		42,046	58,234	74,130	89,030	100,400	106,358	110,974	116,402	124,918	128,863	123,069	120,595
Total		64,843	90,457	114,549	140,174	171,534	195,685	222,910	253,387	286,382	319,611	345,285	373,976

Notes: Primary education, secondary education, and teacher training expenditures are calculated using previously discussed expansion trends and needs.

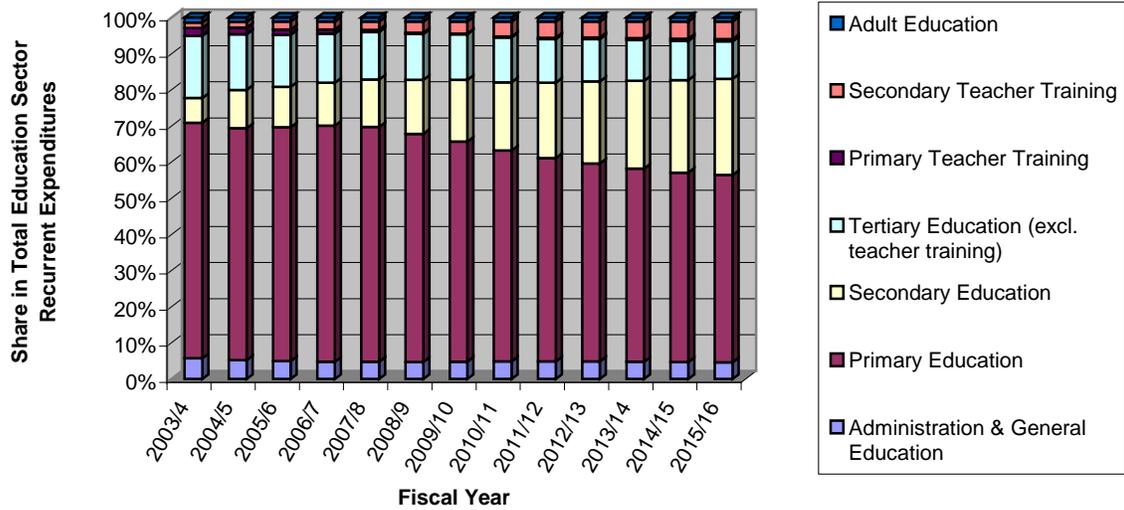
Administration, general education, and adult education expenditures grow at the projected GDP growth rate.

Tertiary education (excluding teacher training) expenditures are projected to grow at 4 percent annually, i.e. lower than the GDP growth rate.

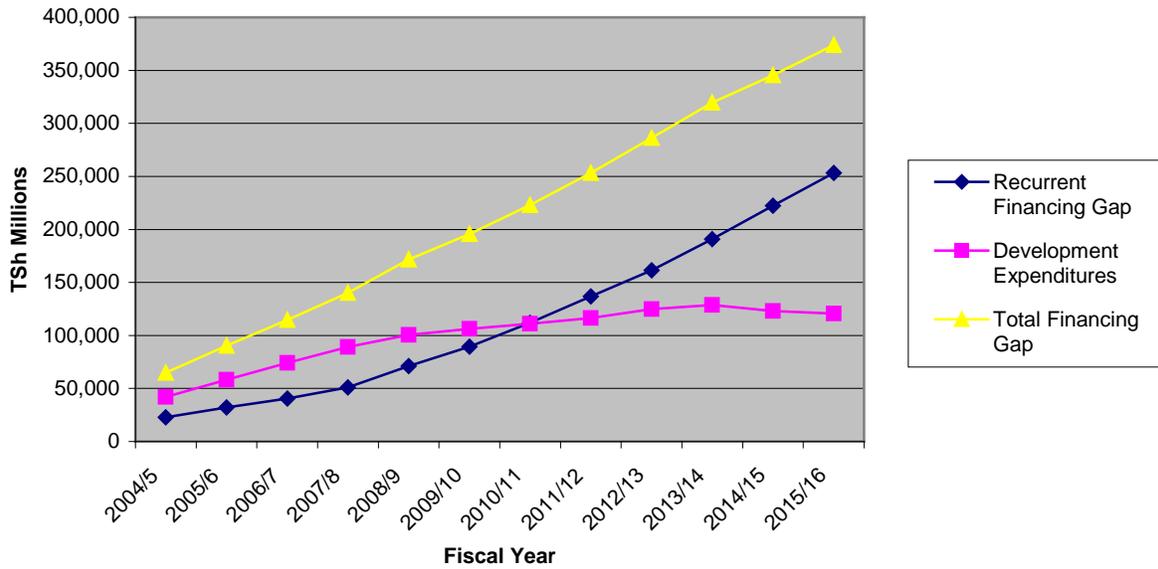
<sup>a</sup> Government of Tanzania PRSP review.

<sup>b</sup> Includes teacher training expenditures.

**Figure 2: Education Recurrent Expenditures, by Sub-sector**



**Figure 3: Secondary Education Financing Gap**



## **Appendix 1**

### **High Growth Scenario**

1. Under this scenario, government secondary school entrants into Form I grow by 30, 35, and 40 percent in 2004, 2006, and 2009 respectively (see Table 14). Entrants into non-government secondary schools increase at a lower rate of 15 percent in 2004 and 20 percent annually over 2005-2011.

2. These expansion rates result in an increase in the Forms I-IV GER from 11 percent in 2004 to 17 percent in 2006 and 37 percent in 2009. Total enrollments in Forms I-IV rise from 380,000 in 2004 to 1.9 million in 2010.

3. The student-teacher ratio increases from 24:1 in 2004 to 28:1 in 2006 and 34:1 in 2009, reaching a high of 35:1 in 2010 (see Table 15). The combination of expanded secondary enrollments, teacher attrition, and increased student-teacher ratios leads to the need for roughly 3,300 new Diploma and 980 new Degree-level teachers in 2006, for example. The share of Form VI graduates who would have to opt for teacher training starts at roughly 13 percent in 2004 and reaches a high of 44 percent in 2010.

4. Assuming an average class size of 45 throughout in order to facilitate this rapid expansion, Table 16 reports on the number of new classrooms to be built each year to absorb increased secondary enrollments. In 2006, for example, roughly 2,840 new classrooms (2,070 government, 770 non-government) will be needed. Assuming half these classrooms will be built in new schools, this translates into 240 new government secondary schools over the period 2004-2006 and over 940 new schools during 2004-2009. The resulting public portion of required construction expenditures is projected to reach 99 TSh billions in 2006 and 327 TSh billions in 2009. Overall, the public portion of development expenditures for secondary education (which includes government schools additional school capital and costs for teacher training institutions) amounts to roughly 51 TSh billions in 2004, 80 TSh billions in 2005, and 122 TSh billions in 2006.

5. Annual growth rates of the secondary education recurrent budget over the period 2004-2015 average 32 percent (see Table 17). The main items in the secondary education recurrent budget are teacher salaries (roughly stable at 30 percent of the budget), non-salary recurrent expenditures (25 percent in 2006 and declining), government schools capitation grants (roughly stable at one fifth of the budget), and government schools fee subsidies (13 percent in 2006 and increasing).

6. Secondary education recurrent expenditures capture an increasing share of total education recurrent expenditures, starting at 7 percent in 2003/04, reaching 12 percent in 2005/06, 19 percent in 2008/09, and 44 percent in 2015/16 (see Figure 4). In addition, the education sector as a whole would capture an increasing share of GDP (see Table 18): 3.6, 4.1, 4.6, and 5.9 percent of GDP in 2003/04, 2005/06, 2008/09, and 2015/16, respectively. Perhaps the most stark demonstration of the required increase in government commitment to education is the share of the education sector in total recurrent expenditures, which would need to increase from the 2003/04 level of 25.6 percent to 29.7 percent in 2005/06, 33.4 percent in 2008/09, and 42.4 in 2015/16. Barring these increases, the financing gap for secondary education (see Figure 5) amounts to close to 371 TSh billions (334 million US dollars) over the next three fiscal years.

**Table 14: Secondary Education Enrollment Projections**

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Overall</b>													
Forms I-IV GER (%)	11	11	14	17	22	30	37	49	58	67	74	78	81
Forms V-VI GER (%)	2	2	2	3	3	4	5	8	10	15	19	26	32
Standard VII Pass Rate (%)	30	40	40	60	70	80	90	95	100	100	100	100	100
Transition Rate SVII/FI (%)	20	26	32	43	40	45	45	61	74	82	88	94	101
Transition Rate FIV/FV (%)		27	29	31	34	37	39	41	43	45	47	48	48
<b>Enrollment:</b>													
Form I	109,841	135,441	174,533	225,858	307,654	412,195	554,601	749,468	828,597	879,956	910,968	935,604	960,824
Form II	98,506	107,406	129,344	164,905	212,534	289,223	389,721	526,854	714,817	795,171	847,033	877,591	901,390
Form III	63,291	73,322	84,485	107,403	145,087	198,888	272,639	369,591	502,103	684,102	766,283	816,899	846,774
Form IV	57,303	63,818	73,183	83,992	105,835	142,473	194,754	266,512	360,969	489,817	666,687	753,366	805,096
Form V	16,725	15,740	18,689	23,014	28,494	38,928	55,096	79,239	114,183	162,612	231,924	319,365	363,416
Form VI	13,259	16,551	15,780	18,544	22,791	28,208	38,392	54,261	77,990	112,374	160,100	228,333	314,813
Forms I-IV Total	328,941	379,986	461,545	582,159	771,109	1,042,779	1,411,715	1,912,425	2,406,486	2,849,047	3,190,971	3,383,460	3,514,084
Forms V-VI Total	29,984	32,291	34,470	41,558	51,284	67,137	93,488	133,500	192,174	274,985	392,024	547,698	678,229
Forms I-VI Total	358,925	412,277	496,015	623,717	822,393	1,109,916	1,505,203	2,045,925	2,598,660	3,124,032	3,582,995	3,931,158	4,192,313
<b>Government Secondary Schools</b>													
Change in Entrants (%)		30	35	35	45	40	40	40	10	5	3	2	2
Share in Enrollment (%):													
Forms I-IV Total	59	60	62	64	68	71	74	77	78	79	79	78	78
Forms V-VI Total	62	63	62	62	64	67	71	74	77	80	82	84	85
Forms I-VI Total	60	60	62	64	67	71	74	77	78	79	79	79	79
<b>Non-government Secondary Schools</b>													
Change in Entrants (%)		15	20	20	20	20	20	20	10	10	5	5	5
Share in Enrollment (%):													
Forms I-IV Total	41	40	38	36	32	29	26	23	22	21	21	22	22
Forms V-VI Total	38	37	38	38	36	33	29	26	23	20	18	16	15
Forms I-VI Total	40	40	38	36	33	29	26	23	22	21	21	21	21

**Table 15: Secondary Education Teacher Projections**

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Overall</b>													
Student-teacher ratio	22	24	26	28	30	32	34	35	35	35	35	35	35
Share of Degree-level Teachers (%)	18	18	18	18	16	15	14	12	12	13	14	14	15
Share of Diploma Teachers (%)	82	82	82	82	84	85	86	88	88	87	86	86	85
Number of Degree-level Teachers	2,997	3,132	3,386	3,858	4,401	5,122	5,971	7,148	9,100	11,017	13,556	15,899	17,851
Number of Diploma Teachers	13,471	13,920	15,322	17,847	22,389	28,872	37,498	50,325	63,911	76,685	86,853	93,950	98,948
Total Teachers	16,468	17,052	18,707	21,705	26,791	33,995	43,469	57,473	73,011	87,702	100,409	109,848	116,800
New Degree-level Teachers (15% attrition rate)		584	731	981	1,122	1,381	1,617	2,072	3,025	3,282	4,191	4,376	4,338
New Diploma Teachers (5% attrition rate)		1,123	2,098	3,291	5,435	7,603	10,069	14,702	16,101	15,970	14,002	11,439	9,696
Total New Teachers		1,707	2,828	4,272	6,557	8,984	11,687	16,775	19,126	19,252	18,194	15,815	14,034
<b>Government Secondary Schools</b>													
Share of Degree-level Teachers (%)	14	14	14	14	13	12	11	10	10	10	11	12	13
Share of Diploma Teachers (%)	87	86	86	86	87	88	89	90	90	90	89	88	87
Number of Degree-level Teachers	1,314	1,443	1,647	1,995	2,397	2,942	3,592	4,474	5,802	7,042	8,920	10,674	12,294
Number of Diploma Teachers	8,422	8,864	10,119	12,257	16,042	21,572	29,061	40,267	52,216	63,374	72,173	78,275	82,276
Total Teachers	9,737	10,307	11,766	14,253	18,439	24,513	32,653	44,741	58,018	70,416	81,093	88,949	94,570
New Degree-level Teachers (15% attrition rate)		326	421	595	701	904	1,091	1,421	1,999	2,110	2,935	3,092	3,221
New Diploma Teachers (5% attrition rate)		863	1,698	2,645	4,397	6,332	8,568	12,659	13,962	13,769	11,967	9,711	7,915
Total New Teachers		1,189	2,118	3,240	5,098	7,236	9,660	14,080	15,961	15,880	14,902	12,803	11,136
<b>Non-government Secondary Schools</b>													
Share of Degree-level Teachers (%)	25	25	25	25	24	23	22	21	22	23	24	25	25
Share of Diploma Teachers (%)	75	75	75	75	76	77	78	79	78	77	76	75	75
Number of Degree-level Teachers	1,683	1,689	1,738	1,863	2,004	2,181	2,380	2,674	3,299	3,976	4,636	5,225	5,557
Number of Diploma Teachers	5,048	5,055	5,203	5,589	6,347	7,301	8,437	10,059	11,695	13,311	14,680	15,674	16,672
Total Teachers	6,731	6,744	6,941	7,452	8,351	9,481	10,816	12,732	14,993	17,286	19,316	20,899	22,229
New Degree-level Teachers (15% attrition rate)		259	310	386	421	477	526	651	1,026	1,172	1,256	1,284	1,116
New Diploma Teachers (5% attrition rate)		259	400	647	1,037	1,271	1,501	2,044	2,139	2,200	2,035	1,728	1,782
Total New Teachers		518	710	1,032	1,458	1,748	2,027	2,695	3,165	3,373	3,292	3,012	2,898

**Table 16: Secondary Education Development Expenditure Projections**

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Overall</b>													
Total No. of Classrooms (avg. class size=45)	7,976	9,162	11,023	13,860	18,275	24,665	33,449	45,465	57,748	69,423	79,622	87,359	93,163
New Classrooms		1,186	1,861	2,838	4,415	6,389	8,784	12,016	12,283	11,675	10,199	7,737	5,803
of which in existing schools		593	930	1,419	2,208	3,195	4,392	6,008	6,142	5,837	5,100	3,868	2,902
New Schools		76	110	152	216	285	356	444	454	431	376	285	213
<b>Government Secondary Schools</b>													
Total No. of Classrooms (avg. class size=45)	4,760	5,497	6,798	8,868	12,293	17,432	24,671	34,799	45,125	54,768	63,072	69,183	73,555
New Classrooms		737	1,301	2,070	3,424	5,139	7,239	10,127	10,326	9,643	8,304	6,111	4,372
of which in existing schools <sup>a</sup>		369	650	1,035	1,712	2,569	3,620	5,064	5,163	4,822	4,152	3,055	2,186
Refurbished classrooms		74	130	207	342	514	724	1,013	1,033	964	830	611	437
New Schools		49	78	113	170	232	298	378	386	360	310	228	163
Average school size	309	340	374	411	452	498	547	602	602	602	602	602	602
<b>Non-government Secondary Schools</b>													
Total No. of Classrooms (avg. class size=45)	3,216	3,664	4,224	4,992	5,983	7,233	8,778	10,666	12,623	14,655	16,550	18,176	19,608
New Classrooms		448	560	768	991	1,250	1,545	1,889	1,957	2,032	1,895	1,626	1,431
of which in existing schools <sup>a</sup>		224	280	384	495	625	772	944	978	1,016	948	813	716
New Schools		28	31	39	46	52	59	65	68	70	66	56	50
Average school size	333	366	403	443	488	536	590	649	649	649	649	649	649
<b>Development Expenditures (TSh millions)</b>													
Government Secondary Schools <sup>b</sup>		47,593	77,968	131,814	204,497	299,387	435,707	466,755	460,659	418,705	327,275	250,462	167,098
of which public financing <sup>c</sup>		35,695	58,476	98,860	153,373	224,540	326,780	350,067	345,495	314,029	245,457	187,846	125,323
Non-government Schools for Disabled		3,215	4,593	6,179	8,131	10,476	13,362	14,446	15,656	15,246	13,664	12,562	11,361
Distance Education		3,215	4,593	6,179	8,131	10,476	13,362	14,446	15,656	15,246	13,664	12,562	11,361
Additional Capital for Government Schools <sup>d</sup>		4,599	6,791	5,662	3,675	3,113	2,850	2,063	2,063	2,063	2,063	2,063	1,313
In-service Training for Non-government Schools		1,533	2,264	1,887	1,225	1,038	950	688	688	688	688	688	438
Teacher Training Institutions <sup>e</sup>		1,822	2,551	2,647	2,967	4,881	2,230	878	1,000	750	750	750	250
University Teacher Training		472	402	497	489	581	1,038	338	981	288	59	155	323
Total		62,450	99,160	154,865	229,115	329,949	469,498	499,614	496,702	452,984	358,163	279,241	192,143
of which public financing <sup>f</sup>		50,552	79,668	121,911	177,991	255,103	360,571	382,925	381,537	348,308	276,344	216,625	150,369

Note: All values increase by 5% annually in real terms.

Development expenditures are forward shifted by 1 year to allow enough time for implementation.

<sup>a</sup> The share of classrooms in new schools is 50% throughout, leaving 50% of classrooms to be added to existing schools.

<sup>b</sup> The cost of constructing an additional classroom in an existing school is estimated at TSh 7,000,000 in 2003.

The cost of constructing a new school is estimated at TSh 7,000,000 multiplied by 5 (based on known building costs and specifications).

Laboratories, special purpose rooms, libraries, administrative infrastructure, and sports facilities are costed within school building costs.

<sup>c</sup> It is assumed that communities would contribute one quarter of the cost of classrooms and schools, leaving three quarters to be publicly financed.

<sup>d</sup> Includes development costs associated with system infrastructure e.g. curriculum/examinations/inspection, data system infrastructure, in-service development, book stocking, additional hostel fund, disability provision, research and monitoring studies, management development etc.

<sup>e</sup> Includes classrooms in colleges at an average cost of TSh 25,000,000 and in universities at an average cost of TSh 25,000,000.

<sup>f</sup> Includes public financing portion for government secondary schools, government schools additional school capital, and total costs for teacher training institutions.

**Table 17: Secondary Education Recurrent Expenditure Projections**

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Amount in TSh millions</b>													
Teacher Salaries	11,999	13,351	16,002	20,354	27,595	38,444	53,665	77,057	104,919	133,708	161,997	186,942	209,101
Non-teacher Salaries <sup>a</sup>	2,400	2,670	3,200	4,071	5,519	7,689	10,733	15,411	20,984	26,742	32,399	37,388	41,820
Non-salary Recurrent Expenditure <sup>b</sup>	10,121	11,689	14,455	16,971	20,910	25,945	31,474	36,995	47,973	58,225	67,054	73,550	78,198
Govt. Schools Student Capitation Grant <sup>c</sup>		7,792	9,636	12,571	17,425	24,709	34,971	49,327	63,964	77,634	89,405	98,067	104,264
Non-govt. Schools Student Capitation Grant <sup>d</sup>		2,078	2,395	2,830	3,392	4,101	4,977	6,048	7,157	8,309	9,384	10,306	11,118
Govt. Schools Fee Subsidy <sup>e</sup>		4,948	6,424	8,800	12,807	19,069	28,339	41,970	57,146	72,826	88,061	101,422	113,223
Targeted Bursaries <sup>f</sup>		1,113	1,445	1,980	2,882	4,291	6,376	9,443	12,858	16,386	19,814	22,820	25,475
Forms V-VI Supplementary Capitation Grant <sup>g</sup>		390	421	462	550	687	924	1,314	1,902	2,774	4,014	5,774	8,086
Disadvantaged Schools Capitation Grant <sup>h</sup>		584	723	943	1,307	1,853	2,623	3,700	4,797	5,823	6,705	7,355	7,820
<b>Total</b>	<b>24,520</b>	<b>44,615</b>	<b>54,703</b>	<b>68,982</b>	<b>92,387</b>	<b>126,789</b>	<b>174,082</b>	<b>241,265</b>	<b>321,701</b>	<b>402,425</b>	<b>478,833</b>	<b>543,623</b>	<b>599,104</b>
Year-on-Year % Change		82	23	26	34	37	37	39	33	25	19	14	10
<b>Share of Total Recurrent Budget</b>													
Teacher Salaries	49	30	29	30	30	30	31	32	33	33	34	34	35
Non-teacher Salaries	10	6	6	6	6	6	6	6	7	7	7	7	7
Non-salary Recurrent Expenditures	41	26	26	25	23	20	18	15	15	14	14	14	12
Govt. Schools Student Capitation Grant		17	18	18	19	19	20	20	20	19	19	18	16
Non-govt. Schools Student Capitation Grant		5	4	4	4	3	3	3	2	2	2	2	2
Govt. Schools Fee Subsidy		11	12	13	14	15	16	17	18	18	18	19	19
Targeted Bursaries		2	3	3	3	3	4	4	4	4	4	4	4
Forms V-VI Supplementary Capitation Grant		1	1	1	1	1	1	1	1	1	1	1	1
Disadvantaged Schools Capitation Grant		1	1	1	1	1	2	2	1	1	1	1	1
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>98</b>
<b>Amount in TSh</b>													
Unit Cost	114,473	180,351	178,815	172,852	167,012	161,633	156,802	154,071	158,425	163,285	168,707	174,617	181,000
Teacher Salaries/Student	56,018	53,970	52,309	51,002	49,884	49,009	48,338	49,208	51,669	54,252	57,076	60,048	63,173

Note: All values increase by 5% annually in real terms.

<sup>a</sup> Calculated as 20% of teacher salaries based on historical data.

<sup>b</sup> Calculated based on an initial 2001/2002 value derived from Treasury data.

<sup>c</sup> Allocated to 100 percent of students at a rate of 2500 TSh per student per month.

<sup>d</sup> Allocated to 80 percent of students at a rate of 1250 TSh per student per month.

<sup>e</sup> Allocated to 100 percent of government school students at an annual rate of TSh 20,000 per student.

<sup>f</sup> Allocated to the poorest 15 percent of government school students at an annual rate of TSh 20,000 per student.

An additional 50 percent of the total for the poorest students is allocated to needy girls.

<sup>g</sup> Allocated to Forms V-VI students at a rate of 1250 TSh per student per month in government schools and 625 TSh in non-government schools.

<sup>h</sup> Allocated to 15 percent of government schools at a rate of TSh 1250 per student per month

**Table 18: Education Sector Recurrent Expenditures**

	2003/4	2004/5	2005/6	2006/7	2007/8	2008/9	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
<b>Recurrent Expenditures (TSh millions)</b>													
Administration & General Education	20,507	21,738	23,129	24,678	26,455	28,360	30,402	32,591	34,937	37,453	40,149	43,040	46,139
Primary Education	234,619	269,588	303,399	337,976	362,627	379,893	384,878	392,084	406,214	425,712	450,490	480,801	517,172
Secondary Education	24,520	44,615	54,703	68,982	92,387	126,789	174,082	241,265	321,701	402,425	478,833	543,623	599,104
Tertiary Education (excl. teacher training)	61,858	64,480	67,247	70,162	73,254	76,489	79,876	83,422	87,135	91,023	95,097	99,364	103,835
Primary Teacher Training	7,916	7,693	7,001	5,987	3,469	2,024	872	1,365	2,379	3,356	4,363	5,455	5,923
Secondary Teacher Training	5,469	10,363	13,725	17,643	24,060	36,330	43,511	56,771	61,717	63,051	65,103	69,710	75,489
Adult Education	4,875	5,167	5,498	5,866	6,289	6,741	7,227	7,747	8,305	8,903	9,544	10,231	10,968
Total	359,764	423,643	474,701	531,294	588,540	656,626	720,848	815,245	922,388	#####	#####	#####	#####
<b>Share in Total Recurrent Expenditures (%)</b>													
Administration & General Education	6	5	5	5	4	4	4	4	4	4	4	3	3
Primary Education	65	64	64	64	62	58	53	48	44	41	39	38	38
Secondary Education	7	11	12	13	16	19	24	30	35	39	42	43	44
Tertiary Education (excl. teacher training)	17	15	14	13	12	12	11	10	9	9	8	8	8
Primary Teacher Training	2	2	1	1	1	0	0	0	0	0	0	0	0
Secondary Teacher Training	2	2	3	3	4	6	6	7	7	6	6	6	6
Adult Education	1	1	1	1	1	1	1	1	1	1	1	1	1
Total	100	100	100	100	100	100	100	100	100	100	100	100	100
<b>Education Sector Financial Sustainability</b>													
GDP Growth Rate (%) <sup>a</sup>	6.0	6.4	6.7	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
Total Government Rec. Budget (TSh billions) <sup>a</sup>	1,407	1,497	1,597	1,712	1,836	1,968	2,109	2,261	2,424	2,599	2,786	2,986	3,201
Education Recurrent Exp. As % of GDP	3.6	3.9	4.1	4.3	4.5	4.6	4.8	5.0	5.3	5.5	5.7	5.8	5.9
Education Rec. Exp. As % of Total Rec. Exp.	25.6	28.3	29.7	31.0	32.1	33.4	34.2	36.1	38.1	39.7	41.1	41.9	42.4
Education Sector Rec. Financing Gap (TSh millions)		67,290	95,541	126,731	154,848	191,708	222,456	280,969	349,644	417,941	485,392	546,647	602,251
<b>Secondary Education Financing Gap (TSh millions)</b>													
Recurrent Financing Gap <sup>b</sup>		26,509	38,137	54,304	81,800	125,978	177,778	255,354	337,663	416,426	491,356	556,967	614,168
Development Expenditures		50,552	79,668	121,911	177,991	255,103	360,571	382,925	381,537	348,308	276,344	216,625	150,369
Total		77,061	117,805	176,216	259,791	381,080	538,349	638,279	719,200	764,734	767,699	773,592	764,537

Notes: Primary education, secondary education, and teacher training expenditures are calculated using previously discussed expansion trends and needs.

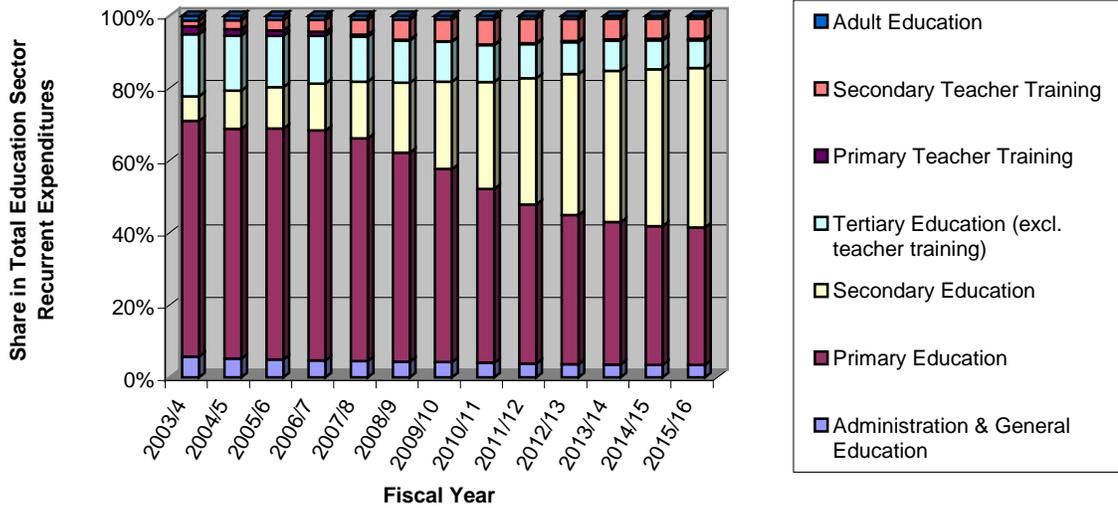
Administration, general education, and adult education expenditures grow at the projected GDP growth rate.

Tertiary education (excluding teacher training) expenditures are projected to grow at 4 percent annually, i.e. lower than the GDP growth rate.

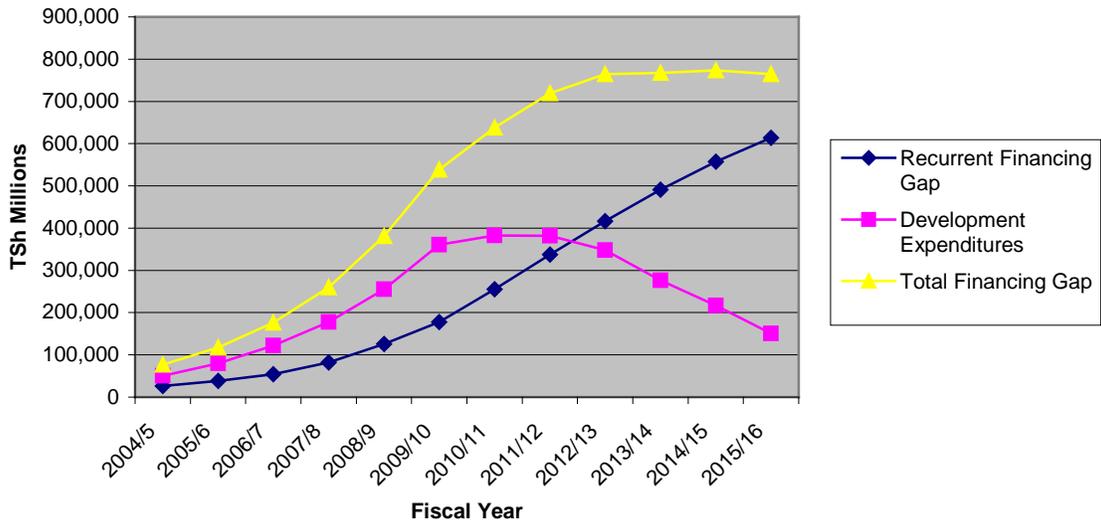
<sup>a</sup> Government of Tanzania PRSP review.

<sup>b</sup> Includes teacher training expenditures.

**Figure 4: Education Recurrent Expenditures, by Sub-sector**



**Figure 5: Secondary Education Financing Gap**



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