EDUCATION SECTOR COUNTRY STATUS REPORT (TANZANIA)

February, 2001

PREFACE

The analysis of Tanzania education presented in this report is based on the desire of the Government to put into practice the aspirations of the Education Sector Development Programme (ESDP). The Government of Tanzania views education as priority sector in its poverty reduction strategy. As part of its effort to develop a strategic approach to sector development, the Government has decided to prepare an education sector country status report to articulate an in-depth understanding of the current status of the sector and the critical constraints on its development. The Government has already prepared, with donor assistance, a wide range of analytic reports and analyses as well as proposals for development investment in the sector. The status report is intended to synthesise the findings from this work, and provide additional analyses where needed. It is expected that this report will contribute to the ongoing discussion between the Government and the donor community toward the articulation of a sector development programme. The report is also expected to serve as a resource to support the development of the Government's Poverty Reduction Strategy Paper, the Medium-term Expenditure Framework and future Public Expenditure Reviews.

Special thanks should go to the Technical Committee that did all the work that led to the production of the report. The committee comprise.

Prof. J. C. J. Galabawa	Team Leader
Dr. A.A.L. Kilindo	Member
Dr. F. J. Sichona	Member
Mr. A. S. M. Mwaimu	Member
Mrs. C. H.M. Kivanda	Member
Mr. D. I. Mugussi	Member
Mr. M.L. Lubambula	Member
Mr. M. W. Macharia	Member
Mr. T.D. Katebalirwe	Member

Other co-opted national resource persons.

……..

Permanent Secretary, ***February, 2001***

Ministry of Education and Culture

TABLE OF CONTENTS

CHAPTER one

MACRO-ECONOMIC CONTEXT

CHAPTER two

ORGANISATION AND STRUCTURE OF THE SYSTEM

CHAPTER three

EVOLUTION OF ENROLMENTS IN TANZANIA

CHAPTER four

EDUCATION FINANCING IN TANZANIA

CHAPTER five

ORGANISATION OF RESOURCES AND EDUCATION QUALITY

CHAPTER six

THE EXTERNAL EFFICIENCY OF INVESTMENT IN EDUCATION

CHAPTER seven

ASPECTS OF EQUITY IN EDUCATION

CHAPTER eight

MANAGEMENT ISSUES IN EDUCATION

CHAPTER nine

CURRENT POLICY CONCERN OF THE EDUCATION SECTOR

LISTS OF TABLES

LIST OF FIGURES.

Page

LIST OF ABBREVIATIONS

ACSEE	Advanced Certificate of Secondary Education Examination
AIDS	Acquired Immune Deficiency Syndrome
BEMP	Basic Education Master Plan
BEST	Basic Education Statistics
BMU	Book Management Unit
CBO	Community-Based Organisation
CEF	Community Education Fund
CG	Central Government
COBET	Complementary Basic Education in Tanzania
CSEE	Certificate of Secondary Education Examination
DANIDA	Danish International Development Agency
DBSPE	District Based Support to Primary Education
DFID	Department for International Development (UK)
DIT	Dar es Salaam Institute of Technology
EFA	Education For All
ERP	Economic Recovery Programme
ESDP	Education Sector Development Programme
ETP	Education and Training Policy
FDC	Folk Development Colleges
FY	Financial Year
GDP	Gross Domestic Product
GEI	Global Education Index
GER	Gross Enrolment Rates
GPA	Grade Point Average
GSES	Girls Secondary Education Support
HEAC	Higher Education Accreditation Council
HIPC	Highly Indebted Poor Countries
HIV	Human Immune deficiency Virus
ICBAE	Integrated Community Based Adult Education
IFM	Institute of Finance Management
ILO	International Labour Organisation

LFS	Labour Force Survey
LGRP	Local Government Reform Programme
MCDWAC	Ministry of Community Development, Women's Affairs and Children
MLYD	Ministry of Labour and Youth Development
MOEC	Ministry of Education and Culture
MOSHI COOP	Moshi Cooperative College
MRALG	Ministry of Regional Administration and Local Government
MSTHE	Ministry of Science, Technology and Higher Education
MTEF	Medium Term Expenditure Framework
MUCHS	Muhimbili University College of Health Sciences
NACP	National Aids Control Programme
NACTE	National Council for Technical Education
NECTA	National Examination Council of Tanzania
NER	Net Enrolment Ratio
NGO	Non-Governmental Organisation
NORAD	Norwegian Agency for International Development
OC	Other Charges
OUT	Open University of Tanzania
PAR	Proportion of Grade A Teachers
PCR	Population per Classroom
PE	Personal Emoluments
PEDFAC	Primary Education Facilities
PER	Public Expenditure Review
PPTC	Post-Primary Technical Centre
PSLE	Primary School Leaving Examination
PTR	Pupil-Teacher Ratio
RNE	Royal Netherlands Embassy
SASP	Structural Adjustment Social Programme
SEMP	Secondary Education Master Plan
SFPR	Special Fund for Poverty Reduction
SSA	Sub-Saharan Africa
STD	Sexually Transmitted Disease
STR	Student-Teacher Ratio

SAP	Structural Adjustment Programme
SUA	Sokoine University of Agriculture
TADREG	Tanzania Development Research Group
TRA	Tanzania Revenue Authority
TSC	Teachers Service Commission
TSH	Tanzania Shillings
TSR	Teacher-Student Ratio
TTC	Teachers' Training College
UCLAS	University College of Land and Architectural Studies
UDSM	University of Dar es Salaam
UEC	University of Dar es Salaam Entrepreneurial Centre
UNDP	United Nations Development Programme
UNESCO	United Nations Education Scientific and Cultural Organisation
UNFPA	United Nations Fund for Population Analysis
UNICEF	United Nations Children's Fund
UPE	Universal Primary Education
USAID	United States Agency for International Development
URT	United Republic of Tanzania
USD	US dollars
VET	Vocational Education and Training
VETA	Vocational Education Training Authority
WABEM	Ward Based Education Management Programme
WSDP	Whole School Development Programme

EXECUTIVE SUMMARY

The education sector country status report is part of the Government effort to develop a strategic approach to sector development. The report articulates an in-depth understanding of the current status of the sector and the critical constraints on its development. This report contributes to the ongoing discussion between the government and the donor community toward the articulation of a sector development programme.

The report has nine chapters: ***The macroeconomic context of education provision; organisation and structure of the system; the evolution of enrolments in Tanzania; education financing in Tanzania; organisation of the system and education quality; the external efficiency of investment in education; aspects of equity in education; management issues in education and; current policy concerns of the education sector.***

Chapter one notes a marked improvement in the performance of macroeconomic aggregates as shown by positive levels of real GDP growth rates and reduced inflation rates although the burden of providing education remains appreciably high. The balance between revenues and expenditure though, remains an area of concern.

Assuming a two-pronged approach towards increasing revenue earnings and reduced expenditures in absolute terms and adopting efficiency-enhancing measures, the education financing crisis can be solved as per government pledges, by raising the education budget share to 30%. This, though, will still be a small increase given the magnitude of resource needs even under conditions of efficiency gains and higher government revenues.

A prudent debt management framework will have to be worked out to complement the Highly Indebted Poor Countries (HIPC) relief by converting the high ***social opportunity costs*** of debt servicing into the high ***gains in human welfare*** of debt relief. Indeed, ***education-for-dept swap*** would increase education sector financing.

Demographic trends, modified by the impact of HIV/AIDS dynamics, will on the one hand increase the school-age population to 9.2 million by the year 2010 while the HIV/AIDS scourge will increase the burden on government resources for both education direct costs and to cope with the HIV-related economic loss of skilled teacher manpower.

The structure and pattern of public revenue and expenditure on education indicate that Tanzania compares unfavourably with regional and similar income-group countries which are allocating higher resources to education, though Tanzania is highly indebted and inevitably forced to restrict its allocation to education. Certainly, there is a need to cast wider the partnership net in mobilising resources for education so as to reduce the predominance of government's role.

Chapter two discusses issues related to structure and organisation affecting different education sub-sectors, existing legislation and decision-making as a whole. Provision of quality education is partly influenced by the organisation and structure of the system. Structural arrangement of the sector breaks down the sector work into tasks and jobs, which are in turn assigned to co-ordinating ministries and institutions, as well as colleges and schools.

There is still a lot of centralism because of old beliefs in tight control being necessary for forging national unity and mobilising all resources for the development of the country. But, this tight control needs to be slowly dismantled because of the economic inability of the government to meet the high costs of education.

This requires that individuals and communities participate in policy formulation and implementation. Thus, the central government will have to relinquish more control to the communities and assume the role of a co-ordinator or facilitator. This force is an inevitable result of development.

Chapter three on evolution of enrolment in Tanzania suggests that the Government's objective of achieving Universal Primary Education is threatened by the declining enrolment ratios. The enrolment numbers in secondary schools, though showing an upward trend have remained low relative to the secondary school-age population. And as with secondary education, enrolment numbers in vocational training are comparatively small relative to the output of primary and secondary schools leavers. Vocational education continues to be treated as a residual.

The non-schooling gap is widening as is the capacity of the system to absorb all children seeking primary education. The low gross enrolment ratios at secondary schools, which appear to stagnate at 7% for lower secondary and 1% for upper secondary, indicate a very low probability of a attending secondary schooling among Tanzanian children. Higher education provision has essentially remained elitist and catering for a select few at a gross enrolment ratio of 0.79 in 1999 as compared to a ratio of 3.0 for Sub-Saharan Africa (SSA). Tanzania's provision of higher education is at a level that is only one quarter of that for the region as in whole.

Trends indicate that on average only 0.17% of the enrolment at primary school level in 1999 was in the private sector. At lower secondary level 43% of the school enrolment is absorbed by the private sector. The private sector's role is more pronounced at upper secondary level at 46.8% provision of total in 1999. About 88% of students receiving vocational training are in private centres, mainly mission trade schools and company centres. On the other hand, the need for expansion of private university and general higher education in order to contribute to the improvement of the international standing of Tanzania is real and necessary.

The internal efficiency index for primary education is 0.56, a figure which compares unfavourably with the Sub-Saharan Africa average of 0.88. The internal efficiency index for lower secondary is 0.96. Figures for grade-specific enrolment ratios indicate that in quantitative terms the differences in education opportunities are widening over time and across schooling levels. In particular, at grade seven almost 50% of the relevant cohort of grade 7 school-going age children are not in school.

For each secondary-school grade the majority of secondary-school age children supposed to be enrolled are not in school.

Retention levels in the Tanzania education system are low. Learners are not moving effectively in the system to be able to complete the school cycle. School-life expectancy,

which was 6.23 in 1985, had dropped to by 5.48 in 1990 and slightly improved to 5.66 in 1998. The low school-life expectancy is also reflected in low public spending on education as a percentage of GDP, which again translates into an index of spending efficiency of 2.26 in 1998; an inefficient level of spending when compared with a 1.3 figure for Sub-Saharan Africa. It means more resources are used in Tanzania to produce a unit of output than elsewhere.

Chapter four reviews education financing in Tanzania. The major direct financier of the sector has been the central government followed by parents and the donor community. Other sources have included local communities and private contributions, which have come in the form of infrastructure and running of private schools. The financing burden for both basic and secondary education has been shifting from government to households. The household's annual costs are estimated at Tsh. 152,007 at secondary level while those at primary school level are estimated at Tsh. 48,050 per pupil.

The total education budget share in total government spending is estimated at 24.2% in 1999. This share wage bill and relatively small sector share of development budget. The share of the total education budget going to basic education has to increase from 62.1% in 1995 to 66% in 1999. Secondary education has declined from 9.5% to 7.0% in 1999. On the other hand allocations to higher and technical/tertiary education increased from 20.1% in 1995 to 21.3% in 1999. However, Personal emoluments (PE) are consuming a large proportion of the education budget despite the low salaries paid to teachers. The high proportion of PE suggests that other charges in the education sector receive inadequate allocation in general, a situation which translates into inadequate provision of basic items for learning and low quality provision.

The proportion of expenditure covering student welfare at higher/technical education has remained high even after introduction of student loans and cost sharing. For both secondary and teacher education catering still consumes a large proportion of Other Charges (OC), although the trend is declining.

The ratio of secondary to primary per student expenditure has gone down from 13 in 1992/93 to about 4 in 1997/98. The per student expenditure in teacher training colleges has remained high. The ratio of teacher training expenditure per student to primary expenditure was equal to around 17 in 1998/99. The average per student costs for higher and technical education have gone down because of Enrolment increase, however the per student costs at higher education represented a ratio to primary of a high 62 in 1998/99.

The level of efficiency in delivery of education services leaves much to be desired. Capacity utilisation ratios at all levels confirm that there are inefficiencies that need to be redressed. The Net Enrolment Ratio (NER) for primary schools is 56. It takes an average of 9 years instead of 7 years to complete primary education. Two years of inputs are thus wasted for each 7-year graduate.

The average teacher-pupil ratio (TPR) in primary school is 1:39.8 a figure lower than the targeted optimal level of 1:45. There are wide variations in efficiency levels across regions, district, and locations. Average primary school class size vary us from 31 to 55 compared to the target of 45. At secondary school level the GER is only 7.4% with the lowest primary to secondary transition rate in SSA. Average class size is 17 compared to

the required 32 while the TSR ranges between 1:26 in 1996 to 1:19 in 1999. The wide variations in efficiency levels signify a need to rationalise present capacity through teacher audit exercises and institutional rationalisation.

Although recently there have been attempts to improve higher education delivery through individual institutional transformation programmes, higher education still endures considerable inefficiencies in terms of capacity utilisation, unit costs and programme offerings.

The contribution of the local district councils to financing education is low indeed. The degree of local council financial dependency is higher in the rural than in urban councils. The performance of the councils in the collection and utilisation of education revenue has been poor as none of the district councils' covered by the Public Expenditure Review of 1998 used any of their own resources to fund education activities. The absence of targeted funds allocation formulae and or an equalisation grant system at district level is revealing.

Donor assistance to the sector increased from US$ 35.3 million in 1994 to around US$ 92.8 million in 1997/98, as compared to total assistance which is estimated at US$ 895 million in 1994 and US$ 976.2 million in 1997/98. This means education enjoyed a share of 3.7% in 1994 and 9.5% 1997/98. As compared to total development funds, donor funds constituted around 7.5% in 1994/95 declining to 6.8% in 1997/98. The sector thus needs to negotiate a better share of donor funds in the light of donor policy statements to the effect that education is a priority. While prudent macro-economic management and consistency on the side of government is necessary; it is also imperative that there is a firm commitment and predictability of donor support.

Chapter five gets to grip with aspects of the system's organisation and education quality. Among these are the question of teacher distribution, workload and deployment. There are wide disparities in teacher resource allocation by region and district. A high proportion of grade C/B teachers is concentrated in rural areas and rural schools and in far-flung areas. Issues of district-level staffing decisions on where teachers are placed, and procedures for deciding changes in work stations(s) have not been administered desirably. Under-qualification and teacher shortages are experienced in secondary schools. Recommended staffing ratios are not being realised while most private schools and colleges operate with untrained teachers/tutors. The subject-based nature of the curriculum makes teachers un-substitutable across subjects.

Although available facilities are not utilised efficiently, the scarcity of school and classroom facilities remains a major problem. Textbook shortage is prevalent in almost all subjects. The estimated situation of physical infrastructure suggests that the ***actual*** as percentage of ***required*** is as follows: classrooms (59%); staff houses (22%); toilets (30%); desks (51%); tables (37%); chairs (35%) and cupboards (24%).

A number of factors contribute to student achievement. The importance of parents' attitudes to education on the part of local communities is an important factor in organising for school performance. In localities where schools work well and achieve good results, parents and the local community in general are strongly supportive of school, including giving considerable financial resources. In localities where the schools have poor

facilities the reverse situation is true; there is often little community support translated into problems of absenteeism and high dropout rates.

Chapter six covers the external efficiency of investment in education. The major concern is whether the education system is able to equip its recipients with the knowledge and skills needed for employment. There has been an overall increase of graduates at all levels over the past five years. Yet, employment growth has failed to keep pace with growth of the labour force. It is estimated that there are 700,000 entrants annually in the labour force, with few or no relevant skills as compared with about 30,000 jobs that are created in the modern formal sector**.**

There are still indications that higher education graduates fall short on the criteria of: ability to respond flexibly creatively in response to national development needs. They are rated highly by employers on theoretical knowledge, trainability and on technical skills. They are rated lowly on: job-creation skills, self-drive and motivation, leadership, malleability, organisation/skills, and ability to work independently. As a result the majority are found looking on the government and its parastatals for a formal sector job.

Average salaries after tax for educated urban workers are higher (Tsh. 194,563) than those of rural educated (Tsh. 134,972). The variations between and within the urban and rural groups are high. On the other hand the average monthly salaries for men at Tsh. 199,058 are higher than those of women at Tsh. 152,870. The educated urban-rural earnings differential ratio is 1:1.4 while the educated male-female earnings ratio is 1.1:1 an indication that in Tanzania rural-urban differences in benefits are more pronounced than the educated gender differentials.

The picture that emerges from the analysis of average salaries by sector of employment suggests that:

- ***(a) average salary private benefits for educated labour are lowest in the government sector and highest in international organisations;***
- ***(b) the overall government to private (local) sector earnings differential is 1:1.50;***
- ***(c) the overall government to parastatal sector earnings differential is 1:2.20;***
- ***(d) the overall government to foreign-international salary differential is high at 1:3.70;***
- ***(e) the overall government to private foreign earnings differential is 1:1.98.***

The analysis of average salary private benefits by education level is suggestive that:

- ***(a) average private monthly salary earnings are increasing by ascending education level;***
- ***(b) for a given education level the average monthly private benefits show wide variation within the group indicating that the same human capital commands different benefits;***
- ***(c) the overall earnings differentials with respect to primary education are: 1.56 for lower secondary; 1.25 for upper secondary; 1.55 relative to diploma level; 2.27 for first degree; 2.81 for Masters degree; and 4.98 for PhD level.***

Degree or Diploma specialisation has a bearing on the average monthly earnings in Tanzania. The picture is that:

(a) the degree specialisations which show high relative average private monthly benefits are: commerce/business studies, engineering, general-arts, general-science and agriculture;

(b) the degree specialisations which show low relative private benefits are: education arts, education science, medicine and law

The contribution of education related factors that appear to influence earnings in Tanzania could be summarised as follows:

(a) ***On diploma level education;*** given a unit change in diploma education relative to primary education, the average monthly earnings will increase by 53.1%;

(b) ***On age;*** given a unit change in age of respondents, the average monthly earnings will increase by 16%;

(c) ***On location;*** given a change from urban to rural location, the earnings are (decreased) reduced by 32%;

(d) ***On employment;*** given change of employer from public to private, the earnings are increased by 29%;

(e) ***On secondary level education;*** given unit change in secondary education, monthly earnings will be increased by 34%;

(f) ***On university education;*** given a unit change in university education, the average monthly earnings will be increased by 85%;

(g) ***Incidentally,*** given a unit change in years of work experience, the average monthly earnings change is of order zero and not significant at a reasonable level.

The annual rates of return by education level indicate that both private and social returns to investment in education are high. The private returns for all levels of education are higher than the corresponding social rates of returns. The private returns to higher education are the highest in all cases. The values of the private rates of return are consistent with findings from other less developed countries, i.e. they are highest for higher education and lowest for primary education an indication that at higher levels the private costs are low relative to social costs while the private benefits are high relative to social benefits. The specific findings suggest that;

(a) private returns are highest for higher education (23%) followed by secondary education (16%) and lowest for primary education (10%);

(b) social returns are lowest for higher education (8%), followed by primary education (9%) and highest for secondary education (14%);

(c) the values of private returns appear to be consistent with the literature and similar to trends in other less developed countries where higher education is highly subsidised by the public/state/government while its private benefits are high;

(d) contrary to expectations it is the secondary school level, which is experiencing highest social returns rather than the primary school level.

Chapter seven addresses aspects of equity in Tanzania education. Disparities in the Enrolment profile by gender, geographical locality and income group will certainly influence the choice of priorities and investment patterns in the sector. Expenditure

incidence is a further cause of such disparities more so in a country where a high proportion of education financing is undertaken by the government.

The representation of female pupils has reached near parity at primary and at lower secondary level while at upper secondary enrolments show a lower female representation of 34% by 2000, though the proportion is increasing. Yet, at the vocational and higher education levels gender enrolment disparities have remained exceptionally skewed with isolated improvements moving to 18% female in vocational, 18% in higher education, and 8% in technical fields. In private universities the female ratio has reached 26%.

Primary school level female gross enrolment ratios have declined from 73.2 in 1985 to 67.6 in 1999. The corresponding ratios for males are 73.8 and 65.3 respectively. Thus the GER for females is slightly higher than that of boys though this also indicates that at primary school level over-age girls are more numerous than over-aged boys.

The gross enrolment ratios for girls at secondary level remain lower than for boys: at 7.2 and 7.6 in 1999 respectively. At upper secondary level the gross Enrolment ratio for girls remains as low as 1.12 in 1999 while that at higher education level it is around 0.18. Generally, the figures on female GERs are very low compared with the expected high private and social returns from investment in women education.

Grade-specific enrolment at primary level by gender indicates that the average transition loss for girls is lower than that for boys. The association between wastage and age is more pronounced among boys than among girls at primary level. However, wastage rates for girls at lower secondary are higher than those of boys suggesting that the association between wastage and age is more pronounced among girls than boys.

Regional educational inequalities are less dramatic than economic ones. Thus while some regions show high GERs and NERs, others present shockingly low figures as shown by the NERs of 48.5 for Tanga, 47.3 for Tabora, 49.6 for Singida, 45.4 for Lindi, 46.7 for Rukwa, 47.6 for Kigoma and 44.0 for Kagera. More than half of the regions have NERs of less than the national average. The 56.7 national average NER is pulled up by the high performing regions of Dar es Salaam (78.3), Iringa (72.1), Kilimanjaro 71.7) and Mara (68.1).

School age population per classroom records the widest range, from 34:1 in Mbeya to 30:1 in Iringa. The top 20 districts have on average 4 times more classrooms in relation to school-age population compared to the bottom 20 districts. Household expenditures on primary and secondary schooling are glaring. The variance between the poorest 20% and the richest 20% is very high. The richest 20% spend six times the amount spent by the poorest on education. The variances are high in the urban areas while they are low in the rural areas. The flat grant/subsidy system which is used by the government to finance education favours the richest 20% and the urban areas.

Secondary school teacher-student ratios are a source of inequities in the system. There is a spectrum of ratio-variations across schools indicating a high degree of inequity and inefficiency. The TSRs are 1:17 in rural schools, 1:19 in urban schools, 1:14 in community schools, 1:17 in private schools and they are 1:18 in government secondary schools. The general picture is that boarding schools have fewer students per teacher than

day schools. The picture also suggests that day secondary schools are over crowded with high numbers of students per teacher. There are high variations on the extent of teacher utilisation across schools and districts.

A major source of resource inequities in secondary schools is the number of **graduate** teachers and their distribution. Rural schools have a lower graduate teacher-student ratio of 1:149 than that found in urban schools of 1:58. Private schools have a higher graduate teacher student ratio of 1:140 than that found in government schools of 1:171. Also boarding schools regardless of ownership have the highest graduate teacher student ratio of 1:61.

Average unit costs appear to be a source of inequities in secondary schools. The specific sources of inequities in expenditure are the payment of teachers and non-teachers emoluments. There are high variations in salaries paid to teachers in both private and public schools. Teacher average emoluments per unit are lower in government schools than those in private schools.

Attempts to explain the sources of average unit costs differentials across secondary schools suggest that:

(***a)*** ***the expected decrease (increase) in average unit costs for each unit change in the location of school is 68.6%; that is a change of location from urban to rural (rural to urban) reduces (or increases) the unit costs by 68.6%.***

(b) ***school performance in the NECTA examination as shown by the school rank changes by 19.47% per unit change in average unit costs;***

(c) ***the TSRs' influence unit costs; in particular the expected change in average unit cost for each unit change in TSR is 40.8%;***

(e) ***the expected change in average unit costs for each unit change (increase) in the graduate teacher-student ratio is a decrease of 39.1%;***

(f) ***the expected change in average unit costs for a unit change in the type of school ownership is a decrease of 71%.***

The general performance in the Primary School Leaving Examination (PSLE) is low with high variances across the districts. The average score in several districts is below the 45-mark out of a total 150 marks. The key inequity features of the low performing districts in the PSLE are as follows:

(a) ***lack of classrooms in proportion to the school-age population; with an average school-age children per classroom above 125;***

(b) ***slightly below average teacher-pupil ratio in some districts due to the fact that enrolment is low for these other districts, and a very high teacher-pupil ratio (1:77) in several districts;***

(c) ***a high proportion of Grade A teachers in some districts despite having a very high teacher-pupil ratio and low performances in PSLE at 13%;***

(d) ***low output variations with PSLE performance at around 20% below the national average.***

The ***Global Education Index (GEI)*** indicates that the urban-rural differentials are particularly significant because in the PSLE results overtime analysis suggests that ***13 of the top 20 districts are urban while the bottom 20 are all rural.*** The differences are

particularly significant in terms of access to school facilities and quality teachers' allocation. However, the major significant sources of unit costs inequities are school location and number of graduate teachers per student in a school.

In explaining the sources of variation in average unit costs/expenditures for primary schools it was found out that the major explanatory variables were: school location ***(urban or rural) and parents willingness to participate and contribute towards schooling expenses or costs***. Factors like: pupil-teacher ratio, type of school (owner); proportion of grade A teacher, rank in PSLE were not significant explanatory variables as they have zero-order influence on the 'variation' of unit costs.

A further indicator of inequities is the gender related achievement in nationally set examinations. Of the 100 girls at lower secondary level who sit for the Certificate of Secondary Education Examination (CSEE) about 30 fail while 15 will eventually proceed to upper secondary level.

Chapter eight gives major management issues. These are: ***distribution of personnel across schools in such a manner that consistency is attained; efficiency of the system in the transformation of tangible resources into learning outcomes, and decentralisation of educational management***.

There are wide disparities in distribution of personnel and in the teachers' workload across schools and districts. Although the teaching force has grown over time there is still a shortage of teachers and overstaffing in some areas or locations. And the low student: teacher ratios are a reflection of relative high class workloads per teacher rather than a reflection of small class sizes. Indeed, at primary school level urban teachers teach an average of 22 periods (15 hours) or about 63 percent of the periods required by the national policy.

There are difficulties in implementing the establishment, deployment and recruitment policy and guidelines. The macro-standards and norms are given and are clear for both urban and rural schools. Yet, even when other responsibilities in addition to classroom teaching are taken into consideration urban teachers only work about 26 hours a week, compared with an average of 32 hours for rural teachers and an official 35-hour work week for civil servants.

There are significant implications of light workloads for system costs and teacher management. ***If all primary school teachers in urban districts taught an average of 28 periods per week, or 84% of classroom time for one class, each stream would require only 1.2 teachers and teaching staff in urban districts could be reduced by about 15%. The teacher emoluments efficiency gains would be approximately Tsh. 7,270 per unit.***

The heavy and diversified curriculum at both primary and secondary levels makes school staffing difficult also. This also is influencing TSRs and workloads as well as the resource requirements. The small size classes in less densely populated areas, combine with the current staffing policy to result in low TSRs and inefficient utilisation of teachers.

The analysis of the management of education inputs and outputs tends to suggest that:

(a) quantity and quality of teaching (teacher qualification) contribute significantly to good performance in both PSLE and NECTA secondary examination;

(b) overcrowded classes are associated with poor performance in examinations;

(c) the level and quality of staffing encourage enrolment.

There is a decline in popular trust for local government and other officials among the rural poor. Trust is a major determinant of social capital at the community level. Thus, there is a significant relationship between village-level social capital and parental participation in school-related activities. The tendency is to view schools as part of government thus contradicting the policy, which suggests that primary schools belong to communities who are supposed to resource them.

Capacity and competence building in school development planning and management is a pre-condition for successful decentralisation. The indispensable skills for heads of schools in the context of a decentralised system include the following: ***school-community relations, participatory methods and micro planning***. To be effective capacity and competence building must be linked to substantive decentralisation. The supply-side constraints to decentralisation include the following: ***heavy central control, separation between education budget decision, general lack of accountability and central control of investment functions.***

Chapter nine reviews the current policies within the Education Sector and how efforts have been directed in initiating policies that would result into a well-educated nation and high quality of life for all Tanzanians. The Sector-wide Approach to education development has been initiated to redress the problem of fragmented interventions. This is expected to be done through involving all key stakeholders in education planning implementation, monitoring and evaluation. This would require a trusting relationship between the government and development partners.

Education Sector Development Programme (ESDP) is designed to help secure the Tanzania Government long-term human development and poverty-eradication targets. It defines government priorities through a set of policies that will guide sector-wide development in education.

There has evolved sub-sector master plans such as Basic Education, Secondary Education, Teacher Education and Higher Education master plans. These form a basis for joint programming of expenditures and for reporting results. In order to assist in balancing the resource envelope with priority programmes, Public Expenditure Review and Medium-Term Expenditure Framework have been developed.

The broad ESDP priorities and the way forward implications can be grouped as follows: Improving the performance assessment framework; projection of recurrent cost implications of the ESDP; implications for education financing policy; how to address the key allocative and efficiency issues; and improving the institutional and regulatory structure.

The proposed ESDP was appraised and found to have progressed slowly, with a number of unresolved issues. In addition to continuing with the implementation of the programmes, there needs to be a renewed commitment to the completion of the ESDP preparation. The proposed possible approach to the development of a work programme is the establishment of a strategic framework for the sector within which policy interventions and investments would form the main elements of the programme. It would then be important to incorporate the substantial amount of work done on PER, MTEF and ongoing projects and the Education Status Report.

CHAPTER ONE

MACROECONOMIC CONTEXT

Economic Structure and Employment

1.1 Table 1.1 shows the composition of Tanzania's GDP by sector. It can be seen that economy is highly dependent on agriculture, which accounts nearly half (45%) of GDP, although the proportion has been dropping. The livelihood of over 85% of the country's population depends on agriculture: according to the 1990/91 Labour Force Survey (LFS 91), traditional agriculture employed 84% of the persons forming the labour force in that year. Nevertheless agriculture's share of total formal employment declined from 16.8% in 1986 to 4.6% in 1991, apparently reflecting the collapse of large scale farming during the economic crisis period.

Table 1.1: Mainland Tanzania: GDP by Kind of Economic Activity at Current Prices (Tsh Mil and %)

	1990	*%*	*1992*	*%*	*1994*	*%*	*1996*	*%*	*1998*	*%*	*1999*	*%*
Agriculture	*349,281*	*53*	*612,403*	*48*	*955,982*	*45*	*1,658,275*	*48*	*2,294,547*	*45*	*2,798,157*	*45*
Mining and Quarrying	*6,515*	*1*	*13,503*	*1*	*26,170*	*1*	*38,511*	*1*	*74,386*	*1*	*85,792*	*1*
Manufacturing	*70,472*	*11*	*104,589*	*8*	*157,433*	*7*	*254,326*	*7*	*380,901*	*7*	*434,544*	*7*
Electricity and Water	*13,195*	*2*	*22,275*	*2*	*43,496*	*2*	*71,872*	*2*	*87,548*	*2*	*111,121*	*2*
Construction	*45,448*	*7*	*68,860*	*5*	*98,791*	*4*	*132,248*	*4*	*255,330*	*5*	*305,859*	*6*
Transport and Communications	*40,775*	*6*	*66,191*	*5*	*131,670*	*6*	*193,946*	*6*	*244,492*	*5*	*294,180*	*5*
Wholesale & retail trade, restaurants and Hotels	*12,775*	*2*	*202,207*	*16*	*318,940*	*15*	*493,573*	*14*	*635,300*	*12*	*763,073*	*13*
Finance and Insurance	*60,614*	*9*	*72,210*	*10*	*153,363*	*13*	*209,391*	*13*	*318,338*	*14*	*353,457*	*13*
Public Admin. & Other Services	*63,826*	*10*	*117,419*	*9*	*204,713*	*9*	*300,876*	*9*	*564,779*	*11*	*649,553*	*10*
Total	***664,891***	***1011***	***1,281,649***	***104***	***2,092,552***	***102***	***3,355,014***	***104***	***4,857,619***	***102***	***5,797,735***	***102***

Source: *URT, National Accounts of Tanzania: 1987-1998; URT (2000) Economic Survey 1999*

1.2 Among the other sectors the share of manufacturing in GDP has declined during the 1990s, as is also true of finance and insurance. Public administration and other services have marginally increased, but the big growth area has been wholesale and retail trade, restaurants and hotels. The share of the mining sector in GDP has been very low for both the pre- and post-reform periods, even though mining is of some importance in generating export revenue.

1.3 During the pre-reform era, Tanzania developed a large parastatal sector. By 1988, there were 410 parastatals, largely an outcome of the nationalisation of the late 1960s. Until recently parastatals employed about half of the formal manufacturing labour force.

1.4 Labour Force Survey (LFS) of 1990/1991 established that about 80% of the total labour force of 8.9 million was working in agriculture, a sector where formal wage labour is not common in Tanzania. Reflecting this, the LFS estimated that

only about 7% of the total labour force were engaged in wage employment. The Tanzanian labour force is predominantly young with over fifty percent under the age of 30. At the time of the LFS the informal sector employed about 91% of the estimated persons in the total labour force, while only 6.7% of the labour force was engaged in the formal sector.

1.5 Table 1.2 shows the sector composition of wage employment. It is notable from the Table that in 1988 the services sector was the largest employer (42.4%) of total wage employment, followed by manufacturing (14.1%) and formal agriculture (12.7%). In 1995 the rankings were similar to those in 1988.

Table 1.2: Structure of Formal Wage Employment in Tanzania 1988 -1998

Sector	*1988*	*1995*	*1998*
Agriculture	*117,630*	*90,011*	*N/A*
Manufacturing	*125,000*	*99,642*	*137,832*
Mining	*5,900*	*8,909*	*N/A*
Water/Energy	*29,000*	*39,700*	*N/A*
Construction	*26,500*	*41,699*	*22,192*
Trade	*49,400*	*59,699*	*43,665*
Transport	*71,200*	*42,001*	*14,539*
Finance	*20,600*	*26,030*	*N/A*
Services	*258,800*	*299,991*	*N/A*
Memo Item: Government	*461,160 (1984)*	*477,608*	*319,445*
O/W Parastatals	*200,354*	*N/A*	*176,635 (1998)*
Total	***704,300***	***707,646***	***N/A***

***Source**: Wangwe and Tsikata (1999)*

1.6 It is observable from Table 1.3 that the government remains the main employer in the formal wage sector, employing over 60% of formal employees.

Table 1.3: Public Employment in Tanzania (Estimates) '000' and Share in Labour Force

	1980	*1985*	*1991*	*1993*	*1995*
Central Government	*223.9*	*261.8*	*319.5*	*326.4*	*297.4*
	(73.3)	*(75.8)*	*(53.6)*	*(50.0)*	*(50.5)*
Public Sector	*442.4*	*480.1*	*500.3*	*510.0*	*459.4*
	(5.4)	*(5.5)*	*(5.0)*	*(4.8)*	*(4.1)*
Formal Wage	*-(7.4)*	*-(7.2)*	*-(9.2)*	*-(9.6)*	*-(8.1)*

***Source:** Mjema and Shitundu (1996)*

1.7 There is significant involvement of women in the labour force. The proportion of females in the total population aged 10 years and above, according to the 1990/91 Labour Force Survey was 51.3%. As indicated in Table 6.3, the proportion of women in rural labour force is almost the same as the share of the labour force in total rural population 51.6% and 51.5% respectively. In urban areas the proportion of women in the labour force is lower Women's labour-force participation rate is higher in rural areas, at around 73.7%, than in urban areas (59%).

Table 1.4: Women in the Labour Force in Tanzania: 1990/91.

		Total Persons 10 yrs and above	Women	
			Number	%
Population	Total	15,600,240	8,001,917	51.3
	Urban	2,848,135	1,421,854	49.9
	Rural	12,752,105	6,580,063	51.6
Labour Force	Total	11,294,927	5,674,626	50.2
	Urban	1,894,160	835,145	44.1
	Rural	9,400,767	4,834,481	51.5

Source: *URT, 1990/91 Labour Force survey*

1.8 An analysis of women employment by occupation indicates that very few are engaged in categories like crafts, machine operators, sales and clerical officers, professional/technical managers and administrators (Table 6.5). The 1990/91 labour force survey further indicates that women constituted 24.7% of paid employees 42.3% of unpaid/helpers, 53.9% of the labour engaged in agriculture and 20% of self employed.

Table 1.5: Women's Employment by Occupation in Tanzania

Occupation	Total Employed		%	% in Total
	Persons	Female	Female	Female
Admin. Managers	214,388	45,028	21.0	0.9
Professional	17,980	1,832	10.2	0.0
Associate Professional	96,435	53,024	30.1	1.0
Clerks/Cashiers	176,435	45,115	46.8	0.9
Service/Shops	269,435	119,883	44.5	2.2
Agricultural	9,114,437	4,903,690	53.8	90.0
Craft	372,567	37,055	9.9	0.7
Machine Operators	120,720	13,074	10.8	0.3
Sales/Labours	507,117	215,405	42.5	4.0
Total	**10,889,205**	**5,434,100**	**49.9**	**100**

Source: *Labour Force Survey, 1990/91*

Economic Reforms

1.9 After the mid-1980s Tanzania embarked on a radical shift in economic management strategy, with more emphasis being put on liberalisation of key markets and calls for greater private sector participation. Various reforms in the education sector that are part and parcel of the economy-wide reforms began in earnest with the adoption of the first Economic Recovery Programme (ERP I), inspired by the Bretton Woods Institutions. The reforms address the four key issues of access, quality, financing and efficiency and also call for a greater role to be played by the private sector.

1.10 The achievements and failures of past macro-level education efforts should be interpreted in the light of changes to the social, economic and political order. The 1990s have been characterised by political changes in democratic participation and general economy-wide transparency, improvement in major economic indicators and the mushrooming of Non-Governmental Organisations (NGOs) and Community Based Organisations (CBOs). A further important factor that is critical to the interpretation of educational progress is the changing number of children, and their distribution across regions and by levels of schooling. The

absolute number of children for whom education is needed affects the resources required, but Tanzania's ability to provide the education will also depend on the size of the school-going age group relative to the working population.

1.11 A marked improvement in the performance of macro-economic aggregates has been experienced for most years since the reforms were introduced, with GDP growth rates sustained at positive levels even though the annual targets set for growth proved elusive for much of the period (URT/World Bank, 1999; Bank of Tanzania, 1998). The inflation rate, which was over 30% in the 1980s, fell to single digits towards the end of the 1990s with a rate of 7.2% in 1999 (see Table 1.6) and further to 5.7% by September, 2000 (BOT 2000)[1]. In Zanzibar, positive real GDP growth was sustained in the 1990s and inflation was brought down to single digits (Mbelle and Kilindo, 1998) though, as in the Mainland, the targeted annual benchmarks were not reached for much of the post-1988 period. (see also Table 1.6).

Table 1.6: Recent Macro Performance Indicators for Mainland Tanzania and Zanzibar: 1997-1999 (%)

	Mainland			*Zanzibar*		
	1997	***1998***	***1999***	***1997***	***1998***	***1999***
GDP real growth	*3.3*	*4.0*	*4.8*	*4.1*	*0.4*	*4.5*
Inflation	*16.1*	*12.8*	*7.9*	*5.0*	*3.9*	*5.3*
Imports/exports	*153*	*232*	*239*	*N/A*	*1005*	*3112*
Domestic revenue/GDP	*13.5*	*12.6*	*12.6*	*18*	*29.3*	*29.6*
Tax revenue/GDP	*13.4*	*12.1*	*13.0*	*15.7*	*27.1*	*28.3*
Govt. expenditure/GDP	*17.3*	*17.4*	*18.2*	*18.2*	*30.1*	*36.3*
Recurrent exp./GDP	*14.3*	*13.6*	*13.4*	*17.5*	*30.1*	*29.7*
Debt service/GDP[2]	*3.9*	*4.6*	*3.4*	*-*	*-*	*-*
Overall deficit after grants/GDP	*1.0*	*0.2*	*-0.4*	*53*	*-7.0*	*-0.4*

Notes: *The first three indicators refer to calendar years, while the rest, fiscal years (e.g. 1997 means 1996/7).*

2. Debt service is a Union matter and is dealt with by the Union Government.

Sources:

1. Bank of Tanzania (various)
URT/World Bank (1999)

The External Balance and Debt

1.12 As Tanzania strives to emerge from the long and deep economic crisis experienced in the late 1970s to mid-1980s, the main challenge can be described in one word: ***sustainability***. How can the positive post-reform achievements be sustained in the long run? In Zanzibar this may be the main challenge with respect to both GDP real growth and inflation. With regard to "self-reliance" both the Mainland and Zanzibar exhibit a marked weakness in that the value of imports so greatly exceeds exports, ranging from over twice as much for the Mainland (1998) to over thirty times for Zanzibar (1999). This clearly calls for concerted efforts to increase exports.

1.13 The issue of debt service needs to be addressed, too. Tanzania has an external debt of US$ 8 billion, equal to more than 100% of the annual GDP: the recommended level is for debt to be no more than 50% of GDP. The burden of debt servicing is thus unsustainable. The ratio of debt service to GDP averaged 4% for the years 1997-1999 (i.e. 3.9% in 1996/97; 4.6% in 1997/98 and 3.4% in 1998/99). As

indicated in Table 1.7, the servicing of external debt consumed Tsh 88.2. billion in 1995, Tsh 120.0. billion in 1996, 164.3 Tsh. billion in 1997, Tsh 227.0. billion in 1998 and Tsh 194.0. billion in 1999. Debt servicing claimed between 22.8% and 31.9% of recurrent spending over the period 1995-99.

1.14 Because of its high indebtedness, Tanzania is inevitably forced to restrict its budgetary allocation to education in terms both of absolute amounts and of expenditure shares. Education spending was almost of the same magnitude as debt service between 1995 and 1996 and thereafter the servicing of the external debt consumed more than the amount allocated to education spending (Table 1.8). Indeed the debt service to education spending ratio increased from 94.9 in 1995, through 157.2 in 1997, to 174.8 in 1999.

Table 1.7: External Debt Service Trends (Tsh. Bill.)

Year	*Recurrent Spending*	*Debt Service*	*Debt Service/ Recurrent Spending*
1995	*386.6*	*88.2*	*22.8%*
1996	*470.0*	*120.1*	*25.6%*
1997	*587.1*	*164.3*	*27.9%*
1998	*711.9*	*227.0*	*31.9%*
1999	*791.9*	*194.1*	*24.5%*

***Source**: Computed from Table 1.3*

1.15 The above trends indicate that Tanzania, as a low-income highly indebted country, should capture the attention of donors, and of external creditors particularly. The Highly Indebted Poor Countries (HIPC) initiative is not sufficient to address the debt overhang in Tanzania (Tanzania qualified for the First Phase on 4th April 2000), for it is small and is a slow process that may not be able to resolve all education resource needs. Take for example fiscal year 1998/99. The data suggest that if a 50% relief were to be distributed according to base scenario, then 15% of this will be allocated to education, 10% to health and the remainder to other social services. This then would imply Tsh 14.55. billion more allocation to education, thus raising expenditure on education by 13%. Clearly, a prudent debt management framework needs working out, to complement the HIPC relief.

Table 1.8: Indebtedness and Education Expenditure Tsh. (Bill and %)

Year	*Servicing of External Government Debt*	*Education Spending (13+14+15)*	*Debt Service/ Education Spending %*
1990	*-*	*59,423*	*-*
1995	*88.2*	*88,253*	*100*
1996	*120.0*	*119,570*	*100.3*
1997	*164.3*	*104,537*	*157.2*
1998	*227.0*	*118,882*	*190.9*
1999	*194.1*	*111,057*	*174.8*

***Source**: Computed from Tables 1.3 & 1.4*

1.16 The proposal to convert the high "social opportunity costs" of debt servicing into the high "gains in human welfare" of debt relief, as suggested by Oxfam (1998), seems sensible. The key aspects of this proposal that actually address resource constraints in education are that:

(a) Tanzania receives earlier bilateral debt relief through the Paris Club including a 67% debt stock relief.

(b) A strategy is prepared for converting debt savings into social investment, including health and education to ensure that debt relief is not used for other purposes;
(c) Donors contribute more to the Special Fund for Poverty Reduction (SFPR, formerly known as Multilateral Debt Relief Fund).

1.17 By linking debt sustainability criteria to human development and by imposing a cap on the proportion of government revenue for debt servicing, real gains can be made. The "savings" or "education-for-debt swap" would obviously increase education sector financing and provide the revenue necessary to implement both the Basic Education Master Plan (BEMP) and the Secondary Education Master Plan (SEMP). However, it would also be necessary to address concerns related to inefficiencies and absorptive capacity. It is of paramount importance, though, that the correct use of resources is ensured and is safeguarded by greater involvement of civil society and actors at lower levels of government (see Kuleana, 1999, p. 29).

Public Revenue and Expenditure Balance

1.18 The balance between revenue and expenditure is another area of concern as reflected in expenditure/GDP ratios higher than revenue/GDP ratios. This calls for a simultaneous two-pronged approach, involving increasing revenue and reducing expenditure either in absolute terms or through efficiency-enhancing measures. Recently the revenue-expenditure gap has been reduced, if grants are taken into account. Already there have been pledges to solve the education financing crisis by raising the education budget share from 22% to 25% starting 1999 (President Mkapa, 1998). This though, is a small increase given the magnitude of resource needs even under conditions of efficiency gains and higher government revenues. Such pledges also have to be interpreted in an overall context in which other budget items, like health and road construction, are also seriously under-funded.

1.19 Overall trends in Public Revenue and Expenditure are presented in Table 1.9. For the period 1990-1999 domestic government revenue increased from Tsh 94.7. billion to Tsh 722.7. billion in nominal terms. However domestic government revenue has remained stable at around 12.5% of GDP during the period. Domestic recurrent spending increased steadily from Tsh 111.6. billion in 1990 to Tsh 791.9. billion in 1999. During the same period investment spending increased from Tsh 16.3. billion to Tsh 207.2. billion.

1.20 External revenue has increased over time from Tsh 27.7 billion in 1990 to Tsh 169.9. billion in 1999. It is however notable that there has been considerable fluctuation in this source of government revenue indicating its unpredictability, notably the budget support component. When capital expenditure is considered there is an overall increasing trend starting with Tsh 24.7. billion in 1995 to Tsh 104.3. billion in 1996, Tsh 127.1. billion in 1997 to Tsh 254.3. billion in 1998. Generally, the picture that emerges is that more of the external resources have gone into capital investments than into budget support.

Table 1.9: Overall Government Finances (Tsh. Bil.)

YEAR	GDP		GDP/CAPITA		GOVT. REVENUES				GOVERNMENT SPENDING			
	Current Prices	Constant Prices (1992)	Current Prices Shs.	Constant Prices Shs.	Domestic Sources		External Sources		Domestic Recurrent Spending	Servicing of govt. external debt		Investment Spending
					Total	As % of GDP	Budget Support	Capital Investments		Interest	Principal	
	(1)	(2)	(4)	(5)	(6a)	(6b)	(7)	(8)	(9)	(10)	(11)	(12)
1990	760.0	1,219.2	31,799	51,014	94.7	12.5	27.7	n.a	111.6	n.a	n.a	16.3
1995	2,796.6	1,345.2	101,696	48,918	331.2	11.8	105.6	24.7	386.6	47.5	40.7	66.8
1996	3,452.6	1,401.7	121,999	49,530	448.3	12.9	46.9	104.3	470.0	66.2	53.9	30.1
1997	4,281.6	1,448.2	147,134	49,767	572.1	13.4	81.4	127.1	587.1	111.6	52.7	124.6
1998	5,125.3	1,505.8	170,844	50,194	622.5	12.2	44.3	254.5	711.9	101.2	125.8	155.1
1999	6,113.4	1,577.3	197,553	50970	722.7	11.2	169.9	34.7	791.9	118.4	75.7	207.2

Notes: *External Sources of Capital investment defined as Development Expenditure from external sources, Budgetary Support defined as grants.*

Source: *URT (2000) "Public Expenditure Review: 2000 Vols. 1 & 2; URT (1999) Economic Survey for 1999".*

Public Spending on Education

1.21 The provision of education is still financed mainly by government. Given the priority accorded to the education sector, as public revenues increase, more resources are likely to be allocated to it. Conversely, if resources continue to be scarce the burden of providing education will involve considerable strain.

1.22 The revenue effort will certainly have an influence on financing of education provision and the 1997 figure of 13.5% for government domestic revenue as a percentage of GDP (Table 1.7) remains low by regional comparison. Despite improved efficiency in tax administration and collection improvements by TRA, the revenue effort is not expected to go beyond 13% by FY2002 (PER, 1999, Table 1).

1.23 Table 1.11 indicates the pattern and share of public spending on education. Recurrent spending increased from Tsh 57.6. billion in 1990 to Tsh 111.1, billion in 1999. During the same period capital spending also showed an increasing trend. In this case external sources provided the 'lion's share' - around Tsh 11.9. billion in 1998 as compared to Tsh 2.2. billion from domestic sources.

Table 1.10: Comparative Data on Macro-Economic Context for Tanzania (1997)

	Tanzania	***Sub-Saharan Region***	***Least Developed Countries***
Population growth rate (% p.a)	*2.8*	*2.9*	*2.5*
Government Revenues as % of GDP	*13.5*	*17.8*	*21.5*
Public Spending on education			
As % of total govt. spending	*22.9*	*14.0*	*13.0*
As % of GDP	*2.7*	*5.12*	*3.3*

Source: *UNESCO (1993) "World Education Report, 1993", UNICEF (1998) "The Progress of Nations, 1998" pp. 10-11; World Tables, 1998*

1.24 The percentage share of total public recurrent spending that was allocated to education was 13.3% in 1990, 21.2% in 1995, 14.7% in 1996 and 15.5% in 1998-1999. On the capital spending side education's share was a low 1.2% in 1995, rising slightly to 1.6% in 1996 and falling again to 1.4% in 1997 and 1998. The share of public spending on education in GDP was 2.3% in 1995, 2.6% in 1996, 2.4% in 1997, 2.5% in 1998, and 2.4% in 1999.

Table 1.11: Public Spending on Education

	Public Spending on Education			Percentage Share of Public Spending on education					
	Recurrent Spending Tsh. Bill.	Capital Spending by source		In total recurrent spending	In total Capital Spending	In total Public Spending[2]	In GDP		
		Domestic	External				Capital	Recurrent	Total Spending
	(13)	(14)	(15)	(16)	(17)	(18)	(19a)	(19b)	(20)
1990	57.6	3.3	1.5	13.3	29.4	18.8	0.04	2.7	2.1
1995	78.4	0.8	9.1	21.2	14.8	19.6	0.03	2.8	2.3
1996	78.6	0.5	4.1	14.7	13.5	16.7	0.01	2.3	2.6
1997	93.7	1.8	9.1	15.5	8.7	14.6	0.04	2.2	2.4
1998	104.7	2.2	11.9	14.7	9.0	13.7	0.04	2.0	2.5
1999	111.1	2.1	14.9	14.0	8.2	12.8	0.03	2.1	2.4

Notes: *Column definitions:*
(16) ➪ (13)/(9)
(17) ➪ (14) + (15)]/(12)
(18) ➪ (13) + (14) + (15)]/[(9) + (12)]
(19) ➪ (14)/(1)
(20) ➪ [(13) + (14) + (15)](1)

Source: *URT (1999) Economic Survey for 1998*

1.25 In terms of the proportion of public expenditure allocated to the education sector, Tanzania shows up unfavourably in relation to comparable poor countries. These notably include Burundi (30%), Rwanda (26%) and to a lesser extent Zimbabwe (20%), Kenya (16%) and Uganda (15%): the Tanzania figure is only 12.8% of public expenditure including debt service. In this regard the allocation of significant resources to education would seem to be as much the result of policy, political commitment and effective implementation of human resource development strategies as of national earning capacity.

1.26 On the other hand public spending on education as a percent of total government discretionary spending (i.e. after the claims of debt service have been met) was 22.9% in 1997 well above the Sub-Saharan Africa (SSA) average of 14% and that of least developed countries (13%); an indication that in Tanzania education has been given priority in public spending. However as a percentage of GDP, public spending on education in Tanzania is 2.7% compared to the SSA regional average of 5.1% and least developed countries average of 3.3%. This situation suggests the urgent need for debt relief, as discussed above, and also for Government to raise more tax in order to spend more on education[3]. There is also a need for casting wider the partnership net in mobilising resources for education to complement government's role.

Demographic Trends and Impact of HIV/AIDS

1.27 The population of Tanzania is already about 32 million and is likely to reach 40 million before 2010 (Table 1.12). The growth rate is high and close to averages for the region and for similar income-group countries. The general population increase and that of the school-going age groups exert pressure on the resources available for education provision in general. The expectation is that the school-going age population will increase to 7.2 million in 2005 and to 9.2 million in year 2010.

Table 1.12: Population Size and Age Structure

	1990	*1995*	*1998*	*2005*	*2010*
Population (millions) Total	*23.9*	*27.5*	*30.0*	*36.3*	*41.7*
Population (millions)					
Ages 7-13[1]	*5.3*	*6.1*	*6.4*	*7.2*	*9.2*
Ages 7-13[2]					
In Households with no parent	*31,933*	*36,547*	*38,647*	*43,160*	*54,223*
In Households with only one parent	*420,447*	*481,198*	*508,848*	*568,274*	*729,730*
Growth rate[3]					
Total (%)	***2.5***	***2.3***	***2.6***	***2.5***	***-***
Ages 7-13 (%)	*1.9*	*2.6*	*1.4*	*2.1*	*-*

Notes:

1 *Computed as total age 7-13 Enrolment in primary over net Enrolment (0.63 for 1990-95 and 0.77 for 2005 to 2010)*

2 *Computed by use of figures of orphan children from Tanzania Demographic Health Survey (1996)*

3 *Calculated over period beginning with the year indicated in the column (e.g. 1990-95) for the Column "1990".*

Source*: URT (Economic Survey, 1999 and Statistical Abstract, 1994 for period 1990-1995 and 2005 and 2010 respectively.*

1.28 Although the population growth figures look high, as is typical of low-income countries, if one takes into consideration the scourge of HIV/AIDS and the resultant future declining birth rate, population growth rates are likely to decline. More than two thirds of the 33 million infected populations world-wide are living in Africa, and, as Table 1.13 indicates, Tanzania is among the worst affected of Sub-Saharan African countries. In a country striving to produce a critical mass of educated and skilled personnel for key development areas of the economy, this may have serious effects.

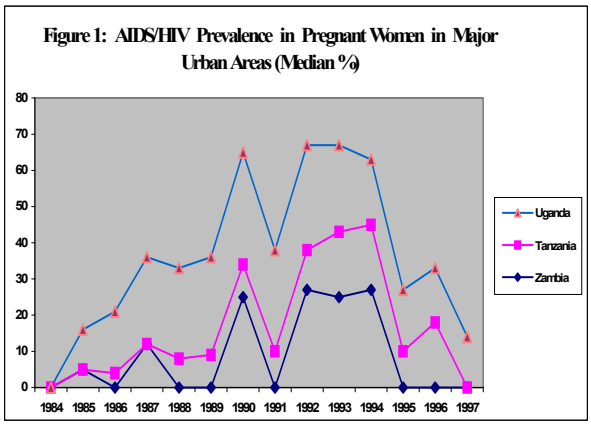
Table 1.13: HIV/AIDS in Context Number of AIDS Cases per 100,000 People, as Reported by UNDP in the 1999 Human Development Report: Selected Countries

Country	*Cases per 100,000 Population*
Zambia	*530.1*
Malawi	*505.4*
*Tanzania**	*365.0*
Botswana	*351.6*
Ivory Coast	*265.5*
Uganda	*249.0*
Ghana	*102.1*
Cameroon	*69.1*
Canada	*50.4*
Senegal	*22.6*
Sweden	*17.6*
Japan	*01.2*

Source: Tanzania Human Development

1.29 It has been estimated that ten percent (10%) of Tanzania's adult population is HIV positive. The precise extent and pattern of the crisis is unclear because of data deficiencies. The National AIDS Control Programme (NACP) estimates that by the end of 1996 the cumulative number of AIDS cases was 450,000. This figure had risen to about 550,000 by the end of 1998. The true position is estimated to be worse than this because these figures by NACP are simply the number of cases reported by hospitals and extrapolations.

According to the NACP, the total number of adult HIV infections is over 1.6 million people, representing one in ten of the 1999 adult population. According to the Ministry of Community Development, Women's Affairs and Children (MCDWAC) as of late 1998, despite widespread awareness of the problem there is no clear trend toward safer sexual behaviour: discrimination and stigmatisation of those with HIV/AIDS is still prevalent. The impact of HIV/AIDS by region is shown in Table 1.14.



1.30 The potential impact of HIV/AIDS on the economy is telling. The World Bank estimates that AIDS will reduce real GDP growth from 3.9% without AIDS to 2.8% - 3.3% with AIDS during the period 1985 to 2010 (UNDP, 1999). The UNDP argues that overall, the HIV/AIDS epidemic has the potential to kill at least one fourth of the country's entire adult population over the next 15 years if left unchecked. It may devastate the already low human development indicators and drive down life expectancy by 10 years or more. The HIV/AIDS pandemic is the worst infectious disease crisis of this century

Table 1.14: HIV/AIDS Impact by Region (1998)

Region	*Rate per 100,000*	*Region*	*Rate per 100,000*
Arusha	*184*	*Mara*	*119*
Coast	*543*	*Mbeya*	*989*
Dar es Salaam	*674*	*Morogoro*	*355*
Dodoma	*167*	*Mtwara*	*300*
Iringa	*320*	*Rukwa*	*125*
Kagera	*444*	*Ruvuma*	*399*
Kigoma	*222*	*Shinyanga*	*186*
Kilimanjaro	*536*	*Singida*	*195*
Lindi	*395*	*Tabora*	*356*
		Tanga	*288*
Total Tanzania	***365***		

Source: *UNDP (1999) Human Development Report for Tanzania, p. 9*

1.31 The likely impact of HIV/AIDS on education and vocational training is serious, taking into consideration that:

- the increase in HIV/AIDS sufferers will have direct impact on the ability of families and communities to provide resources for education and is therefore likely to reduce the demand for education. Limited household resources would be diverted to the sick, and the illness and deaths of adults in the household would reduce household income.

Table 1.15: HIV/AIDS Mortality by Gender August, 1997 (per 100,000)

Age Categories	*Number of Cases*	
	Male	*Female*
15-18	*10*	*50*
19-22	*50*	*200*
23-26	*60*	*400*
27-32	*480*	*700*
33-38	*500*	*430*
39-41	*310*	*210*
45-49	*185*	*75*

Source: *Reconstructed from Tanzania Human Development Report (1999), p. 1*

In consequence a greater burden will undoubtedly fall on the public sector in covering costs formerly met by households.

- there would also be a decreasing growth rate in school attendance. This would partly reflect a decline in the growth of school-age population; partly the prevalence of sickness among children themselves; and partly a likely drop in attendance rates both because of the requirements of children's caring services in the home and because of lack of resources to support children, especially orphans, in school. As indicated in Table 1.12, close to 10% of the school-going age children will be in households with only one parent or no parent at all. Household cost-avoidance might mean keeping most of the orphans at home.

- much of the caring burden will fall on young and adolescent girls. There is need for a better understanding of impending trends and of possible strategies to ensure that girls have the opportunity to continue and complete their education.

- as more children are orphaned due to HIV/AIDS and more HIV positive children and teenagers enter the school system, there are dangers of more discrimination, ostracism and classroom disruption.

- all professional organisations will be adversely affected by the loss of key middle- and senior-management, technical and professional staff. The education sector will lose administrative and teaching staff at an accelerated rate. The increased HIV/AIDS-related illnesses and growing death rate among them represents both a loss of human life and economic loss. Maintenance of system effectiveness will require a deliberate policy of mentoring and having ***understudies*** for key functions. The increasing rates of attrition from the teaching service has implications for future teacher requirements.

- there will be increased costs of recruiting, training and replacing teachers and school administrators who have become incapacitated and died of AIDS.

- the increased prevalence of HIV/AIDS is likely to place an additional burden on public resources, especially health services. Education will be in direct competition with the health sector for public resources. The projections of education's share of GDP, whose growth may in any case be adversely affected by HIV/AIDS, may prove to be overly optimistic.

- as the death rate grows among young adults, funds spent on them will have been wasted in terms of the loss of their potential contributions to society. The economic case for investing in education may be weakened.

- donor funding may go to HIV/AIDS programmes at the expense of other sectors like education. Already donor assistance for HIV/AIDS prevention and services stands at around US$ 15.9 million (see Table 1.16)

1.32 A recent survey study by Katabaro (1999) on school performance and perceptions of "AIDS" orphaned primary school pupils in Bukoba rural districts suggests that:

(a) ***on achievement***; orphans had significantly lower achievement than non-orphans and school attendance could not explain under achievement of orphans;

(b) ***on households***; that orphans living in other households had significantly lower mean scores in academic achievement, teachers' perceptions and self-concept;

(c) ***on households***; that orphans living in other households had significantly lower mean scores in academic achievement, teachers' perceptions and self-concept;

Table 1.16: Donor Funding for HIV/AIDS Prevention and Services, 1999

Donor	*Amount US$ m*
DFID	*1.5*
RNE	*2.6*
NORAD	*1.0*
USAID	*4.5*
UNDP	*1.9*
UNFPA	*1.47*
UNICEF	*1.25*
Others	*1.67*
Total	***15.9***

Source: *HRD – report (1999)*

(d) ***on classroom participation***; orphans more than non-orphans were observed to be on off-task behaviour in classrooms, suggesting that they paid less attention to academic activities.

1.33 Among the many implications of the foregoing is that the HIV/AIDS issue must become part of the strengthened planning and projection capacity of the Ministries of Education. The education ministries will need to develop capacity and come out with research on the implications of HIV/AIDS on the education sector. It is also clear that the education sector has a responsibility to disseminate education about HIV/AIDS. A number of programmes to this end have already been initiated. In the long run, it is hoped that information and education will be important factors in reducing the incidence of HIV/AIDS.

Notes on Chapter One

[1] *It is interesting to note that the overall macro-achievements have been positive, but these positive developments have not been associated with relative positive trends in primary-school enrolments and quality outputs;*

[2] *This is the estimated percentage share of* **public spending** *on education in* **total public spending;** *It is not the same thing as the sector share of education sector spending in total government spending (i.e. total education budget share in total spending) which includes estimated non-government budget and which will be covered in chapter four. Data on how much really goes into education needs further reconciliation otherwise quick readers are always confused.*

[3] *The last two rows of Table 1.10 enable one to calculate that Tanzania's government spending is 11.8% of the GDP compared with 23.6% the Least Developed Countries and 36.5% in Sub-Saharan Africa. The problem seems to be the low proportion of GDP captured through the tax net in Tanzania, not that Tanzania is allocating a low proportion of disposable tax income to education.*

[4] *This part draws heavily on material prepared by UNDP (1999) Tanzania Human Development Report. However, most documents which have referred to HIV/AIDS do not seem to be clear at every point whether they are referring to AIDS cases or to the much larger HIV positive population. Notwithstanding the information is suggestive that the effect of HIV/AIDS on the sector needs to prioritised.*

CHAPTER TWO

ORGANISATION AND STRUCTURE OF THE SYSTEM

2.1 This chapter examines issues related to policy- and decision-making, and organisation. Provision of quality education is partly influenced by the organisation and structure of the system. Organisational arrangements of the sector translate the overall sector goals into tasks and jobs, which are in turn assigned to co-ordinating ministries, public bodies, colleges and schools.

Policy-making and legislation

2.2 In Tanzania parliament makes the laws pertaining to education and approves Government policy. Occasionally, the Government may make decrees. The President appoints a Minister who presides over the formulation and interpretation of educational policy. A hierarchy of officers, ranging from the high-ranking permanent secretary at the Ministry to a teacher in the classroom, ensures the implementation of the policy. At each level of civil administration, that is the sub-location, location, district, province and nation, there are officers in charge of policy implementation.

2.3 The Education Act of 1978 and its Amendment Act of 1995 vest in the government, the Ministry of Education and Culture (MOEC) and Ministry of Science, Technology and Higher Education (MSTHE), control over education in the country. Beyond these there are many separate Acts establishing individual institutions of further and higher education or setting up public regulatory bodies. Many higher education institutions have their own Act of Parliament as do a number of statutory bodies. The latter include the Tanzania Institution of Education (TIE), for example, which had its Act amended four times between 1963 and 1993, with frequent changes of name. The National Examinations Council of Tanzania (NECTA) sets examinations in the whole educational system except for the University. The Tanzania Inspectorate supervises standards of schools, personnel and teaching. The Teachers Service Commission is charged with registration and employment of teachers.

2.4 The existence of numerous Acts for different institutions makes co-ordination and coherence within tertiary education difficult. The rationalisation of institutions of higher learning becomes particularly problematical. Moreover, many of the education Acts are not fully consistent with the liberalisation policies which were adopted later. Almost all institutions were established on the basis of full funding by the Government, so that the role of non-government actors in the financing and management of these institutions is not well articulated nor fully recognised.

2.5 In addition there are bureaucratic hurdles that need to be overcome if institutions are to handle their activities efficiently and effectively. Studies done by the MSTHE (1995) indicate that the state still assumes excessive powers and control over institutions and subsequently compromises their autonomy, efficiency and

innovativeness. It is important that more realistic and flexible Acts are in place in order to stimulate and speed up sector development.

2.6 The principal statements of national policy on education are ***Education and Training Policy*** issued by MOEC in 1995, and ***National Higher Education Policy*** emanating from MSTHE in 1998.

Ministerial Responsibilities

2.7 According to the Education Act of 1978 and its amendment of 1995 the Ministry of Education and Culture and Ministry of Science, Technology and Higher Education have policy control over education in the country. However, neither MOEC nor MSTHE has sole responsibility for all types and levels of education, or the institutions delivering education services.

2.8 At the national level all public policies are co-ordinated by one centre, which is the Prime Minister's Office. According to the Government Organisation Structure, all ministries report to the Prime Minister's Office, which is thus in principle the overall co-ordinator of education matters.

2.9 ***Formal primary education*** is the responsibility of the Ministry of Education and Culture and that of Regional Administration and Local Government. The Local Government Reform Programme (LGRP) of 1997 provides that the Ministry of Education and Culture is responsible for setting up minimum education standards and policies at primary school, and ensuring their implementation. MOEC is also charged with the training of teachers. For its part, the Ministry of Regional Administration and Local Government provides the infrastructural support to primary schools and ensures optimal staffing levels are maintained.

2.10 ***Secondary education*** is co-ordinated by the Ministry of Education and Culture in almost every respect, ranging from staffing to provision of education inputs and school inspection, in the public system of secondary schools; and registration and monitoring of standards of provision in the private sector. It is assisted by various autonomous and semi-autonomous bodies, which operate under the umbrella of the Ministry, including the Tanzania Institute of Education (TIE) and the National Examinations Council of Tanzania (NECTA). They are respectively responsible for curriculum development and setting and administering examinations.

2.11 ***Vocational education*** is co-ordinated by two ministries, the Ministry of Social Welfare, Women Affairs and Children, and the Ministry of Labour, Youth and Sports. Registration, curriculum and examinations for vocational institutions are the responsibility of the Vocational Education Training Authority (VETA) which is an autonomous body under the Ministry of Labour, Youth and Sports. There is a regional board system that runs vocational training under VETA.

2.12 ***The higher and technical education*** system has three distinct elements, namely co-ordinating ministries, higher and technical institutions and the regulatory professional institutions. The structural arrangement of this sub-sector presents a rather loosely co-ordinated complex picture, where higher and technical education is provided under six different sectoral ministry departments and through non-

government bodies. The co-ordinating ministries, and the institutions that each oversees, are summarised in Table 2.1.

Table 2.1: Distribution of Higher and Technical Institutions by Sectors - 1999

	Ministry/Sector	*Number. of Institutions*	*Name of Institutions*	*Type of Award*
1.	*Ministry of Industry and Trade*	*1*	*CBE*	*Advanced Diploma*
2.	*Civil Service Department*	*1*	*IDM*	*Advanced Diploma*
3.	*Ministry of Finance*	*3*	*IAA, DSA & IFM*	*Advanced Diploma*
4.	*Ministry of Works*	*1*	*NIT*	*Advanced Diploma*
5.	*Ministry of Social Welfare, Women's Affairs and Children*	*1*	*CDTI*	*Advanced Diploma*
6.	*Ministry of Labour Youth and Sports*	*1*	*NSWTI*	*Advanced Diploma*
7.	*Ministry of Co-operatives and Crop Marketing*	*1*	*MOSCO*	*Advanced Diploma*
8.	*Ministry of Science, Technology and Higher Education*	*8*	*UDSM,UCLAS, MUCHS, DIT, OUT, SUA, TCA & MTC*	*Full Technic. Cert, Advanced Diploma, Degree.*
9.	*Non-Government Sector*	*6*	*TUMAINI Univ, SAUT, HKIMU, IMTU & Univ. of Z'bar*	*Degree*

Source: MSTHE 1999

2.13 The Higher Education Accreditation Council (HEAC) was established by Act of Parliament Amendment No. 10 of 1995, to advise the government and private education institutions, and to accredit and monitor these institutions. This body is autonomous and operates under the Ministry of Science, Technology and Higher Education (MSTHE). However, it is lacking in capacity and competence required for purposes of institutions' rationalisation.

2.14 ***Non-university-level tertiary education***, referred to in some countries as 'further education', would encompass all post-secondary education and training beneath the 'higher education' level. As discussed in more detail below, the provision is of many different kinds and serves the training needs of many sectors of the national economy.

2.15 This requires overall co-ordination by a body established by Act of Parliament, so as to ensure a national and standardised system of awards in tertiary education. For this purpose the National Council for Technical Education (NACTE) was established by an Act of Parliament No. 9 of 1997 to advise the government, the private sector and individuals on the establishment, accreditation and monitoring of non-university tertiary institutions.

Decentralisation Policies and the Private Sector

2.16 Part of Government's new policy thrust is to achieve greater decentralisation of policy-making and management in education. In practice there is still a lot of centralism because of old beliefs in tight control being necessary for forging national unity and for mobilisation of all resources for the development of the country. This tight control needs to be slowly dismantled because it is inconsistent with the new political philosophy of pluralism and participation, and also for the good economic reason that the government is unable to meet the high cost of education. Even under a decentralised system, however, central government would retain responsibility for formulation of policy, for co-ordination of the different providers to create a coherent education system, for ensuring that

education opportunities of the requisite scale and quality are available to the population, and for maintenance of standards and monitoring of progress.

2.17 In financial terms central government has had to pass increasing financial responsibility to local communities under the ongoing local government reforms and through such devices as community education funds. These entrust school control to the local authorities and communities.

2.18 Another aspect of the trend against centralism is the pursuit of democratisation of education, which is part of the wider democratisation process in society as a whole (Getao, 1996). This requires that individuals and communities participate in policy formulation and implementation. It implies that central government will increasingly have to relinquish control over resources, decisions and implementation to the communities, and assume the role of a co-ordinator or facilitator.

2.19 Among the bodies that would be most strongly affected by democratisation is the Teachers Service Commission, whose inefficiency in staffing schools and taking care of teachers' welfare can be attributed partially to centralisation. The rapid expansion of the primary and secondary system has made it difficult for a centralised TSC to serve the education system efficiently. The TSC has an impossible task of getting enough information about the complexity and everyday changes in schools all over the country.

2.20 Closely related to decentralisation, indeed one dimension of it, is the policy of liberalisation. In recent years the private sector has assumed a greater role in education provision and financing and has received more attention particularly at secondary and higher level. Partly this reflects the fact that public resources are limited and cannot meet the demand. As Table 2.2 shows, only 0.17% of the enrolment at primary school level in 1999 was in private schools. Yet at lower secondary level 43% of the school enrolment was absorbed by the private sector 1999 and the private sector's role is still more pronounced at upper level being 46.8% of total. However, the seemingly high presence of private provision at the secondary level has to be considered in the light of the generally low transition rates between primary and secondary levels.

Table 2.2: Number and Percentage Share of Students Enrolled in Non-Government Schools, in Tanzania: 1985 - 1999

Year	Primary		Secondary				Vocational/ Technical		Post Secondary	
			Lower		Upper					
	No.	%	No.	%	No.	%	No.	%	No.	%
1985	9,614	0.3	39,667	51.3	1,108	19.4			-	-
1990	5,638	0.16	80,739	57.2	2,575	27.9			-	-
1995	5,170	0.12	100,035	54.5	4,272	33.5	41,345	88	-	-
1996	5,684	0.14	96,321	52.0	5,411	38.7			-	-
1997	6,252	0.15	102,262	49.3	6,789	37.6			889	6.1
1998	7,139	0.18	94,316	45.1	8,254	35.4			1,357	11.2
1999	7,359	0.17	97,453	43.1	10,160	46.8				

Source: *MOEC (1999) Basic Statistics in Education, 1994-1999; 1995-1999; Galabawa & Mbelle (2000)*

2.21 The most recent study conducted in 1996 shows that about 88% of students receive vocational training in private centres mainly run by mission trade schools, private vocational education training centres and company centres. Many vocational education institutions are small with an average enrolment of only 133 trainees (UNDP 1999). While company-based training centres are fewer in number, they have a total training capacity of 10,000 people as compared to VETA training centres that have enrolment capacity of around 3,500 students. The contribution of Mission trade schools and private centres is a split 33% each (UNDP, 1999). It is however notable that the capacity of private vocational training in Tanzania is still far from meeting the available demand created by primary school leavers not selected for Form I, or by those secondary school leavers who join neither teacher education nor other tertiary training institutions.

2.22 Private provision of higher education is a recent phenomenon in Tanzania. As indicated in Table 2.2 in 1997 the non-government sector enrolled only 889 students (6.1%) of the total enrolment in higher education; this grew to 1,357, (11.2%) in 1998. The need for expansion of private university and higher education in order to contribute to the improvement of the international standing of Tanzania is real. This expansion will certainly require a series of enabling reforms for non-government participation to be able to absorb greater numbers and maintain the required quality.

Education Structure

2.23 The education structure provides one year for pre-primary education; seven years for primary education; four years for lower secondary education (ordinary level); two years for upper secondary education (advanced level); and three to five years for university education.

2.24 The number of Standard VII leavers has been increasing over the years while their chances of gaining entry to Form I in secondary schools (public or private) is less than 20%. Only 8.5% of pupils gain entrance to public secondary schools and a further 8.3% to private secondary schools. Those entering private secondary schools come from households whose parents can afford to pay the much higher fees.

2.25 Selection to public secondary school places is determined by the PSLE results, adjusted to reflect the quota schemes in operation. Regional and district quotas for those who achieved grade B or better have been established by the MOEC based

on enrolments and available places in public secondary schools. The proportion varies from one location to another. The effect of the quota system is that the examination marks required to gain entry to public secondary school vary widely among regions, and among districts within the region.

2.26 The structure has remained essentially the same since the 1970s and takes at least seventeen years for successful students to complete. In practice as Chapter 3 and Chapter 6 make clear, there is restricted access and considerable wastage, so that very few individuals do progress from the start of the system to the finish. Primary schooling is meant to be universally accessible, but in practice net enrolment rates are only a little above 50%. There is considerable wastage/ drop-out in primary school and thereafter a succession of selection hurdles for Form I, Form V, and for post-secondary institutions mean that very few survive to reach university or its equivalent. Tanzania's secondary- and tertiary-level enrolment rates compare very unfavourably with those of most other English-speaking countries in SSA**.**

The Education System and Its Sub-Sectors

2.27 The education sector is much the largest component of the public sector. Even excluding the adult education system, about one in six Tanzanians is engaged in the formal education system as pupils or teachers. Table 2.3 shows the relative size of the education system in terms of institutions, enrolment and teachers.

Table 2.3: Institutions, Enrolment and Teaching Staff.

Education Level	*No. of Institutions*			*Enrolment*			*Teaching Staff*		
	Govt.	*Non. Govt.*	*Total*	*Govt.*	*Non. Govt.*	*Total*	*Govt.*	*Non. Govt.*	*Total*
Pre-primary	*2,494*	*1,173*	*3,667*	*111,732*	*62,735*	*174,467*	*2,567*	*1,341*	*3,908*
Primary	*11,377*	*32*	*11,409*	*4,182,617*	*7,139*	*4,189,816*	*103,731*	*N.A*	*-*
Secondary	*514*	*377*	*891*	*139,964*	*107,615*	*247,579*	*7,255*	*5,528*	*12,783*
Teachers Education	*34*	*8*	*42*	*8,252*	*249*	*8,501*	*904*	*45*	*949*
Vocational	*377*	*361*	*738*	*5,340*	*41,359*	*46,689*	*322*	*N.A*	*-*
Technical	*4*	*N.A*	*-*	*2,276*	*N.A*	*-*	*229*	*N.A*	*-*
Tertiary	*12*	*N.A*	*-*	*4,327*	*N.A*	*-*	*462*	*N.A*	*-*
University	*3*	*7*	*10*	*12,665*	*1,170*	*13,835*	*1,127*	*259*	*1,386*

Source: Basic Education Statistics (BEST) 1995-1999
Some Basic Statistics on Higher Learning Institutions in Tanzania 1995/96 – 1999/2000

Primary Education

2.28 There were 11,377 public primary schools and 32 private primary schools in 1999, employing about 103,731 teachers and an enrolment level of 4,189,216 pupils. There is considerable disparity in enrolment rates and distribution of teachers by regions. In 1972 the Ministry of Education and Culture decentralised the management and administration of public primary education to local authorities. These are responsible for construction of new schools and maintenance of assets already in place. However, the Ministry maintains the setting of education standards and policies, develops curriculum, sets examinations, trains teachers, ensures quality through regular inspection services and monitors implementation of the sub-sector.

Secondary Education

2.29 The number of secondary schools increased from 595 in 1995 to 849 in 1999. This significant growth has been caused in part by liberalisation of education, allowing communities and the private sector to start and manage schools. Table 2.4 shows the development in the number of public and private secondary schools between 1995 and 1999. The government schools include both those built and managed by the government and those built by communities but managed by the government. The non-government schools are privately built and managed. The government sets the criteria for starting schools, and schools begin operating after being officially registered by the Commissioner for Education, based at the Ministry of Education and Culture. The more rapid increase in government schools can be attributed in part to the government policy of ***taking up the management of schools*** built by communities, in addition to establishing new ones. Government participation was far less than 50% in the secondary education sub-sector in 1999, if the numbers of schools actually established by Government, without take-overs, is used as the yardstick[1].

Table 2.4: Secondary Schools by Ownership 1995-1999

Year	*Government*	*%*	*Non-Government*	*%*
1995	*259*	*44*	*336*	*56*
1996	*303*	*46*	*353*	*54*
1997	*350*	*43*	*371*	*57*
1998	*406*	*52*	*375*	*48*
1999	*444*	*60*	*382*	*40*

Source: MOEC "BEST", 1995-1999

2.30 The regional distribution of secondary schools by type of management is shown in Table 2.5.

Table 2.5: Secondary Schools by Geographical Distribution and Ownership in Tanzania 1999

	Govt.	*Community*	*Private*	*Seminary*	*Total*
Arusha	*3*	*45*	*22*	*3*	*73*
Coast	*6*	*11*	*5*	*2*	*24*
Dodoma	*6*	*18*	*6*	*3*	*33*
Dar es Salaam	*8*	*4*	*18*	*12*	*42*
Iringa	*7*	*10*	*31*	*4*	*52*
Kagera	*5*	*16*	*27*	*3*	*51*
Kigoma	*2*	*9*	*6*	*1*	*18*
Kilimanjaro	*9*	*51*	*63*	*9*	*132*
Lindi	*1*	*11*	*1*	*1*	*14*
Mara	*3*	*28*	*13*	*1*	*45*
Mbeya	*4*	*19*	*31*	*2*	*56*
Morogoro	*7*	*19*	*7*	*7*	*40*
Mtwara	*5*	*11*	*3*	*3*	*22*
Mwanza	*6*	*32*	*13*	*3*	*54*
Rukwa	*2*	*15*	*4*	*1*	*22*
Ruvuma	*4*	*9*	*17*	*4*	*34*
Shinyanga	*3*	*16*	*12*	*0*	*31*
Singida	*2*	*16*	*6*	*2*	*26*
Tabora	*4*	*16*	*9*	*2*	*31*
Tanga	*5*	*24*	*19*	*1*	*49*
Total	***92***	***380***	***313***	***64***	***849***

Source: ***MOEC (2000)***

Teacher Training

2.31 Various ministries are responsible for teacher education. The Ministry of Education and Culture (MOEC) has a network of 35 teachers' colleges for training non-graduate school teachers, and the Ministry of Science, Technology and Higher Education (MSTHE) is responsible for training degree-level teachers at the University of Dar es Salaam and at Sokoine University of Agriculture. Teachers for vocational training are produced through various institutions under the Ministry of Labour and Youth Development.

2.32 In 1998 the 35 government teacher training colleges (TTCs) under MOEC had an average of 225 students and 25 tutors (UNDP, 1999). There is excess capacity in the colleges with only 33% of the number of places occupied by pre-service students. The number of students being taught could be accommodated in fifteen colleges. Among the causes of the reduction in numbers was the introduction of boarding fees of Tsh. 80,000 per year and the freeze on hiring new teachers in an attempt to raise student-teacher ratios at all levels. Attaining an average primary pupil-teacher ratio of 45:1 across the country would cut the number of teachers required by 10,000 (UNDP, 1999).

Technical and Vocational Education

2.33 Technical education is offered in 12 training institutions, eleven of which are in the Mainland and one in the Isles, with a total capacity of 1,855 students. There has been a general upward trend in the output from the four technical colleges over the years (Table 2.6). However enrolment rates have still been low, possibly due the fact that the private sector has not yet fully involved itself in the sub-sector.

Table 2.6: Output Trends in Technical Colleges in Tanzania 1995-1999

	1995/96	*1996/97*	*1997/98*	*1998/99*
Dsm. Institute of Technology	*189*	*235*	*238*	*270*
Technical College Arusha	*117*	*149*	*155*	*164*
Mbeya Technical College	*151*	*166*	*189*	*190*
Karume Technical College	*26*	*36*	*53*	*69*
Total	***483***	***586***	***635***	***693***

Source: *MSTHE (2000)*

2.34 Vocational training is available in 738 institutions offering training in technical, commercial, information technology and computing, home craft and hotel trades. These are government, company, religion, private community owned. As Table 2.3 showed, the greater part of enrolment in vocational training is in the private sector.

2.35 It has been recognised by the government and donors that adequate training facilities are necessary in order to supply the economy with appropriate human capital. This has resulted in the establishment of numerous training facilities. Almost every ministry created its own training department for its own specific requirements. In addition, Folk Development Colleges, Post-Primary Technical Centres and the Vocational Education and Training Authority were established. This demonstrates that provision of tertiary education at various levels is vested in a multitude of ministries, parastatals and private sector. The mushrooming of

tertiary education institutions has been without proper co-ordination and this has resulted in overlaps and duplication of courses and programmes in some disciplines. Moreover, most of the institutions are under-utilised or not utilised at all.

2.36 By 1999, there were around 170 ***tertiary institutions spread over 13 ministries***. Table 2.7 shows the distribution of these institutions by specialisation. The health sector has the highest number of institutions(87) followed by the Co-operatives(20), Community and Rural Development(12), Agriculture(10), Finance(9). The areas with the least number of institutions are Natural Resources(2) and Prisons(2).

Table 2.7: Distribution of Tertiary Institutions by Specialisation 1999

Specialisation	*Number of Institutions*
Agriculture (P)	*10*
Health(S)	*87*
Community and Rural Development (S)	*12*
Finance (E)	*9*
Police (A)	*3*
Prisons(A)	*2*
Co-operative (P)	*20*
Forestry (P)	*5*
Natural Resources (P)	*2*
Livestock (P)	*6*
Communication and Transport (P)	*8*
Management (A)	*6*
Total	***170***

***Note**: P-Productive, S-Social, E-Economic, A—Administrative*
***Source:** MSTHE 1999*

2.37 The distribution of tertiary institutions by broad category is thus as follows:- Social (58.2%), Productive (30.0%)., Administrative (6.4%) and Economic (5.4%).

2.38 ***Folk Development Colleges*** *(FDCs)* started with a programme launched in 1975 by the government in collaboration with the Swedish Government. Through financial and technical assistance from Sweden, 25 FDCs were constructed during the first phase, beginning late 1975. By 1992, there were 52 FDCs in the Mainland.

2.39 There were three specific objectives of FDCs. The first was to stimulate and motivate learning of adult men and women; the second was to facilitate follow-up activities related to literacy campaigns; and lastly was the objective of providing knowledge and skills useful in rural life (Ishumi, 1992, MOEC, 1975). Both short-term and long-term courses in three main areas were offered. These were general education (including social, economic and political studies, mathematics, the natural sciences, agriculture, nutrition, hygiene and sanitation); skill training in a variety of trades and crafts, farm management, book keeping, home economics, carpentry, masonry etc.; and cultural training (e.g. local cultural arts, music, folk songs, traditional folk dance and drama). The relevance of FDC programmes to the local community as well as to individuals is confirmed by Ishumi (1992), who points out that out of all ex-trainees sampled by an evaluation study, 78% stayed and worked in the villages while 25% went out to search for work outside villages. By 1998 Folk Development Colleges had produced close to 130,000 graduates.

Table 2.8: Indicators in Folk Development Colleges in Tanzania 1975-1990

	1975	*1980*	*1985*	*1987*	*1988*	*1989*	*1990*
No. of Institutions	*25*	*51*	*52*	*52*	*52*	*52*	*52*
Total enrolment	*n.a*	*13,964*	*16,419*	*24,250*	*21,549*	*11,625*	*468**
No of tutor	*100*	*192*	*374*	*447*	*446*	*434*	*450+*
Tutor learner ratio	*n.a*	*1:78*	*1:44*	*1:54*	*1:48*	*1:27*	*1:10*
Average Enrolment per Inst.	*n.a*	*274*	*316*	*466*	*414*	*224*	*89*
Average Staff per Institution	*4*	*4*	*7*	*9*	*9*	*8*	*9*
Average tutor-learner ratio	*n.a*	*1:69*	*1:45*	*1:52*	*1:46*	*1:28*	*1:10*

Source: *Ishumi (1992) , *only boarders, +estimate*

2.40 Reflecting the doubling of the number of institutions from 25 in 1975 to 51 in 1980, enrolment in FDCs increased steadily up to 1987. After 1985, however, there was neither construction nor conversion of older structures into FDCs, which thwarted the objective of having an FDC in each district. At present enrolment has dropped catastrophically to the point where only around 2,500 students are enrolled annually. This decline appears to be due to reduced government support and introduction of a fee (around US$ 30). There have been plans to transform FDCs into National Vocational Training Centres, with a shift from the self-employment and community capacity-building goal to wage employment, with students attempting the National Trade Test. Links with employers are weak, however.

2.41 ***Post-Primary Technical Centres*** *(PPTC)* providing a two-year training in Domestic Science, Carpentry, Masonry and Blacksmith studies, number almost 300. They face financial and human resources problems in addition to inadequate curricula, and this has led to low capacity utilisation, enrolling only 4,000 when installed capacity is 50,000. Kent (1995) points out that despite the low intakes, PPTCs' placement of their graduates in the labour market is still minimal.

2.42 ***The Vocational Education Training Authority*** *(VETA)*, previously a division under the former Ministry of Labour and Manpower Development, has the most organised vocational education and training institutions in Tanzania. There are 10 regional training centres and 50 VETA institutions that provide a four-year training program to primary and secondary school leavers. Initially VETA was designed for Std. 7 school leavers but as O-Level leavers increased in numbers there was more pressure exerted on the employment of school leavers unable to proceed for further education. The main objective of VETA at the time of their establishment was to make curricula more relevant to demands from the informal sector and to include entrepreneurship courses in the curricula. To date, these objectives have not been met as basic information about skills demand from the informal sector is still lacking.

2.43 Enrolment in VET Centres is very low, at 133 trainees per centre on average. In 1995, enrolment in VET was 46,689. Table 2.9 shows the output in 1996. Placement of VET graduates into the labour market has been dismal and declining over recent years. In 1996 for example, only 14% of the trainees who attended the VETA centres found a job after completion of studies. In previous years there was a slightly improved entry rate, with 13% placed in 1995, 20% in 1994 and 40% in 1993. As DANIDA (1995) has pointed out, the present shift of emphasis to the private sector's role, calls for the vocational/technical education and training

system to build close relationships with the private sector, in order to meet the changing needs of a dynamic labour market.

2.44 In 1997, 45,000 students were enrolled in 446 vocational training institutions. Analysis of institutions by trades offered indicates that 239 were in technical trades, 93 in commercial trades, 69 in the hotel industry, 9 in agriculture, and 36 were based in private companies. This last group, company-based training centres, had a Capacity of 10,000.

Table 2.9: Output of Vocational Training Students in Tanzania 1996

VET Provider	*No. of Students*	*% Output*
Private Individual owners	*13,750*	*40*
Religious/Mission	*9,015*	*26*
Parastatals/Private Companies	*3,528*	*10*
VETA centres	*2,986*	*9*
PPTCs	*1,701*	*5*
FDCs	*1,422*	*4*
Co-operative Unions	*1,074*	*3*
Government	*982*	*3*
Total	***34,458***	***100%***

Source: *VETA, MOEC, MCWCA – 1997.*

Higher and Technical Education

2.45 Higher and technical education enrols 15,777 students of whom 2,925 (18%) are in 8 accredited institutions of higher learning. Technical college institutions accounted for 2,276 (14%) students. Out of the gross enrolment, 3,050 students (19%) are enrolled in science disciplines. Postgraduate enrolment constituted an insignificant portion of 477 students (3%). Private universities' enrolment amounted to only 1,049 students spread over six universities.

Notes to Chapter two

[1] *The increase in secondary schools has actually been the result of liberalising the education system. However, Table 2.4 seems to show the total of Government; Actually the growth of Government of non-government schools, so the overall growth of the secondary system. May indeed have been fuelled by start ups of new community schools.*

CHAPTER THREE

EVOLUTION OF ENROLMENTS IN TANZANIA

Introduction

3.1 The regression in the gross and net primary school enrolment rates; the exceptionally low intake at secondary, university and vocational education levels; and the general low internal efficiency of the education sector have combined to create a crisis in Tanzania's educational system. This chapter examines trends in enrolment and gross enrolment rates by level and type of education rates.

Data and Presentation[1]

3.2 The data that was available for this study posed several problems of completeness and reliability. Data for the same item had different values in different official reports. A major source of errors was the fact that since 1988 no population census figures ware available. The Population Planning Unit gives estimates based on estimated parameters of the population. At the same time the MOEC Planning Unit makes its own enrolment projections based on different parameters. In several cases the sources cannot be reconciled. One of the main conclusions that the authors draw from this is that the database leaves too much to be desired even in core areas like enrolments and school-age population. Strengthening the data base needs to be undertaken as a future priority.

Trends in Enrolments

3.3 There were 3,161,079 primary school pupils in Tanzania in 1985. After expanding steadily in the subsequent decade primary enrolment reached 4,112,167 (a 30% increase) by 1999. However, as will be shown later, when measured in terms of enrolment rates, this actually represents a decline, undermining government's objectives to achieve universal primary education.

3.4 Table 3.1 indicates that enrolments at both lower and upper secondary have also increased over time. This increase went in tandem with the increase in number of secondary schools. Indeed there were 814 secondary schools in Tanzania in 1999, of which 439 were government and 375 private, including seminaries. These schools enrolled 225,866 pupils at lower secondary level and 21,713 at upper secondary in 1999. This should however not be regarded as satisfactory when compared with, for example, Kenya which, despite having a slightly smaller population, had as many as 2,632 secondary schools by 1992. The enrolment in secondary school shows an upward trend but remains low relative to the secondary school age population, as shown later.

Table 3.1: Trends in Enrolments by Level and Type of Education, in Tanzania 1985-1999

Year	*Primary*	*Secondary*		*Vocational*[1]	*Tertiary*[2]
		Lower	*Upper*		
1985	*3,161,079*	*27,400*	*5,697*	*-*	*4,866*
1990	*3,352,934*	*147,062*	*9,211*	*2,394*	*5,157*
1995	*3,837,403*	*183,655*	*12,716*	*2,661*	*7,831*
1996	*3,937,404*	*196,887*	*13,974*	*2,953*	*9,974*
1997	*3,943,579*	*205,566*	*18,041*	*3,136*	*11,148*
1998	*4,057,965*	*208,738*	*18,165*	*3,624*	*14,076*
1999	*4,112,167*	*225,866*	*21,713*	*3,513*	*16,712*

1. Enrolments in VETA colleges only; however the total VET enrolment was around 47,000 in 1995

2. Includes technical education colleges and higher education colleges

Source: *MOEC, BEST, Various.*

3.5 The vocational education enrolment shown in Table 3.1 is for VETA colleges only and has increased from 2,394 in 1990 to 4,805 in year 2000. As is the case with secondary education enrolment, however, numbers in vocational training are comparatively small compared to the output of primary and secondary education leavers who do not proceed into post-primary/secondary education. There is paucity of data on vocational education enrolment, which does not seem to have been solved by the recent creation of the Vocational Education Training Authority (VETA) to take over the work which was formerly under the Department of Vocational Training in the Ministry of Youth and Labour.

3.6 The total higher education system enrolment was 16,712 in 1999 compared with 4,866 in 1985. These low enrolment levels for higher education translate into low participation rates for a national population of about 32 million people. These small numbers should also be weighed against the fact that Tanzania has more than 150 tertiary training institutions, many of which are not accredited as higher education institutions.

Trends in Gross Enrolment Rates

3.7 Trends in gross enrolment rates by level and type of education are presented in Table 3.2. Although the enrolment at primary school increased to over 4 million pupils by 1999, as shown in Table 3.1, the gross enrolment rate (GER) over the period 1985 to 1999 declined from 83.8% in 1985 to 66.2% in 1999 (Table 3.2). The declining GERs at a time of demographic growth is a cause for concern indicating that the 'non-schooling gap', school-age children out of school, is widening. Causative factors include restricted capacity of schools, economic inability of parents to meet the costs of schooling, and lack of confidence of parents and children in the ability of the school system to provide a basic education of reasonable standard and future relevance.

Table 3.2: Trends in Gross Enrolment Rates, by Level and Type of Education, in Tanzania 1995-1999(%)

		Secondary			
Year	*Primary*	*Lower*	*Upper*	*Vocational*	*Higher Education*
1985	*83.8*	*1.3*	*0.56*	*	*0.56*
1990	*70.2*	*6.9*	*0.87*	*2.86*	*0.27*
1995	*67.7*	*7.0*	*1.19*	*2.86*	*0.37*
1996	*67.7*	*7.2*	*1.23*	*3.15*	*0.48*
1997	*67.7*	*7.2*	*1.48*	*3.19*	*0.53*
1998	*65.9*	*9.5*	*1.42*	*3.55*	*0.65*
1999	*66.2*	*7.4*	*1.6*	*3.28*	*0.79*

Source: *Computed From: MOEC, BEST (1985/89, 1989/93, 1991/95 and 1995/99); Population Planning Unit, DSM 1999.*

** for VETA Centres only as private institutions data were not available*

3.7 The gross enrolment rate for lower secondary has increased from 1.3 in 1985 to 7.4 in 1999 and that for upper secondary has also increased from 0.56 to 1.6 in the same period. These levels remain low, however, both in relation to social demand, and the situation in some comparable countries. They show that Tanzanian children have a very low probability of attending secondary school. The low levels reflect both the limited government ability to provide enough resources for expansion of secondary school capacity and its restrictive policies in the 1970s and 1980s assigning a negligible role to the private sector in secondary education expansion and provision.

3.8 For the case of vocational training, what emerges from Table 3.2 is that albeit the data gaps, GERs have remained low at around 3. This is an indication that most of the primary and secondary school graduates who do not proceed to higher levels are not provided with opportunities to gain skills through the formal education and training system.

3.9 The higher education enrolment trends shown in Tables 3.1 and Table 3.2 translate into low GERs of 0.56 in 1985 to 0.79 in 1999. Thus higher education provision has essentially remained elitist, catering for a select few. The long-term impact of this trend has been poor externalities and socio-economic outcomes because of absence of a critical mass of highly qualified staff to service the population through both first and second round spill-over benefits which could be translated to high productivity and income economy-wide.

Comparative Gross Enrolment Rates

3.10 Tanzania has a difficult challenge of catching up in terms of GERs with both her regional neighbours and comparable low-income countries. The data in Table 3.3 show that the GER at primary school for Tanzania was 67.7 in 1995, the Sub-Saharan Africa (SSA) average was 74, and that for low- and middle-income countries was actually 102. At secondary level the figures indicate that Tanzania's 1995 GER was 7.2, while in both SSA and low and middle-income countries it was already close to 25. Yet the situation at higher education level is more alarming for it shows that while the SSA Gross Enrolment Rate was 3 in 1995 it was only 0.37 in Tanzania, in the same year.

Table 3.3: Comparative Gross Enrolment Ratios by Level (1995): Tanzania and Other Countries

	Primary	*Secondary*	*Higher Education*
Tanzania	*67.7*	*7.2*	*0.37*
SSA	*74*	*25*	*3.0*
Low Income & Middle	*102*	*25*	*10.0*

***Source**: World Bank (2000) "Higher Education in Developing Countries" and Table 3.2.*

Grade-Specific Enrolment

3.11 An erratic trend in grade-specific enrolment figures is shown in Table 3.4. Although there has been an increase of Grade 1 enrolment from 683,803 in 1992 to 737,564 in 1999, in between there have been some fluctuations.

Table 3.4: Primary Grade-Specific Enrolment in Tanzania 1992 - 1999

Grade	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*
1	*683,803*	*668,113*	*674,334*	*712,593*	*723,749*	*732,360*	*693,498*	*737,564*
2	*587,182*	*622,945*	*621,734*	*625,800*	*681,478*	*682,556*	*682,066*	*659,852*
3	*541,911*	*561,080*	*582,454*	*587,257*	*588,084*	*629,271*	*646,671*	*646,132*
4	*565,923*	*577,904*	*599,499*	*572,155*	*613,832*	*596,309*	*655,678*	*684,034*
5	*451,246*	*480,432*	*463,877*	*528,272*	*463,109*	*530,417*	*475,332*	*534,047*
6	*417,000*	*430,195*	*454,866*	*431,425*	*483,424*	*430,268*	*499,336*	*454,425*
7	*371,358*	*408,679*	*400,066*	*420,143*	*409,212*	*456,780*	*389,987*	*473,162*
Total	***3,620,415***	***3,751,341***	***3,798,824***	***3,879,640***	***3,964,884***	***4,059,958***	***4,044,566***	***4,191,215***

Source: *MOEC Basic Statistics in Education (1999 June, 2000 June)*
Notes: *Internal Efficiency Index (Primary) = 0.56 computed by use of the Input-output ratio for the 1992/1998 Cohort; where output is defined as successful completions of the seven year cycle.*

3.12 The trends in grade-specific enrolment between 1998 and 1999 as depicted in Table 3.4, show an increase except for grades 2, 3 and 6, 655,678 to 684,034 (2.8%). It is worth noting that the grade specific enrolments are lowest in Grade 7 throughout the period covered, except for 1997 and 1999.

3.13 A tracer of the 1992 cohort indicates that of the 683,803 pupils who enrolled in Grade I in that year only 389,987 survived the 7-year cycle, an indication that 293,816 (42.9%) pupils dropped out on the way. By defining and computing the internal efficiency index for primary education using the 1992/1998 cohort to calculate an input output ratio, it is found that the internal efficiency index for primary education is 0.56, if the 1992-1998 cohort is taken as representative [This figure of internal efficiency for primary education in Tanzania compares very unfavourably with the SSA average of 0.88].

3.14 Table 3.5 shows secondary-school grade-specific enrolment trends. The Form I Enrolment has increased overtime, from 50,246 in 1994, 53,698 in 1995, 61,811 in 1997 to 67,477 in 1999. The grade-specific enrolment for Forms II and III also show a similar increasing trend. The only decline in grade-specific enrolment for secondary schools was experienced at the Form IV grade between 1995 and 1996.

3.15 The grade-specific enrolment figures for upper secondary increased by 77.3% from 6,752 in 1994 to 11,972 in 1999 for form V. There was also a 65% increase in enrolment from 5,874 in 1994 to 9,741 in 1999 for Form VI though it should be emphasised that the transition rates between lower secondary to upper secondary was a low 28.8 in 1998/99. The above picture translates into an internal efficiency of 0.96 and 0.92 for lower secondary and upper secondary respectively.

Table 3.5: Secondary Grade-Specific Enrolment in Tanzania: 1994 - 1999

	1994	1995	1996	1997	1998	1999
FORM I	50,246	53,698	56,261	61,811	64,219	67,477
FORM II	46,794	48,479	49,381	57,209	55,974	62,427
FORM III	40,297	43,716	42,691	48,216	46,954	51,709
FORM IV	36,283	38,266	36,786	40,324	41,591	44,251
FORM V	6,752	6,879	7,696	9,820	9,989	11,972
FORM VI	5,874	5,841	6,278	8,227	8,176	9,741
TOTAL	**188,240**	**198,874**	**201,089**	**227,604**	**228,901**	**249,576**

***Source**: MOEC Basic Statistics in Education, 1999, 2000 June.*
***Notes**: Internal Efficiency Index for Lower Secondary = 0.96*
Internal Efficiency Index for Upper Secondary = 0.92

Grade-Specific Enrolment Rates

3.16 The progression of a total number of pupils enrolled in schools expressed as a percentage of the eligible official school-age population is shown in Tables 3.6 and 3.7. For Tanzania, for the purpose of such calculations the primary school age-group is taken as being 6-12, the lower secondary age-group 13 to 16 and the upper secondary age group 17 and 18. It should be noted that taking account of under-age and over-age children in school, partly as a result of repeating grades, a country's gross enrolment rate could be more than 100%. Yet the rates for Tanzania are well below the 100% mark.

Table 3.6: Grade-Specific Enrolment Rates in Primary Schools in Tanzania 1992-1999 (%)

Grade	1992	1993	1994	1995	1996	1997	1998	1999
1	82.7	80.5	77.9	79.7	78.5	77.1	71.3	70.7
2	74.4	76.8	74.4	72.7	76.7	74.6	72.6	68.3
3	70.1	71.5	72.1	70.7	68.7	71.3	71.3	69.3
4	75.5	75.8	76.6	71.1	74.2	70.0	67.1	75.9
5	62.5	63.0	61.1	67.8	57.8	64.5	56.2	59.3
6	61.0	59.8	61.4	57.0	62.2	53.9	61.0	52.2
7	58.0	59.9	55.8	56.9	54.2	59.0	49.1	48.0

***Source:** BEST, various; Population Planning Unit for Population Projects*

3.17 The grade-specific enrolment rates for primary education declined across the years at each grade level. Although Table 3.6 has data showing that the Grade 4 enrolment rate was higher in 1999 than in 1992, it seems obvious that the 1999 rate is based on faulty school-age population data: a glance at Table 3.4 enrolment figures suggests (in a context of 2-3% p.a. enrolment growth) that the Grade-specific enrolment rate at Grade 4 could only have increased by two or three points between 1998 and 1999, not by nearly nine points. This is one of many anomalies in the official data that make analysis of the trends in education so problematical. In 1992 for example, Grade 1 enrolment rate was 82.7, and this declined to 70.7 in 1999. For Grade 2 the enrolment rate declined from 74.4 in 1992 to 68.3 in 1999. The rates for Grade 3 declined from 70.1 in 1992 to 69.3 in 1999; while the Standard VII grade enrolment rate declined from 58.0 in 1992 to

48.0 in 1999. This means that Grade 7 enrolment is less than half the size of the appropriate age-group in the latest period. This fall in enrolment rates took place in what was supposedly the decade of Education For All (EFA). This situation represent a serious decline in education opportunity and attainment.

3.18 The grade-specific enrolment rates for secondary school shown in Table 3.8 are alarmingly low. This means that for each secondary school grade level the great majority of secondary school age children supposed to be enrolled are not in school at the relevant grade. Such low rates of participation in secondary education massively constrain the availability of human capital for economic development in addition to the capacity to recruit quality teachers at all levels of the education system. Given the low levels of second-level GER in the past, the data for Tanzania imply that not more than 2 or 3% of the present workforce has had secondary level education. In turn, low rates of secondary school participation translate into even lower rates of enrolment in tertiary education. Although the first priority in Tanzania must be clearly given to primary education, it needs to lead into a continuing and balanced expansion of secondary, technical and tertiary education[2]. Certainly this will require strategic forward planning and investment in the education sector as a whole.

Table 3.7: Grade-Specific Enrolment Rates in Secondary Schools in Tanzania 1994 – 1999 (%) of potential

Form	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*
I	*7.4*	*10.5*	*7.7*	*8.2*	*8.3*	*8.5*
II	*7.4*	*9.4*	*6.9*	*7.8*	*7.4*	*8.1*
III	*6.8*	*8.4*	*6.3*	*6.8*	*6.4*	*6.8*
IV	*6.6*	*7.3*	*5.8*	*6.0*	*5.9*	*6.1*
V	*1.3*	*1.3*	*1.3*	*1.6*	*1.5*	*1.7*
VI	*1.1*	*1.2*	*1.2*	*1.4*	*1.3*	*1.5*

Source: *BEST, various; computation by authors*

Repetition (Dropout Rates) by Grade

3.19 The above picture on enrolment rates by grade, suggests that efforts have to be directed at addressing repetition and dropouts which are particularly wasteful especially at primary school level. Table 3.8 shows the magnitude of repetition and dropout rates by grade in primary education. Repetitions tend to be high in Grade 1 and decline between Grade 2 and Grade 3 and pick-up in Grade 4 and once again decline to near zero levels in Grade 6. Dropout rates appear to be high at the first grade, to decline between Grade 2 and 3, picking up at Grades 4, 5 and 6. Overall cycle dropout rates are around 4% while the overall cycle repetition rates are around 6%.

Table 3.8: Repetition (Dropout) Rates by Grade in Primary Education

Year	*Grade 1*	*Grade 2*	*Grade 3*	*Grade 4*	*Grade 5*	*Grade 6*	*Overall for the cycle*
1990	*4.2(7.1)*	*3.1(3.8)*	*2.2(4.6)*	*14.0(5.4)*	*0.0(4.1)*	*0.0(3.8)*	*3.9(4.8)*
1995	*3.1(5.7)*	*2.2(4.6)*	*1.3(5.4)*	*4.7(7.2)*	*0.0(7.0)*	*0.0(7.7)*	*1.8(4.8)*
1996	*3.4(5.7)*	*2.2(5.0)*	*1.3(5.8)*	*11.9(7.4)*	*0.1(8.4)*	*0.0(5.2)*	*3.5(6.2)*
1997	*3.2(5.7)*	*2.1(4.7)*	*1.2(3.3)*	*6.5(13.6)*	*0.0(7.1)*	*0.0(5.5)*	*4.3(6.6)*
1998	*3.4(5.6)*	*2.2(4.4)*	*1.3(5.5)*	*11.6(8.8)*	*0.2(5.8)*	*0.1(9.4)*	*3.1(6.6)*
1999	*3.4(3.4)*	*4.5(2.1)*	*5.8(1.4)*	*5.6(13.0)*	*4.3(0.1)*	*0.0(5.2)*	*4.8(3.3)*
Average	***3.5(5.9)***	***2.7(4.1)***	***2.2(4.3)***	***5.8(7.3)***	***0.8(4.7)***	***0.0(6.1)***	***3.6(5.4)***

Source: *MOEC (1999) Basic Statistics in Education, 1994-1998; 1995-1999.*

Several explanations can be given for the observed repetition and dropout rates discussed above. At the first grade it can be assumed that most parents prefer that their children repeat first grade because at the first enrolment most of them feel that their children are not yet acquainted with the school environment. The low repetition rates at higher grades can be explained by the policy in the country that officially does not allow repetition. The high repetition rate at Grade 4 is largely explained by the existence of the Grade 4 examination.[3].

3.20 The dropout rate is age-related. It tends to be high at Grade 1 because of possible disinterest in schooling and the curriculum, and of other socio-economic factors affecting the ability and willingness of households to keep children in school. Failure of schools to monitor carefully achievement and quality of learning may be another determinant of dropouts. This suggests that policies to discourage children from dropping out of school or being excluded from school should include social mobilisation campaigns, radical curriculum review and ***performance tied resource incentives***.

3.21 Repetition figures are difficult to trace in secondary school, because the policy does not allow repetition except at Form II. However, the situation is changing in private schools where achievement monitoring and academic make-up are exercised. Dropout rates appear to be higher at secondary level than at primary level. Unfortunately they do not display a regular pattern as evidenced in Table 3.9. The average dropout rates are 3.9% for Form I, 8.9% for Form II and 8.6% for Form III. These figures hide considerable inter-year variances, however. For example the dropout rates in 1996 appear abnormally high as do the 1998 rates for Form II (17.4%) and Form III (13.7%). Too much store should not be set by conclusions drawn from analysis of such erratic data.

Table 3.9: Dropout Rates by Grade in Secondary Education in Tanzania: 1980-1998 (%)

Year	*Form I*	*Form II*	*Form III*
1990	*3.7*	*6.6*	*2.8*
1995	*3.5*	*6.5*	*5.0*
1996	*8.0*	*11.9*	*15.8*
1997	*1.6*	*2.4*	*5.5*
1998	*2.8*	*17.4*	*13.7*
Average	***3.9***	***8.9***	***8.6***

Source: *BEST, various; computation by authors*

3.22 Secondary dropout appears to be a significant problem leading to a substantial number of secondary school children failing to complete Form IV. This calls for a deeper focused analysis of factors that promote retention at school. A number of studies indicate that dropout is poverty-related and that among the children who do enrol it is those coming from poor families who are overwhelmingly the ones

dropping out of school. The educational system may not be geared towards retention of children from low-income families and the most disadvantaged groups. Direct and indirect costs of school attendance can make education prohibitively expensive for such families. Reducing or dismantling the barriers that work against the poor requires priority attention. There is also an important gender dimension to secondary school drop-out as discussed in Chapter 7.

Index of Education System Coverage

3.23 It is vital to increase retention levels in the Tanzanian education system. Available data (that incidentally are not generally reported for international comparison purposes, and seldom used internally) suggest that learners are not moving effectively in the education system and completing each cycle. The school-life expectancy of a child entering school was 6.23 in 1985 but dropped to 5.48 in 1990 and only slightly improved to 5.66 in 1998. This low school-life expectancy is also associated with low public spending on education as a percentage of GDP and translates into an index of spending efficiency of 2.26 in 1998, an inefficient index level of spending when compared with a 1.3 figure of SSA as shown in Table 3.10.

Table 3.10: Index of the Education System's Coverage Efficiency in Tanzania 1985-1998

	1985	*1990*	*1998*
School life expectancy (years)	*6.23*	*5.48*	*5.66*
Public spending on education as % of GDP	*1.9*	*2.3*	*2.5*
Index of spending efficiency[1)]			
Tanzania	*3.2*	*2.38*	*2.26*
SSA	*1.1**	*1.1*	*(1.3)*

Notes: **Figure for 1980.*
[1)] A lower figure denotes lower/higher inefficiency.
Source*: Authors Computation and World Bank, World Education Report, 1993.*

Notes on Chapter Three

[1] *The data in this chapter contain several anomalies which have in most cases been drawn to the attention of the MOEC Directorate of Policy and Planning and the officials of the Statistics Unit. The present study reports school-age population data on which enrolment rates are based and which are taken from the MOEC and MSTHE basic statistics report compiled from school census Data/Reports. These reports pass through several decision points before reaching the Ministries. This procedure tends to bring about contradictory data for the same variables even when produced by the same agency.*

[2] *It may not be clear that priority " must be" given to primary education because Tanzania is much further behind other countries in Secondary and Higher education than in human rights or on rate of returns grounds.*

[3] *The average dropout rate for grade one is around 5.9 as compared to 4.1 for grade 2; 4.3 for grade 3; 7.3 for grade 4; 4.7 for grade 5 and 6.1 for grade 6. Both repetition and dropout rates are highest at grade 4.*

CHAPTER FOUR

EDUCATION FINANCING IN TANZANIA

Introduction

4.1 The education sector has often been described as under-funded and deficient in terms of cost-effectiveness and efficiency, resulting in poor educational performance as reflected in overall low quality and access. The major financiers of the sector have been the central government and households, followed by the donor community. Other sources have included local communities. Private contributions have been mainly for infrastructure in the public system and for private schools[1].

4.2 Basic education is mainly financed by the central government, followed by parents. Parents contribute mainly through UPE fees, exercise books and other pupil direct expenses. About half of secondary education is financed by the central government, followed by parental contributions in the form of fees and direct student costs such as uniforms and exercise books. The private sector operates the other half of secondary schools in the country.

4.3 Teacher education, the largest sector part of which is public sector teacher training colleges, was until 1999 wholly financed by the central government for recurrent expenditures. Pre-service students were paid training allowances, but in 1997 these were abolished and cost sharing was introduced with the requirement that students should pay Tsh 80,000. per annum as boarding fees. The private TTCs are mainly financed from private fees that stand at around Tsh. 550,000 p.a. per student.

4.4 Higher education's major financing source for recurrent expenditure has been the central government, followed by internally generated funds. Since financial year 1992/93 the government introduced cost-sharing in phases, for expenses such as transport. During phase II of cost sharing the government introduced student loans to be re-payable at the completion of studies. Due to the small size of the labour market, declining employment opportunities in the formal sector, and administrative bottlenecks, the probability of loan repayments may be low. The donor community has been the main source in financing the cost of research and other development costs in higher education: for several years the government has not funded higher education research costs.

4.5 The financing burden for both basic and secondary education has been shifting from government to households. Apart from the UPE rate of Tsh 2,000 per child at primary level the household is burdened by other costs which include exercise books, uniforms, writing materials, monthly test expenses, additional tutoring after normal school hours, etc. The household costs are estimated at Tsh. 152,007 in primary schools while at secondary they are estimated at Tsh. 48,050 (Unit Costs Survey) per year per child. In total, the costs are very high since in addition to these payments the household would also pay for mid-day meals or pocket money and in some cases bus fares.

4.6 A number of proposals that will increase charges in the form of cost-sharing are in the pipeline. These include: a national education levy[2], household involvement in site preparation of classrooms and teachers houses, contribution to a revolving fund for textbooks and a contribution to the cost of school inspectors. These policy initiatives are consistent with the government's Education and Training Policy of 1995 and the follow-up sector development programmes[3], that in one way or the other lay emphasis on diversification of financial resources and continuation of efforts to solicit internal and external support to complement government efforts.

4.7 Donor spending in the education sector appears to be increasing with growing priority given to basic education. While donors show continued interest in financing basic education, and little is forthcoming for secondary education, communities, private firms/individuals, NGOs and CBOs have shown greater interest in financing secondary education.

4.8 There are no records to show how much has been contributed in total by NGOs and the private sector although it is well known that both have actively participated in financing the education sector especially in infrastructure development.

Distribution and Trends in Public Spending in Education

4.9 The allocation of funds and actual expenditure in the education sector is shown in Table 4.1. The total educational budget increased from Tsh. 79,165 million in 1995 to Tsh 111,057 million in 1999. These figures represented shares in total government spending of 26.6% in 1995 and 24.2% in 1999, a decline in the share of 2.4%. During the same period the wage bill increased and education took a relatively small sector share of the government development budget. This might suggest a switching of priorities within the sector.

Table 4.1: Sub-Sector Shares of Education Sector Spending in Tanzania (Tsh Mil.)

	1995	*1996*	*1997*	*1998*	*1999*
1. Total Education Budget	*79,165*	*79078*	*95,467*	*106,947*	*111,057*
Share in total Govt. Spending	*(26.6)*	*(25.1)*	*(22.9)*	*(22.8)*	*(24.2)*
2. Basic Education	*49,174*	*51602*	*60,938*	*68,895*	*78,000*
Share in education spending	*(62.1)*	*(65.2)*	*(66.5)*	*(64.4)*	*(66.0)*
3. Secondary Education	*7,533*	*6,608*	*7,838*	*7,894*	*7,774*
Share in education spending	*(9.5)*	*(8.4)*	*(8.2)*	*(7.4)*	*(7.0)*
4. Teacher Education	*2,013*	*1,458*	*1,955*	*2,639*	*2,600*
Share in education spending	*(2.5)*	*(1.8)*	*(2.0)*	*(2.5)*	*(2.3)*
5. Higher and Technical Education	*15,922*	*16,836*	*16,811*	*22,914*	*26,638*
Share in education spending	*(20.1)*	*(21.3)*	*(20.7)*	*(21.4)*	*(20.0)*
6. Support Services share of total	*4,524*	*2,596*	*2,830*	*4,464*	*3,600*
Share in education spending	*(5.7)*	*(3.3)*	*(2.9)*	*(4.3)*	*(3.2)*

** Numbers in brackets refer to percent,*

Source: *PER, 1998, 1999*

4.10 The share of the total education budget going to basic education has increased from Tsh. 49,174 million (62.1%) in 1995 to Tsh. 78,000 million (66.0%) in 1999. Secondary education appears to be the most vulnerable sub-sector during this period because both the share and the total public spending show a percentage decline in the latest period shown from Tsh 7,838 million in 1997 (8.2%) to Tsh

7,774 million (7.0%) in 1999. Allocations to higher/technical and tertiary education increased between 1995 and 1996 (20.1% to 21.3%), then declined to 20.7% in 1997, and later rose to 21.4% in 1998 before falling to 20.0% of total education budget in 1999. The fact that primary education remains teacher intensive, with a high teacher salary bill, explains the large allocation to the sub-sector. Higher education has a high allocation in absolute terms because of the relatively high salaries of academic staff, high operating expenses at departmental levels especially in scientific and technological fields, and the elaborate infrastructure on higher education campuses.

Analysis of Personal Emoluments (PE) and Other Charges (OC).

4.11 Table 4.2 shows the magnitude and percentage of public expenditures on PE and OC for the period 1996 to 1999. Personal emoluments consume a large proportion of the education budget despite the low salaries paid to teachers. The OC allocation from public funds looks very inadequate and it is left to parents and communities to fund much of the OC requirement.

Table 4.2: Analysis of Public Expenditure on PE and OC by Sub-Sector in Education in Tanzania 1996–1999 (Tsh. Mill.)

Sub-Sector	*1996*	*1997*	*1998*	*1999*
Primary	*69,758*	*74,272*	*79,078*	*76,839*
PE	*67,501*	*72,182*	*76,002*	*71,787*
OC	*2,256*	*2,090*	*3,075*	*3,052*
Share of PE	*97%*	*97%*	*96%*	*96%*
OC per Student	*583*	*531*	*759*	*732*
Secondary				
Total	*8,086*	*7,910*	*10,209*	*8,491*
PE	*5,932*	*6,511*	*5,948*	*5,546*
OC	*2,154*	*1,399*	*4,262*	*2,945*
Share of PE	*73%*	*82%*	*58%*	*65%*
OC per student	*23,395*	*14,370*	*36,563*	*23,758*
Teacher Education				
Total	*2,024*	*2,261*	*3,075*	*2,378*
PE	*1,433*	*1,736*	*1,802*	*1,672*
OC	*591*	*525*	*1,274*	*706*
PE share	*71%*	*77%*	*59%*	*70%*
OC per student	*36,065*	*39,490*	*39,405*	*67,231*
Technical Education				
Total	*1,145*	*1,426*	*1,430*	*3,172*
PE	*251*	*319*	*161*	*242*
OC	*845*	*1,190*	*1,286*	*2,930*
PE share	*26.2%*	*16.5%*	*10.1%*	*7.6%*
Higher Education				
Total	*21,980*	*24,431*	*29,165*	*61,222*
PE	*12,127*	*7,085*	*10,497*	*39,182*
OC	*14,853*	*17,346*	*18,668*	*22,040*
PE share	*44.9%*	*28.8%*	*35.9%*	*64.1%*

Notes: *PE figures for higher education exclude salaries for lecturers*

Source: *PER 1999, Reconstruction by Authors from App. Accounts*

4.12 At primary school level the PE share declined marginally from 97% in 1996 to 96% in 1999. This leaves less than 4% of public expenditures for ***Other Charges*** so that primary schools have to do without basic items such as stationery, equipment, repairs, maintenance and textbooks unless communities, parents or donor organisations meet these costs. This situation has contributed to the low

quality of educational service at primary school level. The position appears to be a bit better at secondary school where the share of PE in total secondary recurrent expenditure appears to have declined from 73% in 1996 to 65% in 1999. For an understanding of the significance of this it would be important to know how much of secondary school OC is accounted for by expenditure on learning resources, and how much is spent on school administration or boarding/catering.

4.13 For teacher education the recorded share of PE displayed an erratic trend from 71% in 1996 to 77% in 1997 then declining to 58% in 1998 and rising to 70% in 1999. The high per student expenditure reflects low student-teacher ratios; and substantial boarding and catering costs, that were around 35% in the 1997/98 budget.

Table 4.3: Higher and Technical Education Expenditure by Purpose in Tanzania 1995 – 1999

	1995/96	*1996/97*	*1997/98*	*1998/99*	*1999/2000*
A: HIGHER EDUCATION					
Personnel/Non-teaching expenses	*0.03*	*0.05*	*0.02*	*0.04*	*0.09*
Student costs (Welfare/allowances excluding loan)	*22.3*	*30.5*	*22.4*	*24.9*	*14.9*
B: TECHNICAL EDUCATION					
Personnel/Non-teaching expenses	*2.5*	*16.6*	*10.1*	*10.9*	*4.8*
C: PE FOR HIGHER/TECHNICAL					
EDUCATION	*44.8*	*28.8*	*35.9*	*43.3*	*64.1*

Source: *Constructed from Appropriation Accounts, MSTHE, various*

4.14 In technical education the share of PE has declined over time from 26.2% of total recurrent expenditure in 1996 to 16.5% and 7.6% in 1997 and 1999 respectively (Table 4.2). Nevertheless, over the years more funds have been allocated to OCs in technical schools[4].

4.15 In higher education the figures for teacher salaries have been estimated from appropriation accounts of MSTHE by isolating the central personnel expenses and the sub-sector expenditure on "Other Charges". The constructed Table 4.3 suggests that the share of PE for higher and technical education was 44.8% during 1995/96, declined to 28.8% during 1996/97, increased again to 35.9% during 1999/98 and rose further to 64.1% in fiscal year 1999/2000: this wide variation clearly demands more detailed analysis to understand such wild fluctuation. Thus the proportion of expenditure covering student welfare at higher education has remained high even after introduction of student loans which are supposed to meet accommodation and food costs. In terms of the pattern of spending, student welfare takes a higher share of the budget of higher education than in industrialised countries but a lower share than the SSA average. At the same time funds for operational costs are smaller in Tanzania than elsewhere and one needs to understand whether this reflects lower outlays on academic expenses, with possible serious implications for education quality, or whether Tanzania is more economical in administrative costs of various kinds. As shown elsewhere within the institutions themselves PE consumes a high proportion of public allocations as compared to the share of OCs[5]. (See Unit Cost Survey).

Table 4.4: Proportion of Funds Allocated to Various Expenditure Items for Universities in Africa, Europe and UDSM (%)

Item	*Africa*	*Belgium and France*	*Japan and Sweden*	*UDSM*
Personal Emoluments	*46*	*75*	*48*	*68*
Student Welfare	*31*	*4*	*7*	*20*
Operating Costs and Material	*23*	*21*	*45*	*12*
Total	***100***	***100***	***100***	***100***

Source: *Galabawa and Mbelle (2000)*

4.16 Some evidence is available about the composition of other charges at secondary schools and in teacher education. The critical expenditure items are catering and material costs. For secondary education, catering claimed 63.1% of other charges in 1996, but this share has declined over time to 42.7% in 1999 in line with the de-boarding strategy. Conversely, the share for school materials rose from 8.5% in 1997 to 44.8% in 1999. In teacher education, catering still consumes a larger proportion of OC although it has shown a declining trend, falling from 77.8% in 1996 to 49.2% in 1999. The share of teaching materials for teacher training colleges has also risen from a low 1.1% in 1997 to 16.7% in 1999[6].

Total per Student Education Expenditures

4.17 Over the past five years government spending per pupil enrolled in primary education has been rising in nominal terms. By 1997/98 the primary per student expenditure was Tsh. 19,517 (Table 4.5). This figure, though, compares unfavourably with that for secondary education where expenditure per student was Tsh. 87,590 in 1997/98, four times as high. This ratio of secondary to primary per student expenditure has gone down from 13 in 1992/93 to 7 in 1994/95 to about 4 in 1996/97. This trend signifies a deliberate government policy to promote more parent cost-sharing at secondary and teacher training levels.

4.18 Per student expenditure in teacher training colleges has remained high. In 1997/98 the per student expenditure in teacher training was Tsh. 336,602, close to that of 1992, Tsh. 330,398. The ratio of teacher training per student to primary expenditure was thus equal to 25 in 1992/93 and 17 in 1997/98. The ratios have declined as a result of the deliberate cost-sharing policy in teacher education.

4.19 The average per student cost for higher and technical education has gone down from Tsh. 2,016,821 in 1994/95 to Tsh. 1,794,919 in 1995/96, and further down to Tsh. 1,205,566 in 1997/98. These figures represented a per student ratio to primary of 93 in 1994/95, 71 in 1996/97 and 62 in 1997/98.

Table 4.5: Total and Per Student Public Expenditure by Education Sub-Sector in Tanzania (Million Tsh. unless otherwise stated)

Sub-Sector	*1992/93*	*1993/94*	*1994/95*	*1995/96*	*1996/97*	*1997/98*
Primary						
Total	*47,348*	*57,975*	*81,920*	*69,758*	*74,278*	*79,078*
Per student Tsh.	*13,154*	*13,923*	*21,597*	*18,014*	*18,664*	*19,517*
Secondary						
Total	*13,927*	*14,395*	*12,475*	*8,086*	*7,910*	*10,209*
Per student Tsh.	*177,057*	*173,513*	*149,510*	*87,826*	*81,247*	*87,590*
Ratio to Primary	*13*	*12*	*7*	*5*	*4*	*4*
Teacher Training						
Total	*4,642*	*4,258*	*3,376*	*2,924*	*2,261*	*3,075*
Per student Tsh.	*330,398*	*269,097*	*207,709*	*123,498*	*170,043*	*336,602*
Ratio to Primary	*28*	*19*	*10*	*7*	*9*	*17*
Higher and Technical						
Total	*18,573*	*22,977*	*26,637*	*22,583*	*21,965*	*27,635*
Per student Tsh.			*2,016,821*	*1,794,914*	*1,324,876*	*1,205,566*
Ratio to Primary			*93*	*100*	*71*	*62*
Administration/Other	*8,358*	*6,972*	*6,603*	*5,610*	*4,214*	*5,549*
TOTAL	***92,848***	***100,579***	***131,011***	***108,060***	***110,123***	***118,546***

***Source**: Lawson, Craig, Ward and Hough (1999)*

4.20 International comparisons of per student public spending, shown in Table 4.6, reveal that Tanzania expends, as a multiple of GNP per capita, 0.15 for primary, 0.69 for secondary and 9.66 for higher education. Quantitatively Tanzania's public spending per primary school student compares favourably with other countries. Though well below Botswana, which spends 296.2 US$ per pupil in primary school, Tanzania's expenditure per student in primary school of 32.5 US$ is higher than that for Kenya (US$ 30.4), Uganda (US$ 24.8) or the average for Least Developed Countries of US$ 22.0. These findings seem surprising given the relatively low salaries paid to Tanzania teachers. In fact as a multiple of GNP per capita Tanzania spends above the SSA average of 0.13 and above the Least Developed Countries average of 0.10.

Table 4.6: International Comparisons of Public Spending per Student p.a. (1997)

	Primary	*Secondary*	*Higher*
Tanzania			
Tsh.	*19,517*	*87,590*	*1,205,566*
USD	*32.5*	*145.9*	*2,009.0*
As a multiple of GNP/Capita	*0.15*	*0.69*	*9.66*
Kenya			
USD	*30.4*	*-*	*-*
As a multiple of GNP/Capita	*0.09*	*-*	*0.004*
Uganda			
USD	*24.8*	*79.8*	*-*
As a multiple of GNP/Capita	*0.08*	*0.24*	*0.006*
Botswana			
USD	*296.2*	*1,545.7*	*-*
As a multiple of GNP/Capita	*0.09*	*0.47*	*0.007*
SSA*			
USD	*42.0*	*150.0*	*1,405.0*
As a multiple of GNP/Capita	*0.13*	*0.46*	*7.96*
Least Developed Countries			
USD	*22.0*	*95.0*	*417.0*
As a multiple of GNP/Capita	*0.10*	*0.45*	*1.98*

* *Refers to Year 1993 La*

Source: *Lawson, Ward, Craig and Hough (1999);* ***UNESCO (1993)*** *"World Education Report*

4.21 Tanzania's public spending per student in higher education as a multiple of GNP (9.66) is also high by comparison with the SSA region as a whole (7.96)[7]. Using aggregate data, unit cost per student in higher and technical education and can be computed, tracing changes in relation to enrolment changes and changes in government budgetary allocation after controlling for expenditures for overseas students. The results of the calculations are shown in Table 4.7. They indicate an initial rise in higher education per student cost from 1993/94 to the highest peak of US$ 3,771 for the entire period during 1994/95, with an average for all higher and technical education of US$ 3,166. Thereafter unit costs declined steadily for higher education alone to US$ 2,272 during 1987/98, before rising to US$ 2,718 during 1998/99, when the average for both higher and technical education was US$ 2,666

4.22 These per unit costs compare unfavourably with those in comparable countries. Corresponding figures for higher education alone are US$ 1,320 for Ethiopia, US$ 1,325 for Kenya; US$ 1,322 for Sudan and US$ 345 for Uganda (MSTHE, 1998). For 1997 there are signs that the cost of higher and technical education delivery in Tanzania is decreasing e.g. student multiples decreasing from 1:20:100 for tertiary student to secondary students to primary pupils in 1995/96, to 1:14:62 respectively in 1997/98. Analysis by Galabawa and Mbelle (2000) however, shows that there is still more room for reducing costs through improving efficiency.

Other Sources of Education Finance: (1) Parents and Communities

4.23 Parents and communities make two kinds of contributions to primary education for their children, those made directly to the schools and indirect contributions. It was estimated that direct parental contributions at primary level average about Tsh. 30,728, excluding lunch and transport costs. However, these contributions only a fraction of the household budget for education. In many of the schools surveyed by the Education Status Report team (2000), by far the largest part of parental costs constitutes indirect contributions. The burden of parental contributions has increased substantially over the last two years, although in the very poor rural areas revenues actual collected are considerably less than the fees levied[8]

Table 4.7: Student Unit Cost in Higher and Technical Education in Tanzania: 1993–1999 (US$ Current)

Year	*Higher Education*	*Higher and Technical Education*
1993/94	*1,487*	*2,446*
1994/95	*3,771*	*3,166*
1995/96	*2,557*	*2,260*
1996/97	*2,494*	*2,284*
1997/98	*2,272*	*2,128*
1998/99	*2,718*	*2,666*

Source: *Galabawa and Mbelle (2000*

The Public Expenditure Review survey results suggest that this could be attributed to a number of factors:

(i) Parents have not yet finished making payments, using the instalment approach. In this respect 80% of schools surveyed accepted instalments;
(ii) In-kind contributions were not reflected in the reported figures for actual collections: 24% of the schools surveyed allowed parents to pay fees in kind;
(iii) In poorer districts up to 58% of parents could not afford fees; and
(iv) Poor record keeping.

Table 4.8: Average Unit Costs/Expenditures at Primary Schools (1998/99)

Private Costs/Expenditures	
Fees	*6,481 (13%)*
Uniforms	*9,965 (21%)*
School Materials & Books	*9,464 (21%)*
Examinations & Games	*420 (1%)*
Other Contributions (Buildings, Desks)	*4,398 (9%)*
Other Costs – Lunch/Catering/Transport	*17,322 (36%)*
Total Private Unit Costs/Exp.(2)	***48,050 (100%)***

Source*: Education Status Report Survey (2000)*
Notes: *These figures should be taken as average for Tanzania Primary School Sector regardless of type of school*

4.24 The level of community contributions in primary schools can also be estimated from analysis of data from the Community Education Fund (CEF) project administered by the MOEC under the Human Resources Development Programme. The extent of parental involvement in CEF appears to be related to community awareness and wealth. The survey conducted in sample schools and communities revealed that communities differ in their speed of response to the sensitisation campaigns and thus in their level of participation and involvement in school finance. Rural communities (especially pastoral and those without cash

crops) require more sensitisation campaigns using approaches different from those used for urban communities. In Kilosa district for example, there was greater enthusiasm for CEF among schools within the township than among the pastoral communities in remote villages. By contrast, in Sumbawanga Urban there was no such disparity in enthusiasm for CEF because most parents in urban areas attach value to the education of their children.

4.25 Data from CEF suggest that parental contributions in monetary terms are an indicator of the participation level. ***Project implementation statistical data for 1998*** report that:

(a) parental contributions in Kibaha district with a total of 46 schools totalled Tsh. 73,960,000; an average of Tsh. 1,608,000 per school;
(b) parental contributions in Mtwara (rural) were Tsh. 36,940,000 from 60 CEF schools; an average of Tsh. 616,000 per school;
(c) parental contributions in Sumbawanga with a total of 41 CEF schools totalled Tsh. 68,355,000; an average of Tsh. 1,667,000 per school and parental contributions in Lindi (Urban) with a total of 13 CEF schools were Tsh. 14,357,000; an average of Tsh. 1,104,000 per school.

4.26 Table 4.9 shows financial flows into CEF schools compared with national averages in 1998. The data exclude resource flows related to personal emoluments that are estimated at around 96% in 1997/98 total publicly-financed flows. At national level it is worth noting that per pupil government spending on other charges went down from Tsh. 3,684 in 1994/95 to Tsh. 759 in 1997/98. Thus in 1998/99 schools in CEF projects spent an average of Tsh.3,534 per student on inputs unrelated to emoluments. Even the lowest average figure expended in CEF schools, of Tsh. 2,630 per student in Mtwara, was much higher than the national average OC expenditure per pupil provided by government funds.

4.27 On the other hand data from the School Mapping exercise in six districts of Kisarawe, Bagamoyo, Musoma, Serengeti, Magu and Morogoro urban by Galabawa (2000) indicate that several villages have experienced an increase in UPE collections from as low as 60% in 1997 to 100% in 1999. The secret behind this success appears to be the honest use of the contributions and that decisions on use are taken by the communities themselves. The contrary practice of collecting contributions and keeping them at the Ward Office for re-allocation and use is not popular, and tends to demotivate parents. Indeed, the capacity for community mobilisation was constrained by politically motivated village leadership that was only keen on enforcing school contributions unless if this contributed to their political standing and prospects of getting votes: not for the purpose of institution building.

Table 4.9: Financial Resource Flows into CEF Schools Compared to National Average in Tanzania (1998) excluding personnel emoluments

	Enrolment	*Contribution*	*Matching Grants*	*Total*	*Per Student*
Kibaha	*17,334*	*36,980,112*	*16,967,235 (20,012,877)*	*73,960,225*	*4,267*
Kilosa	*29,912*	*53,110,892*	*21,122,173 (31,938,721)*	*106,221,788*	*3,551*
Mtwara	*14,054*	*13,130,574*	*10,036,450 (13,797,106)*	*36,963,812*	*2,630*
Sumbawanga	*18,089*	*30,148,479*	*22,301,468 (15,844,853)*	*68,354,799*	*3,779*
Lindi	*5,452*	*7,178,574*	*3,935,214*	*14,357,148*	*2,633*
Total	***(84,841)***			***(299,857,770)***	***(3,554)[3]***
National Non-CEF	***(4,051,004)[4]***	-	-	**-**	**-**
OC per student				***(3,075 mill.)[2]***	***(759)[1]***

Notes: *1. Actual other charges per pupil for 1997/98 (Table 4.2)*
2. Tsh 3,075,000,000. Total OC for 1997/98 (Table 4.2)
3. The actual total per student expenditure for primary was Tsh.19,517 in 1997/98 (Table 4.5)
4. Total Enrolment at primary level
Source: *Galabawa and Komba (1999).*

4.28 What comes out clearly from the CEF and School Mapping exercises is the need to build the capacity of the district and village/school leadership to make the utilisation of funds fully transparent. Much of the communities' enthusiasm to contribute depends on the trust that people have in leaders who have proved to be honest with expenditures. When parents see that the money they contribute is spent wisely to improve the learning environment through the construction of classrooms, the provision of learning materials and improvement of the general welfare of children and teachers, they become motivated to contribute. Communities appear to have enough resources to finance education. What is lacking is the capacity and competence for the mobilisation and efficient use of available resources.

Other Sources of Education Finance: (2) District Councils

4.29 The contribution of the councils to financing education must be understood in the context that during FY 1994 the central government grants to the councils were on average 80% of total council income (75% for urban and 85% for rural councils). Councils' own contribution to recurrent costs is still low.

4.30 The main sources of local government revenue are outlined in the act establishing the local governments. They are legally empowered to extract revenue from virtually all activities, i.e. agriculture, natural resources, industries, commerce, services as well as from individuals. Most districts have five main sources of revenue, namely taxes in the form of development levies, cesses, property taxes, licence fees and user charges. They may in addition impose taxes on major tax bases touched by the central government.

4.31 Studies by Price Waterhouse in 1988, based on 42 rural councils, indicate that the main sources of all the revenues were development levy 28%, agricultural cess 25%, business and liquor licences 11% and other fees and fines 12%. These sources contributed an average of 76% of total revenue from councils' own

sources. For a sample of 10 urban councils the main sources of own revenue were found to be licences 29%, property tax 20%, development levy 16%, fees 8% and levies 7%. Together these contributed 80% of total revenue from own sources on average.

4.32 The performance of councils in the collection of own revenues has been poor. None of the district councils covered by the PER (1998) survey used any of their own resources to fund education activities. This finding is consistent with a previous finding that ***few councils manage to supplement government grants***, (Galabawa, 1993).

4.33 It has been clearly shown in the case of Bagamoyo and Kisarawe districts that the major challenge to the School Mapping exercise is the general performance of the economy and the fiscal incapacity of the districts. For example, the District Planning Officer Kisarawe indicated that during FY 1997/98 the total resource requirement for the district was around Tsh 4 billion. The district was expected to generate Tsh 150 million. from internal sources, but only 75% of the target was realized at around Tsh. 112 million. Considering that the central government approved grant was no more than Tsh. 130 million, the shortfall in the resource requirement was around Tsh 3.75 billion.

4.34 What has to be adhered to is a targeted, effective and efficient funds-allocation formula for education purposes through a grant system, in the form of either a general-purpose grant for education or a fixed unit equalising grant. This will make it possible to address the different needs of districts, and at the same time will allow the central government to exercise a measure of control over standards.

Other Sources of Education Finance: (3) Donor Expenditure on Education

4.35 Table 4.10 shows donor expenditure on education relative to total assistance to Tanzania. Total assistance increased from US$ 895.1 million in 1994 to estimated US$ 976.2 million in 1997. Assistance to the education sector also increased from US$ 35.3 million to US$ 92.8 million in 1997, representing a share of 3.7% in 1994 and 9.5% in 1997. This share reached 11.8% during 1997/98. As compared to total development funds, donor funds constituted 7.5% in 1994/95 declining to 6.8% in 1997**.** There is a need therefore for the sector to negotiate a better share of donor funds in the light of donor policy statements to the effect that education is a priority.

Table 4.10: Donor Expenditure on Education in Tanzania (Million US$)

Calendar Year	*1994*	*1995*	*1996*	*1997*	*1998**	*1999**
Total Assistance	*895.1*	*814.2*	*906.5*	*976.2*	-	-
Assistance to Education Sector (HRD)	*35.3*	*46.5*	*65.5*	*92.8*	*44.0*	*56.0*
Education share of total (%)	*3.9%*	*5.7%*	*7.2%*	*9.5%*	-	-

Notes: ** Approved estimates*

Source: *Lawson et al (1999), PER, 1998*

4.36 Table 4.11 shows donor funding for education sector for the period 1994/95 to 1997/98 by level. The figures for 1994/95 to 1995/96 are actual while those for 1996/97 and 1997/98 are approved estimates. The donor share in total education

expenditure was 4.2% in 1994/95 falling to 0.1% in 1995/96 and rising to an estimated share of 6.9% and 11.8% in 1996/97 and 1997/98 respectively. For the year in which the actual figures are available, the donor share in 1994/95 of total public primary education outlays was 1.6%, 1.0% for secondary education, 7.4% for teacher education, 11.3% for higher and technical education and 9.0% for support services. Available data indicate that during 1995/96 the entire donor support went into basic education, though it accounted for no more than 0.2% of the total basic education budget during that year.

4.37 The approved estimates for 1996/97 to 1997/98 suggest that donor share in basic education has been rising at the expense of secondary education support. However the donor share of public higher and technical education expenditure has risen from 9.3% during 1996/97 to 15.7% 1997/98. A substantial amount of donor funding goes into support services. By 1996/97, 29.1% of the total support service expenditure was supported by donors, and this was estimated to rise to 36.9% in 1997/98.

4.38 Table 4.11 to suggests that considerable donor funds are still going to teacher and higher education. For example during 1994/95, while the government directed around 66% of its own resources to basic education, 22% of estimated donor funds went to basic education and 55% to higher education. As pointed out by Todd and Dom (1997) if very considerable structural changes are to be made in basic education to improve access and quality then considerable donor investment funds will be required to kick-start the process.

Table 4.11: Donor Funding for Education Sector in Tanzania

	1994/95	*1995/96*	*1996/97*	*1997/98**
Total Education Govt. & Donors	*82,673*	*79,209*	*98,252*	*121,265*
Total Education Donors	*3,507*	*210*	*6,737*	*14,318*
Donor Share in total (%)	*4.2*	*0.1*	*6.9*	*11.8*
Basic Education	*49,976*	*51,712*	*62,569*	*76,764*
Total Govt. Domestic	*49,174*	*51,602*	*59,197*	*68,895*
Total Donor Dev. Funding	*802*	*110*	*3,372*	*6,869*
Donor's share	*1.6*	*0.2*	*5.4*	*8.9*
Secondary Education	*7,612*	*6,608*	*6,620*	*8,446*
Total Govt. Domestic	*7, 533*	*6,608*	*6,570*	*7,894*
Total Donor Dev. Funding	*79*	*0*	*50*	*552*
Donor's share	*1.0*	*0*	*0.8*	*6.5*
Teacher Education	*2,173*	*1,458*	*2,625*	*3,135*
Total Govt. Domestic	*2,013*	*1,458*	*2,395*	*2,639*
Total Donor Dev. Funding	*160*	*0*	*230*	*496*
Donor's share	*7.4*	*0*	*8.8*	*15.8*
Higher Education	*17,941*	*16,836*	*21,715*	*27,179*
Total Govt. Domestic	*15,922*	*16,836*	*19,695*	*22,914*
Total Donor Dev. Funding	*2,019*	*0*	*2,020*	*4,265*
Donor's share	*11.3*	*0*	*9.3*	*15.7*
Support Services	*4,972*	*3,876*	*3,661*	*5,794*
Total Govt. Domestic	*4,524*	*3,876*	*2,596*	*3,656*
Total Donor Dev. Funding	*448*	*0*	*1,065*	*2,738*
Donor's share	*9.0*	*0*	*29.1*	*36.9*

Note * *approved estimates*
Source: *Todd and Dom (1997)and PER (1999)*

4.39 Donor support is very low compared to the total budget. Donor funds are nevertheless required to prevent ***shocks*** within the macro-economic environment impacting negatively on the course of changing the role of government. Thus while prudent macro-economic management and consistency on the side of government is necessary, it is also important that there is a firm commitment and predictability of donor support. Many of the activities supported by donors in the sub-sectors require a guaranteed release of funds over a period of time. The period 1995/96 experienced problems of DANIDA pulling out of the sector and the suspension of SASP III releases due to inability to meet non-sectoral conditions related to overall structural adjustment, with results shown in Table 4.11. If development of the sector is to take place within the framework of a true partnership, modalities of donor support have to be better understood and where possible changed, so as to conform with Government's modus operandi (Todd and Dom 1997).

Notes on Chapter Four

[1] *School-level Survey data reported in the Unit Cost Analysis section suggests (Chapter 7) that parents contribute as much as the government to primary, secondary and teachers education. Thus, the "popular" statement that the major financier of the sector is the central government is not strictly correct!*

[2] *The justification of an education stakeholder levy-led and grant-driven system of finance and provision is to have in place a different, presumably higher, level and standard of educational services on the one hand, and a more effective distribution of educational benefits among Tanzanians than would be in place under a free market pricing system on the other hand. The levy will operate at low rates of contribution and will be against possible distortion of the current tax-regime.*

[3] *The ETP (1995) had somewhat conflicting messages. One the one hand it proclaimed cost-sharing; on the other access. It could be argued that some of these changes are not actually consistent with improving access!*

[4] *This trend is because more funds are allocated to OCs to cover costs for equipment, machinery and maintenance rather than deliberate withdrawal from PEs.*

[5] *The fluctuations in data related to higher education PE seem too extreme to give any confidence. Nobody seems to know exactly how much goes to higher and technical education PE. The figures used here are yet to be verified. The unit cost Survey indicated that PE are around 61% at SUA(36% for academic and 25% for administrative staff):at DIT salaries and wages consume only 12.5% while teaching costs are around 43%.Generally,the operating costs are "bad"(or high).There appears to be high material provision at MUCHS and SUA which is a good trend.*

[6] *Catering in secondary schools claim around 63% of OC expenditures. It would be desirable in future to have separate computations for boarding and day secondary schools. School materials shares at Secondary and Teachers Education OC have been rising because of the new policies on sources of financing which stipulated how the contributions made by parents are used in different sub-votes favouring catering (58%), school materials (52% for day and 13% for boarding).*

[7] *The favourable Tanzania figures should be interpreted in the light of inferior enrolment rates at all levels as compared to the regional figures and also in relation to lower relative salary figures pertaining in Tanzania civil services structure.*

[8] *It is estimated that almost 51% of the fees revenue at primary school is not collected.*

CHAPTER FIVE

EDUCATION QUALITY

Introduction

5.1 There is increasing recognition that to increase access to education is a necessary but not sufficient objective: access to quality education, producing perceptible learning achievement, should be the aim. This chapter discusses education quality from three standpoints: the quality of inputs, quality of education process and quality of outputs.

Quality of Inputs

5.2 Learners are the principal input to the education process. The quality of the human material that enters successive cycles of education is crucial to the effectiveness of education. The material and moral support of caring parents can make all the difference to a child's educational progress. In terms of public policy and investment, family education and support through ante- and post-natal care, health and nutrition of young children and early-childhood education deserve high priority.

5.3 Lawson et al, (1999) identified a number of factors that contribute to student achievement in school and so may be indicators of education quality. They found evidence of the importance of attitudes to education on the part of local communities and parents in relation to performance of schools. It was reported by district education officials and head teachers that in localities where schools worked well and achieved good results, parents and the local community in general were strongly supportive of the school, providing considerable financial resources. In localities where the schools had poor facilities, the reverse situation applied: little local community backing and the lack of parental support translated into frequent problems of absenteeism from classes and into high dropout rates.

5.4 Head teachers believed that the factor having the greatest effect on parents' attitudes was the sufficiency of school classrooms in relation to enrolment. The quality of the resources provided in the school was closely related to parents' willingness to pay towards the cost of their children's education.

5.5 The quality of teaching personnel does also determine performance. Unfortunately most rural teachers were characterised as lacking formal training, motivation and professional 'integrity' (used in the sense of competencies, personality and dedication). As a result many rural schools have not seen a PSLE ***pass*** for a number of years. A study by TADREG (1993) revealed that parents felt increasingly that their children were being excluded from the competition for secondary school places.

5.6 Lawson et al. further point out that, after the quality of teaching personnel, parents' evaluation of schools also relates closely to the availability of consumable school materials. Poor school supplies certainly affect student achievement.

5.7 The above suggests that the availability of physical infrastructure, of learning and teaching materials, and of qualified and motivated teaching personnel are basic contributors to student achievement. When these factors are in good supply parents will be less disenchanted with primary schooling as they will get value for their money as measured by their children's learning, for example ability to read and write, and to achieve selection to secondary schools.

Physical Facilities

5.8 The scarcity of school and classroom facilities remains a major problem at primary and secondary levels, yet available facilities are not used efficiently. Acute shortage of sufficient, good quality classrooms is a major obstacle to raising the quality of schooling. Within the primary school system, there are currently twice as many teachers as there are classrooms and the class: classroom ratio is also 2:1 (PER, 1999).

Table 5.1: Situation of Physical Infrastructure in Primary Schools

Type of Building/ Furniture	*Required Number*	*Actual Number*	*Shortage*	*Actual as % of Required*
Classrooms	*92,529*	*54,417*	*38,122*	*59%*
Staff houses	*111,581*	*24,404*	*87,177*	*22%*
Toilets	*153,114*	*46,319*	*106,795*	*30%*
Desks	*1,666,420*	*815,530*	*850,890*	*51%*
Tables } *for*	*189,613*	*69,734*	*119,879*	*37%*
Chairs } *teachers*	*206,593*	*71,370*	*135,223*	*35%*
Cupboards	*120,295*	*29,355*	*90,940*	*24%*

Source: *Kuleana (1998) "The State of Education in Tanzania Crisis and Opportunity"*

Pedagogical Materials

5.9 There has been a very restricted provision of critical teaching-learning materials. For primary education, the reason is limited allocation of funds, which has resulted in the use of a single textbook for instruction. Recent surveys verify the seriousness of the problem in a number of districts where textbook shortage is prevalent in almost all subjects (see for example Table 5.2). Financial constraints have also impeded the establishment and development of library facilities in most schools.

5.10 A number of measures have been taken to arrest the above situation, the most important one being to improve and protect basic education spending. This is done by soliciting financial resources to enable the government to shift from a single to multi-text book system, with competing titles, and to meet a target of one textbook to three pupils. The other reforms that are expected to improve the availability of learning materials are the Local Government Reform Programme and the sector-wide approach to socio-economic development, which will involve replacement of the current supply-driven system of education provision by a demand-driven one.

Teachers

5.11 Most primary school teachers are under-skilled, with only basic training. Over 50% of the teachers obtained minimal training after completing primary school under the Universal Primary Education Policy (UPE) during the 1970s and 1980s. Most of them have remained at the same grade with little or no chance to up-grade themselves.

Table 5.2: Availability of Textbooks by Subject: Kibaha District, Tanzania

Subject	*Available*	*Shortage(%)*
Civics	*404*	*88%*
Agricultural Science	*758*	*78%*
Geography	*859*	*75%*
Life Skills	*1,037*	*-*
Social Studies	*1,154*	*-*
History	*656*	*81%*
English	*2,997*	*51%*
Mathematics	*4,271*	*30%*
Science	*3,056*	*50%*
Kiswahili	*3,934*	*35%*
Domestic Science	*895*	*74%*

Source: *School Mapping in Kibaha District, 1999: 55 Shortage based on a book pupil ratio of 1:3*

5.12 It was in 1995 that serious efforts were made to increase the number of qualified teachers through the Education and Training Policy (ETP). At primary level the proportion of Grade A teachers is less than 50% and has been improving only slowly even after the ETP was put into place, as Table 5.3 confirms.

5.13 The problem of under-qualified staff and shortage of teachers is also true for secondary schools. Under the ETP all secondary school teachers were supposed to have a minimum qualification of Grade A. To-date, this target is far from being reached.

Table 5.3: Primary School Teachers by Grade

Year	*Grade A*	*%*	*Grade C/B*	*%*
1995	*41,435*	*38*	*65,000*	*62*
1996	*45,007*	*41*	*63,000*	*59*
1997	*47,751*	*43*	*61,829*	*57*
1998	*46,833*	*39*	*60,737*	*61*
1999	*47,249*	*46*	*56,077*	*54*

Source: *MOEC "BEST", 1995-1999*

Quality of Process

5.14 An important aspect of quality is the quality of the experience that learners have when enrolled in education. Partly this is a matter of physical environment in terms of buildings, classroom furniture and equipment, books and materials. But it also depends on school organisation in terms of class-size, the nature of the curriculum and the manner in which it is delivered, and on relationships between students and teachers and the degree of personal care and professional concern that teachers exercise towards their pupils and students. Rates of school enrolment and dropout in Tanzania suggest that many potential learners do not find the formal education environment congenial: the problems of inadequate physical provision are exacerbated by large classes, by unmotivated and unqualified teachers who may be harsh in their treatment of pupils, and a curriculum that may seem irrelevant and is often badly or incompletely delivered. Of course, as in other countries, good schools are to be found as well as poor ones.

Class Size and Teacher-Student Ratios

5.15 It is hard to get dependable information on the size of classes that learners actually experience. There is data available on teacher-pupil or teacher-student ratios and the TPRs/TSRs for the different levels are shown in Table 5.4. These are not grossly out of line with those in other countries, but Tanzania is attempting to raise the student-teacher ratios in the interest of economy and cost containment.

5.16 For a variety of reasons reasonable TSRs are often translated into unfavourable size of learning groups. In many places in Tanzania there are too few classrooms in relation to the number of students and teachers and the solution adopted is to crowd more children into the classrooms and increase class size. In other cases the timetable may be devised to give teachers light teaching loads; or teacher absenteeism, for acceptable reasons of maternity and sickness or unacceptable ones of deliberate absconding, may force schools to raise the size of teaching groups. Another factor is the maldistribution of teachers so that in some areas severe shortages of teachers force up the size of teaching groups.

5.17 As regards the teacher-pupil ratios at primary level, Government has set a target of 1:45, but this has not yet been achieved. It is probably inconsistent with current primary school staffing formulas of eight teachers for seven classes in rural schools and nine teachers for seven classes in urban schools. To achieve a ratio of 1:45 in urban schools the average class size would have to be about 58 (7 classes x 58 = 406 pupils , which divided by 9 teachers would give a ratio of 1:45.1). In rural schools it would have to be 1:51, which is clearly impossible in sparsely populated areas. Even if one teacher per class was provided (seven, not eight, teachers for seven classes) in rural areas, attainment of a TPR anywhere near 1:45 would inevitably entail much multigrade teaching in many rural schools.

5.18 At secondary level the recommended staffing ratios are not realised. Some of the shortfalls emanate from the subject-based nature of the curriculum, making teachers unsubstitutable between subjects. Most private schools and private training colleges do not have trained teachers.

Table 5.4: Ratio of Teachers to Students in Public Institutions in Tanzania

	1990	*1998*	*1999*
Primary	*1:34.8*	*1:37.9*	*1:39.8*
Secondary	*1:26.1*	*1:19.4*	*1:19.4*
Technical	*1:7*	*1:9*	*1:11*
Higher	*1:5*	*1:11*	*1:11*

Source: BEST, various, MSTHE, 2000

5.19 Student-teacher ratios in the universities, on the other hand, are generous. Targets have been set for more economic ratios at university level but TSRs remain well below the target levels (between 1:5 and 1:7 as compared with targets of 1:15 in humanities and 1:10 in sciences).

Curriculum Content and Relevance

5.20 The basis for the school curriculum in Tanzania is laid down by the Education and Training Policy (ETP) of 1995, which entrusts the Tanzania Institute of Education (TIE) with responsibility for design, development, monitoring and evaluation of curriculum in pre-primary, primary and secondary schools and for teacher

education. The policy states that the curriculum will focus on the teaching of languages, science and technology, humanities and life skills.

5.21 The ETP makes clear in its initial statement of aims and objectives that the purposes of education in Tanzania are broad. They include not only the important skills and knowledge necessary to earn a livelihood, but also the imparting of attributes that will make fully developed human beings, socially responsible members of society and good citizens. There is emphasis on acquisition and appreciation of culture, customs and traditions of the peoples of Tanzania as well as on productive capacities. This is in keeping with the long-standing affirmation in public statements of education policy, from the time of *Education for self-Reliance* onwards that there are important moral, social, and civic dimensions to the content of education. The challenge, of course, is to translate these lofty aims into reality in conditions where poorly educated and trained teachers are attempting to deliver the curriculum in unsatisfactory physical surroundings, with inadequate materials and equipment, and without sustained professional support.

5.22 The ETP also emphasises that education also prepares pupils and students for the labour market and must provide opportunities to acquire useful knowledge and skills for employment and self-employment. As far as education policy is concerned the principal issues that concern education and work centre around the kind of education or training that is best suited for a given purpose, and the institutional forms that can best deliver it. This is achieved by a combination of formal, non-formal, general and specialised types of education and training. In Tanzania the institutional forms of delivery include general education, diversified schools, professional education, on-the-job training, and a combination of education and work.

5.23 It is commonly agreed that education increases the productivity of workers. General formal schooling at primary school level is a necessary foundation for further training; by providing skills in communication, mathematics, and science, required in a modern economy. Workers who are educated are expected to be more achievement-oriented, more self-reliant, more adaptive to new situations and more trainable.

5.24 At secondary level, like many other developing countries Tanzania has adapted the content of education to the expected job needs of those leaving school by diversifying the curriculum. Practical or occupational subjects like agriculture, commercial studies, technical studies, and home economics have been introduced into an otherwise completely academic programme at lower secondary level. The broad aim is to provide prevocational orientation and to develop a positive attitude toward work. Among the problems encountered from this approach have been that expensive facilities provided have often been under-utilised, and the challenge of ensuring that the amount of specialised work included in the curriculum is sufficient for the formation of skills. If it proves unrealistic to expect the development of full-fledged skills, then diversified secondary schools should be used as a basis for the training of technicians or as preparation for further education in technical fields.

5.25 Tanzania has used the twin-track combination of diversified secondary schools and technical and vocational schools for the purpose of training middle-level skilled manpower. Full-time pre-employment vocational training is expected to impart general skills, and the vocational and technical schools usually provide pre-employment training in broad categories of skills that can be applied in a variety of work situations. Vocational and technical knowledge that prepares graduates for the additional training they may get on the job, and training in skills that requires a good organised knowledge of theory, are best presented formally in a classroom.

5.26 Three approaches may help to make technical and vocational schools more effective. First it is necessary to recognise that creating employment depends less on training than on the pace of industrialisation. Since the modern sector has limited absorptive capacity, resulting in high unemployment rates, technical and vocational education should encourage self-employment, individual initiative, and co-operation. Second, the quality of the relationship between schools, employers and government ministries is important. The stronger these linkages and the greater the involvement of employers, the better are the chances to operate schools effectively and to produce more employable graduates. At the same time it is necessary to resist an excessive advocacy by some employers of rather narrow vocational training in specific skills, because it is probably true that language and mathematics and capacity to learn (i.e. good general education) is the key to long-term employability/productivity in an economy where technology will be changing and developing. Third it will be desirable to ensure that instructors in technical and vocational schools have both technical/vocational backgrounds and a solid academic grounding.

5.27 The number of young people graduating from Universities has been increasing, yet their prospects for finding employment have been bleak. An idle graduate is a loss for the individual and an economic cost to the nation that paid to train him or her. At the Faculty of Commerce of the University of Dar es Salaam an Entrepreneurial Centre (UEC) has started, to provide participating students with usable skills and bankable plans of action that can lead to self-employment upon graduation. The curriculum for the UEC comprises four main areas: realities of the Tanzanian job market; developing job-seeking skills; developing employment-enhancing skills; and developing self-employment option skills.

Quality of Outputs

5.28 One long of measuring student achievement is through examinations. In Tanzania there are school and national examinations. There are also regional and district-level mock examinations for both primary and secondary levels.

5.29 The Primary School Leaving Examination (PSLE), conducted by the National Examinations Council of Tanzania (NECTA) is taken in three subjects: language, general knowledge and mathematics. It regularly happens that the average marks (out of 50) achieved in mathematics are significantly lower than those in the other two subjects. Results of the PSLE show a decline in performance between 1998 and 1999 from an already low pass rate of 20.3% to 18.8%. There is a wide variation in pass rates across regions, as shown in Chapter 7.

5.30 Certificate of Secondary Education Examination (CSEE) results taken at the end of Form IV showed a 78% pass rate in 1998. However as Table 5.5 shows, more than two thirds of the passes were at the lowest level, Division 4, and only 5% of all candidates obtained a Division 1 pass and a further 5% Division 2. The pass rate for schools candidates (77%) was somewhat better than for private candidates (71%); but among the private candidates, who numbered just over a fifth of all candidates, 97% of passes were Division 4. The overall pass rate for boys was 84% and for girls 70% (see Table 7.7 for more detail, including gender differences).

Table 5.5: CSEE Results by Grade 1995-1999

Year	*Passed*				*Failed*
	I	*II*	*III*	*IV*	
1995	*3.5*	*5.3*	*15.8*	*55.3*	*20.1*
1996	*3.5*	*4.6*	*15.3*	*51.5*	*25.1*
1997	*5.8*	*6.6*	*17.6*	*49.7*	*20.4*
1998	*4.07*	*4.08*	*13.88*	*51.07*	*26.91*
1999	*3.15*	*4.49*	*13.66*	*51.98*	*26.72*

Source: *MOEC, BEST, 1995-99*

5.31 Results for the main CSEE subjects, defined by Lawson et al. (1999) as those subjects with more than 10,000 candidates, show wide variations in pass rates. There is good performance in Kiswahili (83.3%), English (62.3%) and Civics (61.1%) but only 24.1% in book keeping. Girls performed very poorly in Mathematics (only 17% passed), and in some science subjects, e.g. Biology (only 19.5% passed).

5.32 Very few proceed to form V and sit for the Advanced Certificate of Secondary Education Examination (ACSEE) taken at the end of Form VI. Nearly 70% of them are boys. ACSEE examination results are generally good, with an overall pass rate of 92% in 1999 (Table 5.6), suggesting that the few pupils who manage to reach high school have the ability to perform well. Boys-only schools and girls-only schools have comparable pass rates: they are better than those in co-educational schools, where failure rates are higher among girls than boys. Variation in performance on major subjects are more marked in ACSEE than CSEE.

Table 5.6: ACSEE Results by Division in Tanzania 1995-99

Year	*Passed*				*Failed*
	I	*II*	*III*	*IV*	
1995	*5.2*	*13.4*	*46.9*	*20.7*	*13.8*
1996	*8.7*	*20.2*	*47.6*	*15.4*	*7.8*
1997	*9.4*	*20.6*	*45.3*	*15.0*	*9.7*
1998	*10.7*	*20.6*	*44.5*	*15.9*	*8.3*
1999	*8.8*	*21.7*	*46.2*	*15.6*	*7.7*

Source: *MOEC, BEST, 1995-99*

CHAPTER SIX

EFFICIENCY AND EFFECTIVENESS OF INVESTMENT IN EDUCATION

Introduction

6.1 This chapter deals first with the efficiency of resource use, and the relationship between inputs and outputs, in the education system. It goes on to look, secondly, at the effectiveness of the system in producing graduates from the different levels of education who are fitted for productive and remunerative work in the modern, informal, urban and rural sectors of the economy. Evidence about the private and social returns to education investment is presented and analysed.

6.2 The internal efficiency of the system concerns maximising the relationship between inputs and outputs. There must be a constant quest on the part of managers of the system to see whether the same outputs - in terms of enrolments, successful completers, or measured learning achievement - can be achieved with fewer financial or 'real resource' inputs: and whether greater output can be achieved by redeployment of the existing level of inputs. An understanding of the internal dynamics of the education system, and how inputs and outputs are related, is necessary if genuine rather than cosmetic efficiency gains are to be realised.

6.3 The external effectiveness of an education system in an economic sense involves relationships between general and vocational education and between schools and work opportunities. This concerns what schools and teachers can be expected to do in preparing for future occupations, and what returns may be expected in terms of increased productivity and earnings from investment in education, seen as a combination of learning in and out of school (World Bank 1980).

Efficiency in Delivery of Services

Primary level

6.4 One way of measuring the efficiency of an education system is by its utilisation rate of human and physical capacity. Using this yardstick one can point to inefficiencies that need to be redressed at all education levels in Tanzania. In primary schools the net enrolment ratio (NER) is 56.4. It takes an average of nine years, instead of the prescribed seven years, of investment in schooling to produce a primary-school graduate from Standard VII. Thus it has been calculated that in 1997, for example, it took 29% more resources to produce a primary school graduate than it would have taken had all students completed their schooling within the required time. The extra years are due to repetitions and dropouts especially at Standard 4. These inflate the proportion of starters to finishers.

6.5 The average teacher-pupil ratio (TPR) in primary school is 1:39.8, (Table 5.4) lower than the targeted level of 1:45. There are, however, vast variations in efficiency levels (class sizes, students per teacher, teachers per class etc) across

regions, districts and individual schools. For example, Lindi and Kilimanjaro have a teacher student ratio of 1:30, while Shinyanga has 1:53. Average class sizes vary from 31 to 55 (see Chapter 7. for analysis by regions and districts). At 17.3%, the transition rate from primary to secondary education is the lowest in SSA.

6.6 Table 6.1 shows the estimated workload of primary school teachers. Three norms seem to prescribe the establishment of teachers in primary schools. First, in the urban schools for a one-stream school with a population of 315 (7 x 45) pupils, the number of teachers should be 9, of whom 5 (56%) should be grade A and 4 (44%) grade B/C. Second, the number of teachers should be 8 in a similar rural school, of whom 4 (57%) should be grade A and 3 (43%) grade B/C. This works out as a TPR of 1:35 and 1:40 respectively for urban and rural schools, well below the third norm which is a national target for TPRs of 1:45. (see also para 5.17)

6.7 Yet, Table 6.1 suggests that even when other responsibilities in addition to classroom teaching are taken into consideration, urban teachers only work about 26 hours a week, compared with an average of 32 for rural teachers and an official 35-hour work week for civil servants.

6.8 It would appear that the low student: teacher ratios are a reflection of relative light workloads per teacher rather than a reflection of small class sizes. Urban teachers teach an average 22 periods (15 hours) or about 63 percent of the periods required by the national curriculum policy, which specifies 27 periods per week for standards one/two,; 35 for standards three/four; 40 for standards five/seven; averaging 35 periods per week across all grades.

Table 6.1: Work Load of Primary School Teachers in Tanzania[3]

	Average	*Urban*	*Rural*
Teaching periods/week	*26.0*	*22.0*	*28*
As % of curriculum	*74*	*63*	*80*
***Hours**:*			
Classroom teaching (a)	*17*	*15*	*18.5*
Preparations	*4*	*4*	*4.3*
Marking	*4*	*4*	*4.3*
Self-reliance	*3*	*2.5*	*3.0*
Sports/Games	*2*	*1.5*	*2.1*
Total hours/week	*30*	*27*	*32.3*

(a) Hours spent on Classroom teaching were estimated from average periods a week. Each period was assumed to last 40 minutes. The result over estimates teaching hours, since classroom periods are 30 minutes for standard one and two and 40 minutes for the others

6.7 Teachers in rural areas on average teach almost 28 periods a week (19 hours) or 79% of the total periods. This implies, taking account also of staff shortages in many schools, that the nationally prescribed curriculum is not fully implemented in rural areas, which is not surprising given the variety of subjects that schools are supposed to offer. There may well be a lot of class combination in rural areas using multi-grade teaching. Otherwise, it does seem probable that the curriculum cannot be covered if the data in Table 6.1 is correct, since rural schools are supposed to be staffed on the basis of eight teachers for seven classes.

6.8 Table 6.2 shows the level of utilisation of teachers from school mapping data within Morogoro Urban District by zones of economic activity. The information suggests that:

(a) the district/municipality's average TPR was 1:25.3 which is much lower than the Ministry norm of 1:45. This implies some elements of lighter workload and teacher under-utilisation;
(b) there are substantial variations of TPRs and workloads per week within districts and between zones with some zones having much lower ratios than the district average.
(c) The district had a surplus of 437 (77%) teachers (using a TPR of 1:45 as the yardstick); the requirement being 561 teachers while the actual teaching force was 998.

Table 6.2: Pupil Teacher Ratios, and Periods per Week in Morogoro Urban, by Economic Zones (1999)

Zone	*No. of Pupils*	*No. of Teachers*	*TPRs*	*No. of Periods per week*	*Average Teacher Periods per Week*
Residential	*3184*	*130*	*24.5*	*2125*	*16.34*
Central	*5100*	*197*	*26.9*	*2454*	*12.45*
Commercial	*2439*	*104*	*22.4*	*1652*	*15.88*
Industrial	*2305*	*101*	*22.8*	*1520*	*15.04*
Administrative	*2692*	*92*	*29.3*	*1744*	*18.96*
Agricultural	*4650*	*213*	*21.9*	*3140*	*14.74*
Immigrant	*4844*	*161*	*30.1*	*2920*	*18.14*
District Municipal	-	-	-	-	-
	25,223	*998*	*25.3*	*15,555*	*15.6*

Source: *UNICEF: School Mapping in Morogoro (Urban) District, 1999*

6.9 Implications of light workloads for system costs and teacher for utilisation are significant:

- If all primary school teachers in Morogoro Urban taught an average of 28 periods a week, or 84 percent of classroom time for one class, each stream would require only 1.2 teachers and teaching staff in Morogoro urban could be reduced by about 15 percent, or roughly 150 teachers;
- THis will imply either a budget efficient gain/saving; or, alternatively, each of the ranking teachers could be paid 15 percent more within the original budget constraint.

Secondary Schools

6.10 At secondary school level the GER is only 7.4%. The average number of pupils per stream in secondary schools is higher than in primary schools. Average class size is 17 compared to the required 32. The teacher-student ratio ranged between 1:26 in 1990 to 1:19 in 1999 (Table 5.4): private schools have a slightly more economical ratio of 1:21. There are wide variations at both primary and secondary levels signifying a need to rationalise teacher stocks and deployment, towards which end a teacher audit has recently been undertaken. The reasons for these variations in capacity utilisation include teachers' preference for urban schools and differences in attitude towards education among regions, leading to differential enrolment rates.

Table 6.3: Selected Indicators of the Situation in Secondary Schools in Tanzania

	Public	*Private*	*Community*	*All*
Ratios:				
TSR	*1:17*	*1:14*	*1:12*	*1:15*
Students/stream	*36*	*34*	*30*	*33*
Teachers/stream	*2.1*	*2.4*	*2.5*	*2.2*
***Teachers**:*				
Percent Science Degree	*19.6*	*9.0*	*N.A*	*10.5*
Percent Arts Degree	*11.8*	*14.0*	*N.A*	*12.5*
Percent Science Diploma	*36.0*	*18.00*	*N.A*	*30.8*
Percent Arts Diploma	*31.0*	*18.2*	*N.A*	*26.7*
Grade A	*1.4*	*4.0*	*N.A*	*3.1*
Other	*0.2*	*35.0*	*N.A*	*16.1*

Source: *Survey of MOEC Statistics and Teacher Survey Data of 1990.*

6.11 The picture portrayed in Table 6.3 for secondary schools indicates that:

(a) overall the TSR is around 1:15; higher ratios (1:17) being experienced in public schools as compared to private schools (1:14);
(b) overall there are more than two teachers per stream (2.2);
(c) the majority of teachers are diploma holders (30.8% Science and 26.7% Arts);
(d) a small proportion of teachers, around 4% in private and 1.4% in public secondary schools, are Grade A Certificate holders;
(e) as in primary schools, higher TSRs result from a larger teaching staff and smaller teaching loads not from small class sizes;
(f) class sizes (students per stream) are reasonable and are similar in both public and private schools–36 students per class in public schools and 34 in private schools;
(g) public schools employ 2.1 teachers per class, compared with 2.4 teachers in private schools.

6.12 Public school teachers at secondary school teach fewer periods a week than those in private schools and fewer than the officially prescribed number of 28 to 35 periods per week. Public school teachers are reported to be working 25.5 hours a week (or about five hours a day, six days a week) and private school teachers an average of 25.1 periods a week. Thus if classroom teaching time were raised only slightly for public school teachers, this would increase the teacher-student ratio moderately and lower per student costs[4].

Table 6.4: Work Loads of Secondary School Teachers in Tanzania

	Public	*Private*	*All*
Teaching periods/week	*23.4*	*26.6*	*24.4*
***Hours/Week**:*			
Classroom teaching (a)	*16*	*18*	*16.0*
Preparations	*3.0*	*2.5*	*3.0*
Marking	*3.4*	*2.7*	*3.2*
Income Generation	*2.2*	*1.1*	*1.9*
Sports/Games	*1.0*	*0.8*	*.94*
Total hours/week	*25.5*	*25.1*	*25.4*

(a) each period is 40 minutes
Source: Teacher Survey Data of 1990, and information from MOEC

Teacher Training Colleges

6.13 In teacher training colleges a 1998 Cost-Efficiency Analysis found it impossible to capture adequately past enrolment trends and outputs. There was no reliable information on the number of teachers entering and leaving TTCs either (Mwaga and Williams, 1998). The study documented the lack of basic elements of sound administration at the TTCs such as standardisation of teaching contact hours, establishing intake levels, defining conditions of enrolment, maintaining basic records and other issues. The situation suggests a need to increase TTCs' role in upgrading and in-service training to remedy specific teaching deficiencies while at the same time making some colleges more specialised, for example in producing secondary school teachers or focussing on Grade A primary teacher development.

6.14 Capacity utilisation in TTCs has become a major issue, Williams (1999). No college was operating to full capacity during 1998/99. This results in low class sizes and low tutor-student ratios, averaging 1 to only 9. There were wide variations in TSRs among colleges in 1998, from only 1 to 2.4 at Bustani Teacher Training College and 1:2.8 at Kasulu, to 1:16 and 1:18 respectively in larger colleges like Mpwapwa and Monduli. The low tutor-student ratios in TTCs are in turn reflected in low teaching loads for tutors. The average number of periods per week was 15. Among 851 tutors for whom data was available, 68 taught less than five periods a week and another 180 between six and ten periods. There is a general incompatibility between qualifications and work assigned, due partly to the small scale of colleges and partly to staffing and staff deployment.

6.15 Table 6.5 suggests that average first-year student intake to initial training courses has declined by half between financial years 1996 and 1998. Yet teacher-student ratios show sharp rise from 1:9 in FY 1996 to 1:7 in FY 1999, because while enrolment in TTCs was falling, the number of teaching staff was relatively stable. Indeed per student PE has risen from Tsh. 87,430 in FY 1996 to Tsh. 197,198 in FY 1998 (***this last information does not take account of in-service students).***

Table 6.5: Efficiency Indicators for Teacher Education in Tanzania FY 1996 – FY 1999

	Students per Teacher	*Expenditure per Student*	*Total Enrolment*
1995/96	*16*	*123,495*	*16,388*
1996/97	*13*	*170,043*	*13,297*
1997/98	*9*	*336,602*	*9,136*
1998/99	*7*	*226,484*	*10,500*

Source: *PER 1999 and Williams, P.R.C (1999)*

6.16 Although recently there have been attempts to improve higher education delivery through individual institutional transformation programmes, higher education still exhibits considerable inefficiencies in terms of capacity utilisation and unit costs. More efficient use of their fixed and variable resources and assets is needed in order to reduce unit costs.

6.17 The valuable fixed resources in higher education are the teaching facilities (lecture theatres, seminar rooms, laboratories, training workshops) and learning resources

(libraries, computers and utilities). Data from the UDSM transformation programme 1999 reveals that no room is fully utilised. Overall room utilisation rates are 68% at UDSM main campus, 43% at MUCHS, and 89% at UCLAS. The institutions still operate a rigid ten-hour working day, five days a week, and synchronised rather than staggered lunch breaks; with no lectures beyond 7 p.m., every day. The University is completely closed for approximately six months in a year as part of ***term breaks***. The institutions therefore need to plan for a strategy based on a broad conceptualisation of capacity utilisation to include such parameters as time on task, utilisation of vacation periods and workload definition.

6.18 Teacher-student ratios in selected higher education institutions for the period 1996/97 to 1998/99 are shown in Table 6.6. More economical ratios have been achieved at MUCHS and IFM particularly; and the provisional ratios for 1999/2000 of 1:9, 1:8, 1:4, and 1:6 for UDSM, SUA, MUCHS and UCLAS respectively, all offer promise of efficiency gains. Generally the teacher-student ratios in higher education in Tanzania are above the regional averages mainly because of low enrolments and small-size institutions. This results in high unit costs and proportionally high expenditure on PEs relative to OCs at institutional level.

Table 6.6: Teacher-Student Ratios in Selected Higher and Technical Education Institutions in Tanzania (1997-1999)

	1996/97	*1997/98*	*1998/99*
UDSM	*1:7*	*1:7*	*1:7*
SUA	*1:5*	*1:6*	*1:6*
MUCHS	*1:2*	*1:2*	*1:5*
UCLAS	*1:3*	*1:5*	*1:3*
DIT	*1:14*	*1:15*	*1:10*
MOSHI CO-OP	*1:2*	*1:2*	*1:2*
KARUME	-	*1:10*	*1:9*
IFM	*1:11*	*1:11*	*1:17*

Source: *Galabawa and Mbelle (2000)*

Efficiency of the Transformation Process in Education (Inputs to Outputs)

6.19 Efficiency in the transformation of tangible resources into learning outcomes can be measured in several ways. One approach is to look at the impact of education inputs on enrolment and the examination results. At primary school level, PSLE performance and enrolment are evaluated as outcomes, using correlation and multiple regression analysis based on the following assumptions:

(a) quantity and quality of teaching contribute to good performances in PSLE;
(b) overcrowded classes are associated with poor performance in examinations;
(c) the level and quality of staffing encourage enrolment;
(d) overcrowded classrooms discourage enrolment.

6.20 The data and analysis in this part of the report are adopted from TADREG (1999). The report summarises quantitative data as well as other qualitative data on district-level poverty and educational indicators for Mainland Tanzania. The PSLE indicator data were obtained from the National Examinations Council (NECTA). The other data were obtained from the database.

6.21 Table 6.7 shows the correlation between selected education inputs and outputs in the 113 districts of Mainland Tanzania.

The inputs were: school-age population per class room (PCR); proportion of Grade A Teachers (TAR) and the teacher-pupil ratio (TPR); while the outputs for each district were defined as net enrolment ratio (NER) and Primary School Leaving Examination average score (PSLE).

Table 6.7: Results: Correlation between Education Inputs and Outputs in Primary Schools in Tanzania

	PCR	*TAR*	*TPR*
NER	*-41%*	*39%*	*-24%*
PSLE	*-21%*	*41%*	*-19%*

(Is this PTR or TPR?)

6.22 Data in Table 6.7 suggest that:

(a) in general the direction of correlation is as expected: districts where the level of inputs is low, do record poorer performance (NER and PSLE).

(b) there is an inverse relationship between pupil-teacher ratio (PTR) and PSLE; that is, as PTR increases the PSLE performance goes down, and vice-versa.

(c) there is a positive relationship between the proportion of Grade A teachers and PSLE performance: as the proportion of Grade A teachers in a district increases, performance on PSLE improves;

(d) there is a positive relationship between the proportion of Grade A teachers and the level of NER;

(e) there is a negative relationship between school-age population per class room (PCR) and both districts' PSLE performance and districts' NERs: as PCR increases, the NERs and PSLE performance decrease.

Factors Affecting PSLE Performance

Table 6.8: Results: Average Score for the District PSLE in Districts in Tanzania 1999

Regression Statistics				
	Adjusted R Square	*0.26*		
	Standard Error	*0.06*		
	Observations	*100*		
	Coefficients	***Std. Error***	***T stat***	***P. Value***
Intercept	*0.10716*	*0.039267*	*2.72*	*0.01*
TAR	*0.41702*	*0.079067*	*5.27*	*8-22E-07*
TPR	*-0.00175*	*0.000789*	*-2.23*	*0.03*
PCR	*-4.14*	*9.64E-05*	*-0.43*	*0.67*

6.23 Table 6.8 presents the results of analysis of PSLE results in relation to various inputs to education. The main findings are that:

(a) the direction of the partial coefficients of correlation are as expected; that is positive for TAR; negative for TPR and negative for PCR;

(b) the percentage of Grade A teachers in a district, and the pupil-teacher ratio, are significant variables in explaining the variation in PSLE results;

(c) although the percentage of Grade A teachers and pupil-teacher ratio contribute to the average score for the PSLE, a large part of the variance of the PSLE results is explained by other factors as the adjusted R Square

indicators (i.e. only 26% of the variance of Y–Average Score for the PSLE is explained by the percentage of Grade A teachers and the TPR).

Factors Affecting Net Enrolment Rate

6.24 The regression analysis for net enrolment rate (NER) in Table 6.9 suggests that:

(a) the contribution direction of the variables are as expected; that is positive for proportion of Grade A teachers; and negative for both teacher-pupil ratio and PCR (school age population per classroom);
(b) the percentage of Grade A teachers and school-age population per teacher ratio are significant as explanatory variables of NER;
(c) although the percentage of Grade A teachers and the school-age population ratio contribute to the NER, a large part of the variations in NER is explained by other factors as the adjusted R Square indicates (i.e. only 38%).

Table 6.9: Results: Net Enrolment By Districts in Tanzania 1999

Regression Statistics				
	Adjusted R Square	*0.38*		
	Standard Error	*0.11*		
	Observations	*100*		
	Coefficients	***Std. Error***	***T stat***	***P. Value***
Intercept	*0.39727*	*0.0723*	*5.49*	*3.23 E-07*
TAR	*0.79677*	*0.1456*	*5.47*	*3.55 E-07*
TPR	*0.00209*	*0.0015*	*-1.44*	*0.153*
PCR	*-0.00056*	*0.0002*	*-3.14*	*0.002*

Factors Affecting Examination Performance at Individual Secondary Schools

6.25 Table 6.10 shows regression analysis results for selected inputs against school performance, as measured by rank position in the 1998 NECTA examination results at secondary school level. The survey by Kilindo and Galabawa (2000) assumed that school position in the 1998 NECTA ranking can be explained by:

(a) parental contributions;
(b) location of school (urban vis-à-vis rural);
(c) school unit costs;
(d) school teacher-student ratio;
(e) proportion of graduate teachers in the school;
(f) type of school (private, public, community).

Table 6.10: Results for NECTA Ranking for Secondary Schools in Tanzania, 1998

Regression Statistics				
	Adjusted R Square		*0.988*	
	Standard Error		*21-053*	
	Coefficients	***Std. Error***	***T- stat.***	***P. Value***
Intercept	*-515.357*	*36.102*	*-14.275*	*0.000*
Parents Contr.	*6.907*	*6.228*	*1.109*	*0.286*
Location	*-213.601*	*13.187*	*-16.203*	*0.000*
Unit Costs	$1.2.20x10^{-4}$	$2.407x10^{-5}$	*5.067*	*0.002*
School type	*35.247*	*1.579*	*22.309*	*0.000*
TSRs	*330.175*	*8.819*	*37.435*	*0.000*
Graduate Teachers	*-1.469*	*36.102*	*-18.579*	*0.000*

6.26 The regression results presented in Table 6.10 suggest that:

(a) the influence of: parents' contributions, school unit costs, teacher-student ratio and type of school are positive;
(b) the influence of school location, graduate teachers proportion, are negative;
(c) a large part of the variations (0.98) in school rankings is explained by the selected explanatory variables;
(d) TSRs, unit costs, school location, type of school, and graduate teacher student ratio are statistically significant variables in explaining the NECTA rankings of secondary schools.

6.27 The specific interpretations that can be made regarding the input mix and output (NECTA rankings) are as follows:

(a) the expected change in NECTA ranking number or value for each unit change in parent contributions others held constant is 691%;
(b) holding other factors constant, the expected change in NECTA ranking for change in
    - location (urban vis-à-vis rural) is significantly negative;
    - school unit costs is small;
    - school type (private vis-à-vis pupils/community) is large;
    - teacher-student ratio is large;
(c) the expected drop in NECTA ranking for change in proportion of graduate teachers is significant.

Relationship between Inputs and Quality of Output in University Education

6.28 In analysing the relationship between inputs and the quality of output in higher education, a recent study by Abayo and Mbwette (2000), reproduced in ***Galabawa, et al (2000),*** was used. In that study output-quantity is captured by examination results and trends over a period of fifteen years (1981-1996). The STATA statistical test is used to analyse data using regression analysis.

6.29 Quality-output performance is classified as first class, upper second, lower second, pass degree or fail: grade point average (GPA) is determined for each graduating candidate. It is assumed that the variables which have a strong bearing on the output-quality of higher education are: status of funding as measured by budgetary allocation; index of academic staff seniority factor (professional quality and experience of academic staff); staff-student ratio; and quality of inputs (students' entry points).

6.30 In summary, the findings from the above study tend to suggest that:

(a) the staff seniority factor and GPA move in the opposite direction in the studied faculties; that is students taught by junior staff tend to perform better in their examinations than those taught by senior staff ($p = 0.05$).
(b) the higher the average entry point grade of students, the higher the average GPA on graduation. However, the relationship is weak and not significant.
(c) there is a significant relationship between staff/student ratio and GPA.
(d) there is an optimum staff-student ratio; and in some faculties this ratio is not yet optimum while in other faculties (e.g. engineering) the TSR has already surpassed the optimum level.
(e) the average GPAs and the funding levels were observed to be moving in the same direction; that is the years that received higher financial resources tend to have higher GPAs than those years with less financial resources.

6.31 The negative association between staff seniority factor and GPA calls for research to help explain the unconventional finding. It does however put into question the level of utilisation of scarce academic human capital in the universities.

6.32 The observation that there is a close association between GPA and staff/student ratio has some implications for student enrolment and efficient utilisation of staff. The starting point is the determination of optimum staff/student ratios for each academic programme/faculty.

Education Effectiveness: Education Outputs and the Demand for Educated Labour

6.33 Tanzania has been making great efforts to expand and develop education at different levels with the objective of enabling its recipients to earn a decent living in their environment, rural or urban, and in both wage and self-employment. Education is therefore regarded as a tool for the preparation of the human resources for productive work. Despite the above good intentions employment for school leavers has become a big problem. Formerly the problem mainly affected primary school leavers but in the recent past it has impacted even on those with higher levels of education. The concern then is whether the education system is able to equip its recipients with the knowledge and skills needed for employment.

Table 6.11: Education Output

	Output (leavers)			
Level	***1995***	***1996***	***1997***	***1998***
Standard 7	*386,584*	*359,337*	*414,069*	*364,014*
Form IV	*37,850*	*40,479*	*40,324*	*41,591*
Form VI	*5,841*	*6,278*	*8,227*	*8,176*
Teacher Education	*8,113*	*8,657*	*7,275*	*5,713*
Higher Education	*1,207*	*1,554*	*2,173*	*2,267*
Total	***441,590***	***418,301***	***474,065***	***423,759***

***Source**: MOEC, BEST, Various; MSTHE, BSHE; various*

6.34 Output, i.e. those who complete successive stages, of the education system comprises leavers from Standard 7, Form IV, Form VI, and teacher-training colleges', as well as university graduates. Table 6.11 confirms that there has been an overall increase in output at all levels over the past five years.

6.35 Despite the lack of time series data on employment during the nineties, it is generally agreed that employment growth has failed to keep pace with growth of the labour force. The LFS (1990/91) points out that a population growth rate of 2.8% per annum would imply a labour force growth of 2.8% p.a. between 1988 and 1993. Labour force growth during the post-1993 period is higher than the rate experienced earlier, at 3%. It is estimated that there are 700,000 entrants to the labour force annually, of whom at least 500,000 are primary and secondary school leavers with few or no skills (MLYD, 1999). The 30,000 jobs, approximately, that are created in the modern/formal sector compare unfavourably with this.

6.36 Because of constraints in modern-sector employment, the majority of those seeking work will find work and livelihoods in subsistence agriculture, self-employment in the informal sector, or will remain unemployed. About 80% of the labour force is found in agriculture, engaged in low productivity economic activities in subsistence agriculture and in urban informal sector, and this is where labour force growth has been accommodated. The LFS 1990/91 observed that the overall unemployment rate was 10.6%. The rate is substantially higher in urban areas where the majority of the unemployed comprise youths in the age-bracket 15-30 years (MLYD, 1999).

6.37 Policies regarding education development have differed from level to level. Primary school education was made universal in 1977, the aim being to give every child basic education. In 1967, the government proclaimed the Education for Self-Reliance Policy. Primary school education was meant to be complete in itself for those finishing school, and was supposed to equip the youth with skills for self-employment, rather than wage employment. In the case of secondary and higher education, the policy has been that these would be provided only to the extent justified by manpower requirements for the development of the economy. Specific skills are produced at these levels and students are financed by Government bursaries or subsidies. Lack of resources, and competing demands for the limited funds available, was the basis of the policy rather than any disapproval of post-primary education.

6.38 There has been very little progress towards the objective of making primary education terminal, in the sense of preparing pupils for self-employment. The tendency for pupils to aim at secondary school education or white-collar jobs remains. The average PSLE pass mark for secondary selection ranges between 55% and 65%, but the number selected to join Form I is less than 20% of leavers (Table 6.12)[1].

Table 6.12: Std. VII Leavers Selected to Form One in Tanzania

	No. Selected to Form One						
Year	***Leavers***	***Public***	***%***	***Private***	***%***	***Total***	***%***
1990	*306,656*	*19,673*	*6.4*	*27,654*	*9.0*	*47,227*	*15.4*
1991	*373,427*	*19,282*	*5.0*	*29,027*	*7.6*	*48,309*	*12.6*
1992	*346,514*	*19,193*	*5.5*	*25,703*	*7.4*	*44,896*	*13.0*
1993	*363,404*	*21,531*	*5.9*	*26,965*	*7.4*	*48,496*	*13.3*
1994	*370,534*	*24,321*	*6.6*	*28,418*	*7.7*	*52,819*	*14.3*
1995	*386,584*	*28,412*	*7.3*	*28,002*	*7.2*	*56,414*	*14.6*
1996	*359,337*	*30,873*	*8.6*	*29,768*	*8.3*	*60,641*	*16.9*
1997	*414,069*	*35,057*	*8.5*	*27,125*	*6.6*	*62,182*	*15.0*
1998	*364,014*	*41,282*	*11.3*	*28,333*	*7.8*	*69,571*	*19.1*
1999	*426,562*	*41,238*	*9.7*	-	-	-	-

Source: *MOEC "BEST", 1995-1999*

6.39 A small proportion of standard seven leavers make their way into post-primary schools such as those under the Ministry of Health's education and vocational training centres. During the early nineties these vocational centres had a capacity to accommodate 13,000 students, and post-primary training centres would take up to 50,000 students. A substantial number of primary school leavers are absorbed by the Ministry of Health for the Rural Medical Aid and for the Maternal and Child Health Care annually. The Ministry of Education also used to enrol some primary school leavers in teacher training colleges, preparing them to teach in lower primary school classes. However, the bulk of primary school leavers join the pool of the unemployed.

6.40 At secondary school level, in the period after Independence development was guided by manpower plans, to prevent over-investment or expansion of enrolment and outputs beyond the capacity and needs of the economy to absorb the outputs. This explains the low expansion of secondary schools during the 1964-69 period[2]. In the mid-1980s there was a shift in policy from basing provision of secondary education on manpower requirements to basing it more on social demand. With the support of the Economic Recovery Programme II and the Economic and Social Action Programme, there was renewed interest in investing resources in social services and as part of this effort there has been expansion of secondary schools by establishing day secondary schools and day streams in some boarding secondary schools, by building new secondary schools, and by introducing the double session. This has certainly increased output at secondary school level but even now less than 6% of the Tanzanian labour force has any post-primary education a situation that undermines the development effort.

6.41 Placement of secondary school leavers at both Form IV and VI levels still faces problems. About half of the students who complete these levels of education do not secure any employment. In 1988, for example, a total of 21,787 pupils completed Form 4: out of these 4,135 (19%) joined Form V and technical colleges, and 5,915 (27%) joined pre-service courses. The remaining 11,737 did not manage to secure any placement. The situation has worsened in recent years as the output increase has surpassed the growth of intake capacity of high schools, teachers training colleges and institutions of higher learning. The proportion joining high school is still less than 30%[3] and the post-secondary transition rate has remained one of the lowest in Sub-Saharan Africa.

6.42 Twelve years ago, in 1988, 64.3% of the 3,299 Form 6 leavers were unplaced. About 750 joined institutions of higher learning and 419 joined pre-service courses. By 1997 and 1998 institutions of higher learning absorbed a total of around 6,000 ex-secondary school leavers. This was only 12% of the total output in the preceding years. In teacher training colleges the level of diploma intake from Form VI was maintained at around 1,500, even while Grade A intake from Form IV was declining because of over-supply of primary level teachers.

Table 6.13: Enrolment in Public Teacher Training Colleges in Tanzania 1995-1999[4]

	1995	*1996*	*1997*	*1998*	*1999*
Diploma	*1,584*	*3,121*	*2,621*	*1,910*	*1,948*
Grade A	*10,833*	*10,176*	*5,848*	*2,968*	*2,492*
Total	*13,381*	*13,297*	*9,136*	*6,134*	*8,252*
Change %		*-7.6*	*-26.1*	*-32.9*	*34.5*

Source: *MOEC "BEST", 1995-1999*

6.43 Teacher education is provided by 45 colleges, 35 being public and 10 private. Government teacher training colleges with a capacity of 14,500 per annum have not fully utilised that capacity since the government stopped hiring teachers. Despite the enrolment increase to pre-service training courses from 5,838 in 1998 to 6,952 in 1999, this corresponds to only about 30% of the capacity, and the capacity surplus has been partly devoted to a greatly expanded in-service training programme. The level of capacity under utilisation in the 34 TTCs is very high. Teacher training's absorption of Form 4 leavers experienced a decline during 1995-1998, only to peak up between 1998 and 1999.

6.44 The main task assigned to higher education has been to provide high-level manpower to meet the effective national demand for skills. During the 1960s to 1980s it was necessary to fill the gaps of skills which were in short supply or non-existent at the time, and to reduce dependency on external manpower resources. Recognition was always given to higher education's role in producing expertise capable of engaging in scientific and technological activities and research, and of applying resources to bring about economic and social development.

6.45 Employment of university graduates has not been performing well recently, unlike the 1960s and early 1970s when job placement took place even before students' final examination results were out. Signs of job-market saturation then emerged. Some graduates were misallocated, and some had to accept positions below their level of education and training. In 1990 the government issued a circular specifying professions defined as "rare" and hence liable to placement by the National High Level Manpower Allocation Committee. The real significance of this was that allocation for other graduates was suspended. In addressing the current serious problem it is necessary to take several issues into account. First, students used to consider the public sector as the sole employer to the neglect of the private sector, but in today's conditions the private sector clearly offers scope for absorbing graduates. Second, despite the less certain job prospects, recent studies indicate that there is still a strong social demand for higher education as indicated by the low proportion of those who can be admitted, 16.0% on average,

compared with the number of applicants to UDSM, SUA, OUT and IFM, (Galabawa and Mbelle, 2000; Ishumi et al, 2000).

6.46 Galabawa and Mbelle (2000) suggest that the effectiveness of higher education graduates should be judged in terms of their ability to respond flexibly, creatively and competently to the work situation and to national development in general, and of their performance relative to their client's needs. A tracer study of UDSM graduate engineers found that employer's opinions of them were good. Graduates were rated very good on the whole in trainability for new jobs and good in the rest of the technical areas. The same graduates were rated poorly, however, on job-creation skills, leadership, organisational abilities and ability to work independently. These perceptions by private employers may help to explain why the majority of university graduates are still looking to the government and parastatals for formal sector employment.

Improving the Match Between Education and the Labour Market

6.47 There are three main approaches to improving the balance between education and work. Two of them, arresting inflation and increasing job opportunities, have to do with general economic development. The third is more strictly related to education, involving attempts to modify the supply side and has been discussed in the context of curriculum in Chapter 5.

6.48 Among possible measures on the side of labour market adjustment are reduction in the disparities in wages between the modern and traditional sectors and between clerical and technical jobs; requiring the beneficiary to bear an increasing share of the cost of education as one advances with the system; relating job specification to the minimum required education level, and wages to job specification rather than to credentials, developing effective counselling and placement services in schools and training centres, and better liaison between schools and the labour market. A shift from a highly capital-intensive system of production to a more labour-intensive one can also create more jobs.

6.49 Another approach is to improve rural infrastructure or to allocate a larger proportion of the country's development budget for job-creating activities. Such labour-intensive programmes include infrastructure construction, improvement of rural roads, irrigation projects, water supply projects, afforestation and credit schemes for rural women. (World Bank, 1996 Banda, 1997). Various programmes have been put in place in an effort to raise productivity, employment opportunities and income of farm and non-farm activities.

6.50 Incentives, including those for provision of training, have a role to play in bringing a match between education and work. In-service and on-the-job training for public and private sector should be strengthened to improved productivity built around provision of incentives. VETA programmes should be strengthened and broadened to cover a wider spectrum of economic activities. Another approach is to provide incentives to the private sector to invest in training to augment government efforts. The education system should aim at producing job creators and not job seekers, and in order to achieve this goal, there is a need to strengthen vocational guidance and counselling. There is also need to introduce enterprise

education system in order to inculcate enterprise culture and also to provide business education in training and higher learning institutions.

Private and Social Returns to Education

6.51 Education is a form of investment from which individuals and society derive economic returns. To calculate these returns one needs to examine the costs and benefits of education. Higher earnings that accrue to more educated individuals are the most tangible benefits. It is possible to compute the rate of return to any level of education by comparing the present value of the earnings differentials between two levels of education with the economic (out of pocket and opportunity) costs incurred in obtaining the additional years of education. The benefit side of social returns include intangible externalities such as general increase in societal welfare, reduction in crime rates, better public health and hygiene and lower fertility rates. These benefits have proved almost impossible to quantify accurately but they are significant. When computing social returns in Tanzania, one needs to take into account government subsidies to the cost of education as these are highly pronounced at the upper levels of education.

6.52 Studies that have attempted to analyse private and quasi-social returns in Tanzania (World Bank 1996) have kept in mind the above theoretical and practical observations. The estimations have faced several limitations, though. The first limitation has been the number of observations involved that may make the findings not statistically significant. Second, the studies have been confined to the formal sector, which accounts for less than 10% of the overall workforce. This has tended to bias upwards the rates of return, in particular at lower levels of education. The third limitation is that, within the formal sector, over 65% of the sample analysed were employed in the public sector where pay rates are administratively set with little relationship to productivity. This brings a downward bias to the estimates. Their findings however, do concur with those for other countries at the same level of income. Table 6.14 gives a summary of the World Bank's findings.

Table 6.14: Private and Social Annual Rates of Return to Education and Training in Tanzania

Group	*Education Level*			*Training*	
	Primary	*Secondary*	*University*	*Vocational*	*On the job*
Private Rates					
All	*3.6*	*6.9*	*9.0*	*19.4*	*35.2*
	(2113)	*(609)*	*(41)*	*(819)*	*(514)*
Male	*1.9*	*6.6*	*9.9*	*17.8*	*33.0*
	(1612)	*(360)*	*(28)*	*(523)*	*(416)*
Female	*10.8*	*9.0*	*11.4*	*20.2*	*35.0*
	(501)	*(249)*	*(13)*	*(291)*	*(98)*
Social Rates					
All	*3.6*	*1.5*	*0.0*	*0.0*	*-*

Source: *World Bank (1996) Post Primary Education and Training in Tanzania: Investments, Returns and Future Opportunities*

6.53 The rates of return to education were computed by estimating an earnings function, which controls for human capital characteristics (education and training) along with individual, regional and labour market characteristics (World Bank, 1996). From Table 6.14 the rate of return of 3.6% on primary education implies that if the individual invests Tsh. 100,000 in an additional year of primary

education, that year of primary education will yield a benefit of Tsh. 3,600 annually over the working time of the individual, over and above what the individual would have earned without the investment. Normally rates of return are given for education levels, not year of education. Thus for primary education the rate of return would be 25.2 (3.6 multiplied by 7 years of primary education).

6.54 A notable feature of Table 6.14 is that for males rates of return increase sharply with education. The rates of return are higher for women than for men at all three levels of education, but they are fairly constant for women across education levels.

6.55 Training on the job has the highest returns. This can be explained by the fact that on-the-job training is usually relevant to the current needs of the employer. No rational employer would want to invest in worker's education if it was not seen as increasing productivity at the work place. Vocational training yields higher returns to both males and females than general education. The rates of return to general education are higher for women than men: a finding that might influence action to reverse the low enrolment rates for women if it was fully accepted by communities and policy makers. Once again, this requires rational calculus and setting of priorities in educational planning.

6.56 The rough estimates of the quasi-social rates of return that take into account the costs incurred by the government, indicate that these are negligible for secondary education, and are near zero for vocational training and higher education. This is because of the high public expenditures per pupil (unit costs) in post-primary education, resulting in part from inefficient allocation of resources. It means in effect that the economic cost of publicly provided and funded vocational training and higher education is as great as the net present value of economic benefits (World Bank, 1996).

6.57 The results are consistent with international experience that indicates that public provision and financing of training are only cost-effective when employment is expanding rapidly, especially in the formal wage sector. Given the low rate of economic growth in Tanzania it is not surprising that the social returns to vocational education and training are low and even negative.

6.58 A more recent study by Van de Werf (2000) calculated the private and social rates of return to investment at different levels and types of education. The results are presented in Table 6.15. They show that the private rate of return to investment in tertiary education is highest (21%). For secondary education the separate rates of return (without costs) are 10.9% for O-level and 9.8% for A-level. The combined rate, with costs, is 6.3% and 4.8% and 2.2% for private and social rates respectively.

Table 6.15: Rates of Return to Education in Tanzania

Type of Education	*Without Costs*	*Private Rate of Return*	*Social Rate of Return*
Levels of Education			
Primary Completed	*9.4%*	*6.2%*	*4.8%*
Secondary O-Level	*10.9%*	-	-
Secondary A-Level	*9.8%*	-	-
Secondary O and A level	*6.3%*	*4.8%*	*2.2%*
University	*21.0%*	*21.0%*	*1.8%*
Types of Training:			
On the job	*9.9%*	-	-
Vocational education and Training	*8.0%*	*4.6%*	*3.3%*
Tertiary Training	*2.8%*	*2.8%*	*0.3%*
Subjects of Training:			
Technical			
All Technical	*11.7%*		
On the job technical	*17.5%*		
VET technical	*8.4%*		
Tertiary technical	*13.8%*		
Engineering/architecture	*5.3%*		
Administrative & Financing			
All admin./financing	*5.2%*		
VET admin. & financing	*4.3%*		
Tertiary admin. & financing	*5.1%*		
Textile and Tailoring	*6.5%*		
Transport and Security	*2.1%*		

Source: *Van de Werf (2000)*

6.59 The rate of return for primary education without costs is low (9.4%). An explanation for this is that the number of years of investment in primary education (7 years) overstates the actual forgone earnings years by 3 years. This is because in practice children cannot earn income while younger than 10. (Van de Werf, 2000). Taking account of opportunity costs between the ages of 10 and 14 for primary education would tend to suggest further that actually primary education in Tanzania costs more than the official statistics show, especially on the private cost side.

6.60 The private rates of return at secondary level are low and are likely to decrease further as private costs of education rise in response to increased privatisation and cost sharing. Unless the urge for entry to higher education compensates for the extra costs incurred at secondary level, there is a danger that enrolment at this level may fall if benefits do not follow schooling. A glance at the rates of return by subject indicates that technical training increases income rapidly (11.7%). It is more profitable to enter tertiary technical education than vocational technical education.

6.61 Table 6.15 also brings out how the benefits from education for individuals differ from those for society. It is notable that the social rate of return to tertiary education is quite low (1.8%), against 21% for private individuals. This is caused by the high public unit costs of tertiary education. At secondary level, since no government bursaries/loans are provided, the private rate and social rates are close to each other though relatively low. The low public unit costs to secondary education are reflected in this. The same is true for primary education, but[5] surprisingly Van de Werf calculates that the social rate of return is low.

Findings from the Current Study on Benefits and Returns

6.62 The present survey, undertaken for the Education Status Survey Report, used a designed respondent questionnaire whose major items included background information on respondents, type of institution attended, location of institution where highest education level was attained, highest education level, employer, monthly salary (before and after tax), work experience in years, field of study/specialization, industry of employment and position of responsibility. A total of 1,743 respondents were reached, of whom 1,051 (60.3%) were males and 692 (39.7%) females. The respondents were selected purposively from a stratified and clustered matrix of variables.

Private Benefits

6.63 ***Rural-Urban Differentials***: Table 6.16 reveals the average private benefits as shown by average monthly after-tax salaries for selected groups of respondents.

The data suggest that the average salaries after tax for educated urban workers (Tsh. 194,563) are higher than those for rural workers (Tsh. 134,972). The educated urban-rural earnings ratio is thus 1.40:1. However, within the groups of urban workers there is high variation (shown by the high value of standard deviation). The variation within the group of rural workers is not as pronounced as that of urban workers.

Table 6.16: Average Private Benefits (Monthly Salary after Tax) for Selected Groups in Tanzania

Group	*Mean*	*STD*	*n*
Urban	*194,563*	*486,926*	*1,245*
Rural	*134,972*	*130,126*	*3655*
Male	*199,052*	*506,387*	*976*
Female	*181,341*	*279,659*	*649*
All		*433,926*	*1,600*

Source: ***Education Status Report Survey***

6.64 ***Male-Female Differentials***: The Survey suggests that the average monthly private benefits for men at Tsh. 199,o52 are higher than those for women at Tsh. 181,341 per month, so that the educated male-female earnings ratio is 1.1:1, a smaller differential that between educated urban and rural workers. However, the values of standard deviations are high for men, an indication that within the male group there are high variations in benefits received, whereas the standard deviation for women is low, indicating less variation among them in average monthly salaries.

Private Benefits by Sector of Employment

6.65 The empirical comparison between public and private salary structures must be treated carefully as it requires the use of a variety of databases. That said, it is important that the theory and practice of public sector vis-à-vis private sector educated labour employment following both non-profit and profit maximising principles receive considerable attention in education-economic policy making. The educational pay differential by economic sector is of great value since it links with an array of issues related to theoretical, empirical and policy labour market situations. Indeed, the private demand for certain types of education can be influenced by labour market price signals. On the other hand government pay scales and their counterpart private sector pay can be used as policy instruments to design and effect a desired educational***(?)*** structure of the broad economy.

Table 6.17: Average Private Benefits (Monthly Salary) by Sector of Employment in Tanzania (1998/99) Tsh.

Value Label	*Mean*	*STD*	*n*	*Diff.*
Government (Public)	*109,351*	*238,634*	*540*	
Private (local)	*158,362*	*197,108*	*452*	*1.50*
Parastatal(s)	*238,688*	*218,061*	*362*	*2.20*
Foreign (International)	*407,5l79*	*152,262*	*96*	*3.70*
Private Foreign Other	*217,550*	*184,724*	*143*	*1.98*
Sample average	*175,874*	*151,684*	*36*	*1.60*

Source: *Education Status Report Survey 2000*

6.66 Table 6.17 shows the average private benefits, as indicated by average salary per month after tax, by sector of employment for the period 1998/99. For educated government employees this was Tsh. 109,351 with a high standard deviation of Tsh 238,634. As expected the (local) private sector pays more than the government sector at Tsh. 158,362 with a lower standard deviation of Tsh. 197,108. The quasi-government/parastatals pay more than either the government or the private (local) sectors, at Tsh. 238,688 with high standard deviation of Tsh. 218,061. The parastatal sector also pays on average higher than the private foreign companies, which offer an average of Tsh. 217,550 per month to educated labour. These average monthly salaries (after tax) compare unfavourably with those in international organisations, where the average pay is Tsh. 407,579 per month with a low standard deviation of Tsh. 152,262.

6.67 The picture which emerges from Table 6:17 is that:

(a) average private benefits for educated labour are lowest in the government sector and highest in foreign-international organisations (e.g. World Bank, SIDA, DANIDA, UNICEF etc);

(b) the overall earnings differential between government and other sectors is

- for private (local) sector - 1.50;
- for private-foreign 'other' - 1.98;
- for parastatal sector - 2.20;
- for foreign-international organisation sector - a very high 3.70.

Average Private Benefits by Education Levels

6.68 As shown in Table 6.18, on average private benefits by education levels indicate increasing differentials by educational level with very high variation. The mean average salary earnings are higher than the median earnings for all levels of education including the primary school level, except for the Ph.D. level where the median earnings are higher than the mean earnings (benefits). The primary school educated employees on average receive Tsh. 93,193 per month with a high standard deviation of Tsh 441,775 indicating that within the primary school education group there are both remarkably low and remarkably high salary earners. The median of the primary school average earnings is Tsh. 49,758, lower than the mean-value, an indication that the majority of primary school employees earn below the average figure for the group, but that there is a minority of very high earners pulling up the average.

6.69 Employees with ordinary level secondary education earn on average Tsh. 108,083 per month with a standard deviation of Tsh. 264,952 and a median-salary per month of Tsh. 67,712. When compared with primary school educated employees, secondary ordinary level employees' salaries show a lower variation within the group. Average monthly private benefits for employees with advanced level secondary education are estimated at Tsh. 116,955 with low standard deviation of 91,705 and median average earnings of Tsh. 98,000. As a group, advanced level employees have the lowest variation among all groups. Diploma holders' earn on average Tsh. 144,417 per month. The in median earnings for this group are Tsh. 90,500 with a variation of Tsh.131,855 (standard deviation).

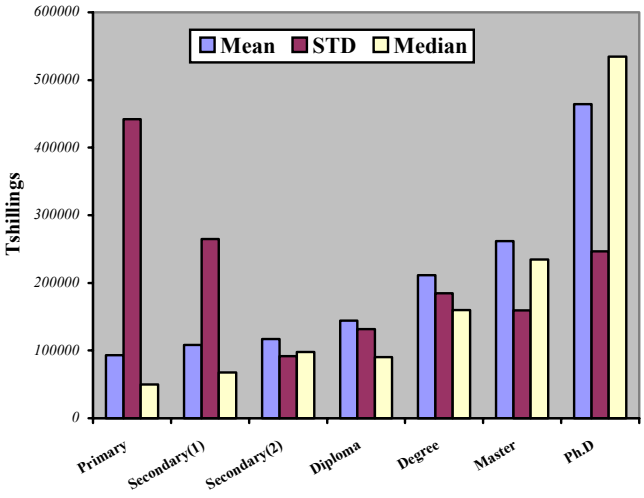
Table 6.18: Average Private Benefits (Monthly Salary after Tax) by Education Level in Tanzania (Tsh.) (1998/99)

Value Label	*Mean*	*STD*	*Median*	*Kurtosis*	*To Primary/ Differential*
Primary	*93,193*	*441,775*	*49,758*	*246.65*	
Secondary (1)	*108,083*	*264,952*	*67,712*	*207.88*	*1.16*
Secondary (2)	*116,955*	*91,705*	*98,000*	*17.345*	*1.25*
Diploma	*144,417*	*131,855*	*90,500*	*18.097*	*1.55*
Degree	*211,349*	*184,647*	*160,000*	*29.176*	*2.27*
Masters	*261,923*	*159,415*	*234,508*	*-0.039*	*2.81*
Ph.D.	*464,368*	*246,546*	*534,365*	*-1.460*	*4.98*

Source: *Education Status Report Survey (2000)*

6.70 Holders of university first degrees on average earn Tsh. 211,349 per month with a high standard deviation for the group of around Tsh.184,647 and a median average monthly salary of Tsh. 160,000. On the other hand, second-degree holders earn an average monthly salary of Tsh. 261,923 with a median monthly salary of Tsh. 234,508 and a high variation within the group of Tsh.159,415. The Ph.D. holders' median income of Tsh. 534,365 is incidentally higher than their average monthly salary earnings of Tsh. 464,368, suggesting that there may be a significant number on very low incomes, thus pulling down the average. The standard deviation for the group is a high Tsh. 246,546. The earnings functions of Masters and Ph.D. degree holders are both skewed to the left as indicated by the values of the Kurtosis which are –0.039 and –1.460 respectively.

Figure 2: Average Private (Monthly Salary after Tax) by Education Level in Tanzania (1998/99)



6.71 The general picture which emerges from analysis of average private benefits by education level tend to suggest that:

(a) private monthly benefits are increasing by ascending educational levels;
(b) at a given educational level the private benefits show high variation;
(c) only one educational level, that is the Ph.D. category of employees has the average monthly benefit lower than the median salary earning;
(d) the overall earnings differentials with respect to primary education increase as one moves from secondary to Ph.D. level education.
(e) the earnings distribution Kurtosis decreases as one goes from lower (primary) to higher (Ph.D.) education levels, indicating changes in pattern of earnings.

Private Benefits by Degree/Diploma Specialization

6.72 The private monthly benefits by type of degree/diploma specialisation are shown in Table 6.19. Employees with a Commerce/Business studies specialisation have the highest average monthly salary at Tsh. 305,459, with a high standard deviation of 282,165. Comparable figures for other specialisations are Engineering - Tsh. 277,445 (s.d. Tsh. 208,239), General Arts Tsh. 262,232 (s.d. Tsh. 211,380) and Agriculture - Tsh. 257,153 (s.d.Tsh. 252,844.).

Table 6.19: Private Monthly Benefits (Monthly Salary after Tax) for Degree/Diploma holders (1998/99)

Value Label	*Mean*	*STD*	*(n)*	*Diff[1].*
Engineering	*277,445*	*208,239*	*113*	*1.82*
Medicine	*213,411*	*528,921*	*197*	*1.40*
Education (Arts)	*152,054*	*156,519*	*174*	*1.00*
Commerce	*305,459*	*282,165*	*149*	*2.01*
Law	*234,537*	*188,707*	*154*	*1.54*
General-Arts	*262,632*	*211,380*	*189*	*1.73*
General-Science	*233,988*	*190,091*	*46*	*1.54*
Education (Science)	*180,401*	*183,404*	*145*	*1.19*
Agriculture	*257,153*	*252,844*	*69*	*1.69*
Other	*192,207*	*114,826*	*42*	*1.26*
N.A (Non-Degree)	*150,233*	*842,854*	*317*	

Notes: *[1]. The earnings ratio/differential is computed relative to the lowest mean-private average for "Education-Arts Degree" Specialization.*

Source: ***Education Status Report Survey 2000***

6.73 These are followed by Law with average monthly salary earnings of Tsh. 234,537, Science (general) with Tsh .233,988, and medical doctors with Tsh. 213,411. The majority of medical doctors (and teachers) work in public institutions (mainly government hospitals and schools) which may explain their relatively low average monthly salaries: it is also true that there is an extremely high standard deviation of Tsh. 528,921 for this group confirming that some doctors (those in private practice?) may receive high remuneration. Teachers (both arts-education and science-education) receive the least of all. Science teachers have an average salary earning of Tsh. 180,401, while the arts-education teachers have the lowest average salary per month of any specialisation at Tsh. 152,054.

Education-related Factors influencing Earnings

6.74 The coefficient of determination value of 0.407 (Table 6.20) indicates that the proportion of variance in the dependent variable (earnings) that is explained by all the independent variables acting together is 41 percent. This result is significant (F=60.3834 at p=0.000). Incidentally the coefficients of diploma level education, secondary level education, higher education, employer, (private vis-à-vis public) respondents' employment, are all positive and significant. The coefficient of variable location from rural to urban is negative and significant.

Table 6.20: Results: Education-related Factors that Influence Earnings in Tanzania

Regression Statistics

Adjusted R.. Square……0.407
Standard Error……0.688
Observations……1025

	Coefficient(B)	***Std Error***	***T-St***	***P-Value.***
Intercept……	*10.6730*	*0.2179*	*48.972*	*0.0000**
Experience……	*3.09E-05*	*4.90E-05*	*0.630*	*0.528**
Experience Sq……	*-7,48E-04*	*0.000*	*-9.205*	*0.000**
Diploma Educ……	*0.5318*	*0.957*	*5.555*	*0.000**
Age……	*0.1606*	*0.461*	*+5.226*	*0.000**
Sex……	*-0.0104*	*0.04610*	*-0.226*	*0.8216*
Location……	*-0.3221*	*0.0572*	*-5.633*	*0.0000**
Employer……	*0.2884*	*0.0181*	*15.750*	*0.0000**
Secondary……	*0.3406*	*0.0840*	*4.0490*	*0.0001**
Higher Educ……	*0.8497*	*0.0976*	*8.707*	*0.0000**

F = 60.3834, P = 0.0000

6.75 The contribution of significant variables could be summarized as follows:

(a) *diploma level education:* average monthly earnings increase of 53.2% over primary education

(b) *age:* average monthly earnings increase of 16.1%

(c) *location:* a change from urban to rural location reduces earnings by 32.2%

(d) *employment:* a change of employer from public to private increases earnings by 28.8%

(e) *secondary level education:* monthly earnings increase by 34%

(f) *university education:* average monthly earnings increase by 85%.

(g) *years of work experience:* a unit change brings no change in average monthly earnings.

From Estimators to Returns

6.76 The results of a transformation from regression estimators to rates of return are shown in Table 6.21. The indicator variable (dummy) was taken as the educational

level while the reference category was primary education level. The returns for each regression variable are shown as percentage (e^B–1)x100.

6.77 Returns to a person with a secondary education (ordinary level/advanced level) are approximately 41% higher than for a primary school educated person. As expected, private returns to a person with a tertiary/diploma level education are higher than those for a person with secondary, and they are approximately 70% higher than those for a person with a primary level education. Similarly returns to a person with at least a degree education are 134% higher than those to a person with primary education.

Table 6.21: Results: Transformation Regression Estimators to Rates of Return (Private) by Education Level in Tanzania

Variable	*B*	*E^B*	*(e^B-1)*	*Percentage*
Industry of employment	*-0.011628*	*0.9884*	*-0.0116*	*-1.2*
Experience…..	*$3.0906x10^{-5}$*	*1.0000*	*0*	*0*
Tertiary education…..	*0.5311872*	*1.77021*	*0.7021*	*70**
*Experience **q**……*	*-5,60E-04*	*0.999*	*-0.001*	*-0.1*
Age……	*0.016006*	*1.0161*	*0.0161*	*1.6*
Sex……	*-0.010400*	*0.9897*	*-0.0103*	*-1.0*
Location……..	*-0.322071*	*.07246*	*-0.2754*	*-2.8*
Specialisation……..	*0.012304*	*0.9878*	*-0.0122*	*-1.2*
Employer……	*0.288436*	*1.3343*	*0.3343*	*33*
Location (Ed)……	*0.106735*	*1.1126*	*0.1126*	*11*
Secondary……	*0.340357*	*1.4054*	*0.4045*	*41***
Position……	*-0.083615*	*0.9198*	*-0.0802*	*-8*
Higher education…….	*0.84972*	*2.3390*	*1.3390*	*133.9****

Notes: ****Stars: related to education, with primary education as the reference category. The indicator variable is level of education***

6.78 The returns to other non-education regression variables are inconclusive but suggestive of:

(a) high returns depending on employer: they can be as high as 33% as one moves from government employment, to private local and foreign, parastatals, international organisations. The high returns in the international organisations and parastatals, operating alongside low paying government departments, have created a "human capital aristocracy" and an educated labour market segmentation.

(b) low returns to the experience variable, though turning with an ***(?)***sign unexpected. This highlights the long-standing complaint that experienced human capital is not rewarded accordingly.

(c) positive returns to age, as expected, but low at 1.6%; lower than those from education levels in general. This finding is indicative that to be able to improve on their lifetime returns workers' continuing education is important.

(d) returns to "location of study institution" of around 11% in favour of overseas study. Those who studied abroad tend to experience higher returns compared to those who did so locally.

(e) low private returns to educated women relative to men (around -0.1) is an indication of existence of labour market earnings discrimination/ differentials against women.

Annual Rates of Return by Educational Level

6.79 Tables 6.22 and 6.23 show the calculated annual rates of return for each educational level by using the regression method and the short cut method. For the regression approach it is noted that:

(a) the private returns for tertiary and University education are higher than the corresponding social returns;

(b) the private returns to higher education are the highest in all cases;

(c) the private returns to secondary level education are the lowest in all cases;

(d) the values of the private returns are consistent with other findings in other less developed countries i.e. they are high for higher education, an indication that private costs are low while private benefits are high.

Table 6.22: Results: Calculated Annual Rates of Return by Educational level in Tanzania (Primary Reference) by Regression Method (1998/99)

Level	*$(e^B-1)x100$ (Social)[1]*	*$(e^B-1)x100$ (Private)[1]*	*Social Returns[2](%)*	*Private Returns[2](%)*
Secondary	*41**	*43.4**	*13.20*	*8.68*
Tertiary	*70**	*33.7**	*9.0*	*10.50*
Higher/Univ.	*133.9**	*161.3**	*8.40*	*17.92*

***Notes:** * indicate how high the returns are to a person with that level of education when compared to a person with primary education level.*

1 Returns are estimated from percentage; divided by average years of schooling (length of cycle) above primary level

2 Social returns are computed from average earnings before tax while private returns are computed from average earnings after tax (take home).

6.80 The findings from the short cut method would tend to suggest that:

(a) private returns are greatest for higher education (23%) followed by secondary education (16%) and lowest for primary (10%);

(b) the social returns are lowest for higher education (8%), followed by secondary (9%) and highest for primary education (14%);

(c) the values of private returns appear to be consistent with those of similar LDCs where higher education is highly subsidised by the state while its private benefits are high;

(d) as per expectations it is the primary school level, rather than the higher school levels, that is experiencing the highest social returns.

Table 6.23: Results: Returns to Education in Tanzania by Short Cut Method (1998/99)

Level	E(high)	E(low)	Private Costs	Social Costs	Social Return	Private Return
Primary	93,1931	(35,000)[1]	(48,000)	(91,696)	0.14	0.10
					(14%)	(10%)
Secondary	112,450	93,193	(152,007)	(307,954)	0.09	0.16
					(9%)	(16%)
Higher/Univ.	211,349	112,450	313,525	3,675,863	0.08	0.23
					(8%)	(23%)

Note[1] *estimated as equal to minimum wage or the going market price of unskilled labour*

Notes to Chapter Six

[1] *The pass mark is taken to be 60 marks out of a total 150 marks. However, for selection into Form I of government schools the minimum range across regions/districts is on average between 55% and 65% marks or around 83 marks and 98 marks out of 150 depending on the performance level in the region. This means a pupil who scores 97 out of 150 in the highest performing region may not be selected, while a pupil who scores 83 in the lowest performing region/district is selected.*

[2] *Considering the secondary school base at independence it is possible that growth in secondary education was quite fast but low relative to the population and also with respect to the school nationalisation policy of 1967 which halted private initiatives.*

[3] *These figures represent mathematical estimates from official documents on students' transitions. The bulk of graduates who join private and informal institutions are not captured. We do not have tracer study data yet.*

[4] *Figures for 1998, 1999 exclude in-service training enrolment.*

4 *Although no government bursaries/loans are provided to secondary education and we said earlier that even in the latest year unit costs for secondary education were four times as high as primary, so it surely remains a bit of a mystery that returns in secondary are close! The only other possible explanation could be that private or school costs are under/over estimated!*

CHAPTER SEVEN

ASPECTS OF EQUITY IN EDUCATION

Introduction

7.1 Disparities in Tanzania's enrolment profile by gender, geographical locality, school type and income-group are very evident. To some extent these may result from past government policies and investment patterns. In a country like Tanzania, where a high proportion of education expenditure falls on families, the differential financial capacity of households can be a further cause of disparity in educational opportunity. Increases in enrolment do not of themselves ensure equitable access, or equal opportunities for high educational achievement, throughout society. Disparities will increase to the extent that resources are not equitably distributed[1].

Trends in Education by Gender, Level and Type of Education in Tanzania

Enrolment by Gender

7.2 Since 1985 enrolment figures among males and females at primary school level have approached near parity. The percentages of males and females enrolled in primary schools for the period have remained stable at around 50.1% for males and 49.1% for females. The absolute number of males in primary schools increased by 32% from 1,589,629 to 2,099,655 in 1999, and of females from 1,580,130 in 1985 to 2,090,101 (also 32%).

7.3 The gender balance is less even at secondary level, but has become much more equal than in the past. In 1985 for example, the percentage of males enrolled in lower secondary was 62.1% compared with 37.9% for females, whereas by 1999 a substantial improvement in the female share of places had occurred, to reach 47.3% of the total lower secondary enrolment. The same trend is evident at upper secondary level, where there were 4,467 male (78.4%) pupils and 1,230 females 21.6%) in 1985. By 1999 the number of males enrolled had increased to 14,518 (66.9% of the total) while females had grown almost sixfold to 7,197 (33.1%).

7.4 The attainment of near parity for female pupils at primary and at lower secondary level, and their greatly increased share of places at upper secondary level represents not just social and cultural trends, but also great efforts on the supply side to eliminate barriers to entry for females. They include the building of more schools by government and, at secondary level, expansion of private-sector provision. There have also been deliberate policies by government to increase the equity of admissions into the limited number of secondary schools through a quota system that gives preferential treatment to certain groups like children from disadvantaged districts and girls (World Bank, 1995).

Table 7.1: Trends in Enrolment by Gender, Level and Type of Education

Year	Primary				Secondary								Vocational**				Higher			
					Lower				Upper											
	M	%	F	%	M	%	F	%	M	%		%	M	%	F	%	M	%	F	%
1985	1,589,629	50.1	1,580,130	49.9	48,072	62.1	29,308	37.9	4,467	78.4	1,230	21.6	-	-	-	-	-	-	-	-
1990	1,705,235	50.5	1,673,765	49.5	80,019	56.7	61,070	43.3	7,133	77.4	2,078	22.6	-	-	-	-	-	-	-	-
1995	1,961,879	50.6	1,915,764	49.4	99,947	54.4	83,712	45.6	9,149	71.9	3,567	28.1	1,915	82.3	411	17.2	9,161	88.0	1,313	12.0
1996	1,992,739	50.5	1,950,149	49.5	98,435	53.2	86,684	46.8	9,597	68.7	4,377	31.3	1,931	82.2	418	17.8	9,593	86.8	1,455	13.2
1997	2,044,098	50.4	2,013,867	49.6	114,013	54.9	93,547	45.1	11,144	61.7	6,903	38.3	2,143	80.5	520	19.5	12,829	80.0	1,731	20.0
1998	2,033,281	50.3	2,009,287	49.7	109,336	52.4	99,402	47.6	12,093	66.6	6,072	33.4	-	-	-	-	6,813	81.2	1,577	18.8
1999	2,099,655	50.1	2,090,161	49.9	118,936	52.7	106,903	47.3	14,518	66.9	7,195	33.1	-	-	-	-	8,589	80.6	2,069	19.4

***Source**: BEST, 1985-89, 1989-93, 1995-99, URT, Economic Survey for 1999.*
*** represent data from VETA centres only; national picture may be same*

7.5 At the vocational and higher education level the gender balance in enrolment has remained exceptionally skewed with only isolated improvements. Table 7.1 indicates that the share of female enrolment in VETA institutions has remained at around 18-19%. In higher education institutions the female share of enrolment has improved from a mere 12% in 1985 to 18% in 1999. According to 1998/1999 figures, female proportions range from 8% for technical colleges, to 23% at the University of Dar es Salaam (UDSM) and Sokoine University of Agriculture (SUA), 24% at Muhimbili University College of Health Sciences (MUCHS) and 26% in private universities.

7.6 The level of enrolment of female students at the largest higher education campus, the University of Dar es Salaam, has remained low for many years as shown in Table 7.2. There is a big difference in gender balance between faculties as well as within departments. This means that the strategies designed to redress the situation have to target specifically vulnerable areas and disciplines of specialisation. Target disciplines include Bachelor of Science General where the female proportion is 5%, Geology at 7%, Computer Science at 6%, Engineering at 5% and Agricultural Engineering at 0%.

Table 7.2: Female/Male Student Proportions in Selected Higher Education Institutions in Tanzania 1994/95 – 1998/99, (%)

	1994/95	*1995/96*	*1996/97*	*1997/98*	*1998/99*
UDSM	*17*	*15*	*16*	*18*	*23*
MUCHS	*25*	*26*	*25*	*28*	*24*
SUA	*23*	*25*	*23*	*24*	*23*
Technical Colleges	*6*	*6*	*6*	*6*	*8*
Private Universities	*n.a*	*n.a*	*35*	*34*	*26*
Average	*17.8*	*18*	*21*	*22*	*21*

***Source**: Galabawa and Mbelle (2000)*

Gross Enrolment Rates by Gender

7.8 At primary school level the female gross enrolment has declined from 73.2 in 1985 to 67.6 in 1999 (Table 7.3). The rates for males are 73.8 for 1985 and 65.3 for 1999. This implies that GERs for females by 1999 were slightly higher than for males, possibly reflecting more over-age girls than boys at primary school level. [1]

7.9 At secondary school level the gross enrolment rates for females remain lower than those for males despite the higher social returns expected from investment in secondary education for females[2]. In 1985 the GER s stood at 2.7 for females and 4.5 for males. By 1999, however, these figures had improved to 7.2 and 7.6 respectively. At upper secondary, gross enrolment rates for girls remain exceptionally low, as for males. In 1985 the GER for females at upper secondary was 0.2: this increased to 1.12 by 1999, but was still very low. The GERs for girls at secondary school level imply that Tanzania has made gains in girls' education over the last decade in terms of gender balance but not in terms of overall

education opportunity, i.e. relative to the population size. Thus current efforts to empower girls and women in secondary education must be continued and intensified.

Table 7.3: Trends in Gross Enrolment Ratios by Gender and Type of Education in Tanzania 1985 - 1999

Year	Primary		Secondary				Vocational		Higher	
			Lower		Upper					
	M	F	M	F	M	F	M	F	M	F
1985	73.8	73.1	4.5	2.7	0.80	0.20	-	-	-	-
1990	70.4	71.1	7.7	5.6	1.30	0.40	-	-	-	-
1995	67.7	79.0	7.5	6.4	1.75	0.60	82.3	17.7	0.95	0.12
1996	66.9	68.5	7.6	6.4	1.70	0.80	82.2	17.8	0.96	0.13
1997	66.7	68.8	7.8	6.7	1.80	1.20	80.5	19.5	1.26	0.16
1998	65.0	66.8	7.2	6.9	1.81	0.95	-	-	0.66	0.14
1999	65.3	67.6	7.6	7.2	2.15	1.12	-	-	0.79	0.18

Source: *Table 7.1 and (URT) Population Projections from Population Planning Unit.*

7.10 At higher education level the GERs for females were as low as 0.12 in 1985 and 0.18 in 1999. They compare unfavourably with those for males which were 0.95 in 1985 and 0.79 in 1999. The GER for females in higher education has thus improved over time, while the GER for males has declined. From an international perspective both rates are extremely low, which underlines the need to strive not only for gender balance in GERs in higher education but also to improve the overall absorption capacity of higher education relative to demographic trends.

7.11 The low GER for females has its root in the whole educational system right from primary and secondary levels. Long-term measures to increase intake of women in higher education have to include strategies to arrest the situation at lower primary and secondary levels. Short-term measures taken ad hoc at individual institutions may not solve the crisis. Desirable measures include those being implemented by the University of Dar es Salaam (UDSM) with a long-term target of achieving a 50-50 male-female ratio through:

> providing qualifying women bonus points 1-1.5 compared to men; taking serious measures to research the causes of the imbalance and making appropriate recommendations; mobilising special resources to support women students; maintenance of the special pre-entry programmes for women to improve their capacity to follow their studies; and working with the Ministry of Education in addressing the observed gender imbalance and taking bold measures to promote greater women's enrolment", Galabawa and Mbelle (2000)

Grade-Specific Enrolment by Gender

7.12 The data in Tables 7.4 and Table 7.5 for primary and secondary levels suggest that female enrolment in each particular grade tends to increase over the years, but in any one year successive grades enrol fewer students. The same pattern is observed for males.

7.13 A cohort analysis of male and female enrolments indicates that the average transition loss of females across a seven-year primary school cohort is 40% while

that for males is 44%. Thus, wastage rates across the cohort are somewhat higher for males than for females. In spite of this, renewed efforts are needed to transform schools into institutions that truly promote the interests of girls.

7.14 The grade-specific enrolment rates by gender for primary schooling are shown in Table 7.4. The rates for both males and females decline over the years, with rates for females being generally lower than those for males *(substantially so for 1999, but these figures are incompatible with Table 7.3 and the text at para 7.8 and will be checked)* . Within the same age group fewer girls than boys are enrolled in schools. In any particular year the enrolment rates for both males and females decline as one looks at higher grades. The decline is sharper for males than for females, confirming the earlier observation that once girls are enrolled in school at primary level, it is easier to retain them than boys.

Table 7.4: Tanzania: Grade-Specific Enrolment Rates by Gender at Primary level, 1995 – 1999 (%)

GRADE	1995		1996		1997		1998		1999	
	M	F	M	F	M	F	M	F	M	F
1	79	73	74	75	74	72	78	70	73	66
2	73	71	68	69	71	69	76	69	73	67
3	71	72	73	75	69	68	79	73	80	74
4	70	56	57	59	63	64	59	55	64	61
5	67	58	61	64	53	53	63	60	56	55
6	56	59	53	53	57	58	52	48	60	60
7	55	59	53	53	57	61	48	50	58	60

Source: *Computed from BEST and Population Planing Unit Data (Several)*

Table 7.5: Secondary Level Grade-Specific Enrolment by Gender in Tanzania 1994 – 1999

Form	1994		1995		1996	
	M	F	M	F	M	M
I	27,228**	23,018*	28,491	25,207	29,305	26,956
II	25,283	21,511	26,592**	21,887*	26,004	23,377
III	22,597	17,700	23,483	19,733	23,453**	19,238*
IV	20,543	15,740	21,381	16,885	19,673	17,113
V	4,610**	2,136*	4,864	2,011	5,185**	2,511
VI	4,280	1,594	4,285**	1,556*	4,412	1,866

Form	1997		1998		1999	
	M	F	M	F	M	F
I	32,987	28,824	33,355	30,866	35,166	32,311
II	31,301	25,908	29,013	26,961	32,627	28,802
III	26,683	21,533	24,755	22,199	27,469	24,240
IV	23,042**	17,282*	22,215	19,376	23,674	20,577
V	6,342	3,478*	6,603**	3,386	8,016	3,956
VI	4,862	3,425*	5,490**	2,686	6,502**	3,239

Notes: * *a tracer of females cohort*
** *a tracer of males cohort*
Source: *Same as Table 6.2.*

7.15 In many respects secondary level grade-specific enrolments by gender seem to follow a similar pattern to those of primary level. They increase for a particular grade over the years and decrease between grades for a particular year. But in the case of secondary education wastage is greater for females. A tracer of 1994 to 1997 cohorts indicates a cycle transition loss for girls of 25% while that for males is 16%. The association between wastage and age is thus more pronounced among girls than among boys at secondary level. This may well be tied up with sexual maturation and marriageability, and may also reflect high opportunity costs of girl-child labour at this age as perceived by families.

Achievement on the Certificate of Secondary Education Examination (CSEE) by Gender

7.16 Of the 100 girls who sit for the Certificate of Secondary Education Examination (CSEE) about 30 fail, and around 15 proceed to Form 5. Most of these girls will sit two years later for the Form Six examinations and a further five will fail.

7.17 Table 7.6 indicates that over the latest five-year period boys' schools have performed better than girls' schools, but the pass rate for boys' schools has been declining, while that of girls' schools has been steadier and the overall grades achieved by those girls who pass has improved.

7.18 Table 7.7 shows achievement on the CSEE in more detail for 1998. Pass rates of boys-only schools are slightly better than those of girls-only schools in total, but are qualitatively far superior. Altogether 18% of male school candidates obtained a Division 1 or Division 2 pass, but only 6% of girls: since there were more male candidates this means that there were four boys with 'good' CSEE passes for every one girl with a 'good' pass.In the co-education schools 2,948 boys achieved a good pass but only 440 girls, giving a ratio of nearly 7:1. The overall failure rate in girls-only schools is 17% as compared to 4% for boys-only schools The failure rate for girls in co-education schools is 33% (boys in such schools 15%); and 34% of female private candidates fail as compared to 25% males. Overall, taking school and private candidates together, 30% of girls fail as compared to 16% for boys.

Table 7.6: Performance in "O" Level Examinations in Tanzania 1995-1999

	% passed		
	Boys' Schools	Girls' Schools	Co-ed. Schools
1995	99.9	85.7	77.5
1996	92.1	79.5	74.0
1997	95.6	82.7	77.8
1998	93.9	82.7	73.4
1999	95.5	85.7	78.5

Source: NECTA

Table 7.7: Certificate of Secondary Education Examination (CSEE) Results in Tanzania 1998

	DIVISION				Passed	Failed	Entered
	1	2	3	4			
Single Sex Schools							
Boys	707	450	785	826	2,768	129	2,897
	24%	16%	27%	29%	96%	4%	100%
Girls	283	326	932	2,048	3,589	751	4,340
	7%	8%	21%	47%	83%	17%	100%
Co-ed. Schools							
Boys	1,256	1,692	4,357	9,947	17,252	2,987	20,239
	6%	8%	22%	49%	85%	15%	100%
Girls	162	278	1,292	7,970	9,702	4,689	14,391
	1%	2%	9%	55%	67%	33%	100%
Private Candidates							
Boys	7	30	176	4,199	4,412	1,477	5,889
	0%	1%	3%	71%	75%	25%	100%
Girls	-	4	46	3,194	3,244	1,699	4,943
	-	0%	1%	65%	66%	34%	100%
Totals							
Boys	1,970	2,172	5,318	14,972	24,432	4,593	29,025
	7%	7%	18%	52%	84%	16%	100%
Girls	445	608	2,270	13,212	16,535	7,139	23,674
	2%	3%	10%	56%	70%	30%	100%
Total	2,415	2,780	7,588	28,184	40,967	11,732	52,699
	5%	5%	14%	53%	78%	22%	100%

Source: Adapted from Examination Results Statistics, NECTA (1997)

Geographical Disparities in Education

7.19 In most countries education supply and demand vary by locality. The reasons are partly historical, with some areas having developed and been exposed to modern education earlier than others. They are partly economic, some areas being better endowed with economic resources, natural or man-made. Geography, demography and density of population make it easier to provide a network of schools in some areas than others. And sometimes political or cultural factors have led to a differential allocation of public resources as between different parts of the country. For some or all of these reasons there are marked differences in education enrolment and achievement across the regions and districts of Tanzania.

Primary School Gross and Net Enrolment Rates by Region

7.20 Regional educational inequalities may be less dramatic than economic ones. Yet since the distribution of schools and their quality is not even, student enrolments may not bear any close relationship to regional population. Indeed Table 7.8 suggests that while some regions have high GER and NER rates, others present cause for concern. The regions of Dar es Salaam, Iringa, Kilimanjaro, Mara, Mbeya, Mtwara, Ruvuma, Tanga had GER above the national average in 1994. However by 1997 the regions with above national average GER rates were Dar es Salaam, Iringa, Kilimanjaro, Mara, Mbeya, Mwanza, Pwani, Ruvuma and Singida. (In other words Mtwara and Tanga had left the list, and Mwanza, Pwani and Singida had joined it).

7.21 The picture portrayed by the net enrolment rates (NERs) is quite different from GERs. The national average NER was 57.6 in 1997. This figure marks high disparities across the regions as shown by the NER rates of 44.0 for Kagera, 45.4 for Lindi, 46.7 for Rukwa, 47.3 for Tabora, 47.6 for Kigoma, 48.5 for Tanga, 49.6 for Singida, 50.7 for Arusha, 51.5 for Morogoro, 52.4 for Shinyanga, 52.9 for Morogoro, and 55.3 for Mtwara. ***(Can we believe that Arusha has a lower NER than Shinyanga)*** Twelve regions had NERs of less than the national average. And only eight above. The 56.7 national NER is pulled up by high performing regions like Dar es Salaam (78.3), Iringa (72.1), Kilimanjaro (71.7) and Mara (68.1) and Pwani (66.3).

Table 7.8: Primary School Gross and Net Enrolments Rates by Region in Tanzania 1994 - 1997

Region	1994		1995		1996		1997	
	GER	NER	GER	NER	GER	NER	GER	NER
Arusha	*72.3*	*48.2*	*72.5*	*48.1*	*73.7*	*50.4*	*72.9*	*50.7*
Dar es Salaam	*97.3*	*69.9*	*97.1*	*71.5*	*98.2*	*73.2*	*101.5*	*78.3*
Dodoma	*68.3*	*14.3*	*66.6*	*43.5*	*69.4*	*47.3*	*73.0*	*51.5*
Iringa	*87.9*	*68.0*	*86.9*	*66.6*	*85.6*	*67.5*	*92.9*	*72.1*
Kagera	*68.7*	*43.0*	*66.0*	*41.8*	*66.5*	*42.8*	*69.2*	*44.0*
Kigoma	*64.0*	*50.0*	*65.8*	*48.0*	*64.2*	*46.2*	*63.8*	*47.6*
Kilimanjaro	*101.3*	*74.5*	*100.3*	*74.7*	*100.4*	*75.4*	*103.3*	*71.7*
Lindi	*64.6*	*51.5*	*64.5*	*51.6*	*59.0*	*43.0*	*61.2*	*45.4*
Mara	*88.3*	*48.2*	*92.8*	*67.1*	*91.7*	*68.7*	*91.2*	*68.1*
Mbeya	*79.2*	*49.5*	*79.2*	*55.0*	*79.7*	*57.1*	*84.4*	*60.2*
Morogoro	*76.5*	*59.2*	*76.4*	*46.0*	*73.6*	*49.4*	*77.9*	*52.9*
Mtwara	*78.4*	*60.4*	*77.6*	*59.7*	*74.3*	*56.9*	*72.0*	*55.3*
Mwanza	*76.3*	*55.0*	*74.9*	*54.3*	*72.7*	*52.7*	*83.4*	*61.8*
Pwani	*73.1*	*53.5*	*69.2*	*45.7*	*75.1*	*56.2*	*88.6*	*66.3*
Rukwa	*69.2*	*46.6*	*79.7*	*56.9*	*62.5*	*43.1*	*66.3*	*46.7*
Ruvuma	*80.9*	*58.2*	*75.9*	*54.6*	*79.1*	*58.9*	*88.7*	*60.4*
Shinyanga	*71.1*	*53.0*	*74.1*	*43.6*	*71.6*	*53.0*	*69.4*	*52.4*
Singida	*26.1*	*46.4*	*65.7*	*50.8*	*74.5*	*45.6*	*82.1*	*49.6*
Tabora	*63.9*	*50.1*	*63.0*	*49.6*	*62.8*	*49.5*	*62.4*	*47.3*
Tanga	*77.9*	*57.4*	*76.8*	*56.4*	*74.7*	*56.1*	*65.8*	*48.5*
Average	***74.2***	***52.8***	***76.2***	***54.2***	***75.4***	***54.6***	***78.5***	***56.5***

Source: *MOEC (1999) "Education Indicators in Tanzania".*

Distribution of Teachers by Region

7.22(a) There are wide disparities in staff allocations by regions and districts. In primary schools, TPRs vary from 1:56 in Shinyanga to 1:32 in Kilimanjaro (Table 7.9). There is also an inequitable allocation of better qualified teachers. A high proportion of grade C/B teachers is concentrated in rural areas and rural schools. This suggests that issues of district-level staffing, decisions on where teachers are placed and procedures for deciding changes in workstations have not been administered equitably. Cases of refusal by qualified teachers to work in remote areas, under the pretext that quality of life is low and opportunities to supplement income are slim, are not uncommon.

Table 7.9: Geographical Distribution of Teachers and Teacher-Pupil Ratios in Tanzania (1999)

	Total Std. I -VII Enrolment	Teachers							Pupil-Teacher Ratio	% Grade A
		Grade B/C	%	Grade. A	%	Diploma	%	Total		
Arusha	*276105*	*3031*	*5.4*	*3274*	*6.9*	*41*	*10.1*	*6346*	*43*	*51*
D'Salaam	*267597*	*2774*	*4.9*	*3085*	*6.5*	*46*	*11.4*	*5905*	*45*	*52*
Dodoma	*229720*	*3188*	*5.7*	*2056*	*4.4*	*7*	*1.7*	*5251*	*44*	*39*
Iringa	*256506*	*3239*	*5.8*	*2936*	*6.2*	*23*	*5.7*	*6198*	*41*	*47*
Kagera	*206058*	*3197*	*5.7*	*2928*	*6.2*	*34*	*8.4*	*6159*	*33*	*48*
Kigoma	*149709*	*2379*	*4.2*	*1440*	*3.0*	*7*	*1.7*	*3826*	*39*	*38*
Kilimanjaro	*257385*	*4041*	*7.2*	*3937*	*8.3*	*39*	*9.6*	*8017*	*32*	*49*
Lindi	*87165*	*1627*	*2.9*	*995*	*2.1*	*5*	*1.2*	*2627*	*33*	*39*
Mara	*214786*	*2966*	*5.3*	*2123*	*4.5*	*26*	*5.4*	*5114*	*42*	*42*
Mbeya	*303294*	*4491*	*8.0*	*3374*	*7.1*	*24*	*5.9*	*7889*	*38*	*43*
Morogoro	*210668*	*3180*	*5.7*	*2446*	*5.2*	*33*	*8.1*	*5659*	*37*	*43*
Mtwara	*126594*	*2294*	*4.1*	*1595*	*3.4*	*4*	*1.0*	*3893*	*33*	*41*
Mwanza	*342885*	*3734*	*5.7*	*3782*	*8.0*	*20*	*4.9*	*7530*	*45*	*50*
Pwani	*108450*	*1445*	*2.6*	*1413*	*3.0*	*9*	*2.2*	*2667*	*38*	*49*
Rukwa	*123727*	*1747*	*3.1*	*1383*	*2.9*	*18*	*4.4*	*3148*	*39*	*44*
Ruvuma	*162591*	*2350*	*4.2*	*1975*	*4.2*	*7*	*1.7*	*4332*	*38*	*46*
Shinyanga	*319279*	*2927*	*5.2*	*2780*	*5.9*	*8*	*2.0*	*5715*	*56*	*49*
Singida	*163817*	*2112*	*3.8*	*1523*	*3.2*	*10*	*2.5*	*3645*	*45*	*42*
Tabora	*160497*	*1920*	*3.4*	*1690*	*3.6*	*15*	*3.7*	*3625*	*44*	*47*
Tanga	*218744*	*3436*	*6.1*	*2514*	*5.3*	*29*	*7.2*	*5979*	*37*	*43*
Total	***4182677***	***56077***	***100***	***47249***	***100***	***405***	***100***	***103525***	***40***	***46***

Source: *MOEC, BEST Regional Data*

Results on the PSLE by Region

7.23 There is a wide variation among regions in terms of PSLE results (Table 7.10), from 35% pass rate in Dar es Salaam in 1998 and 1999 to only 10.3% (1998) in Mtwara. Other data published by NECTA show that many of the best results by location relate to urban locations (Table 7.13).

Table 7.10: PSLE Performance by Region in Tanzania 1998 and 1999[1]

Region	1998 PSLE % passed	1999 % passed	Region	1998 PSLE % passed	1999 % passed
Arusha	*18.9*	*21.0*	*Mbeya*	*24.9*	*20.5*
Pwani	*17.9*	*19.7*	*Morogoro*	*17.1*	*18.7*
D'Salaam	*35.1*	*35.5*	*Mtwara*	*10.3*	*13.3*
Dodoma	*13.5*	*15.4*	*Mwanza*	*21.9*	*21.0*
Iringa	*32.3*	*22.5*	*Rukwa*	*21.4*	*20.7*
Kagera	*15.4*	*15.0*	*Ruvuma*	*16.5*	*13.9*
Kigoma	*20.4*	*15.2*	*Shinyanga*	*19.1*	*11.8*
Kilimanjaro	*19.3*	*19.3*	*Singida*	*18.6*	*17.9*
Lindi	*21.1*	*18.3*	*Tabora*	*16.6*	*13.7*
Mara	*32.2*	*25.2*	*Tanga*	*15.9*	*17.3*
Grand Average				***20.3***	***18.8***

Source*: MOEC, BEST, 1998/99*

Notes 1 *The pass mark is taken to be 60 out of 150 marks*

District Inequalities in Education Opportunities and Achievement

7.24 District inequalities are presented in terms of inputs - staffing level (TPR), teacher qualifications (TAR) and access to classrooms (PCR): and outputs in terms of enrolment (NER) and performance at the PSLE. Analysis of these variables reveals significant differences between districts in terms of education opportunities and achievements (Table 7.11). This is supplemented by some detailed information for six named districts covered by the school mapping exercise (Table 7.12).

Table 7.11: District Education Indicators by Quintile in Tanzania

Quintile	*PSLE*	*NER*	*TAR*	*TPR*	*PCR*
Top	*28%*	*75%*	*46%*	*1:30*	*60:1*
Second	*23%*	*65%*	*41%*	*1:35*	*73:1*
Third	*17%*	*54%*	*39%*	*1:37*	*88:1*
Fourth	*17%*	*47%*	*35%*	*1:36*	*123:1*
Fifth	*16%*	*45%*	*36%*	*1:47*	*222:1*
National Average	*20%*	*57%*	*39%*	*1:37*	*113:1*

***Source**: Cooksey, B., R. Balre B, Berner (1998)*

Notes: *PSLE = Primary School Leaving Examination*
NER = Net Enrolment Ratio
TAR = Proportion of Grade A teachers
TPR = Pupil Teacher Ratio
PCR = School Age Population per classroom.

7.25 The district level differences in inputs seem to be more pronounced than differences in outputs. ***(true of PCR but certainly not obvious from the table as regards TAR)*** School-age population per classroom records the widest range, from 34:1 in Mbeya to 430:1 in Igunga. Analysis by quintile shows that the top 20% of districts have on average nearly 4 times as much classroom space in relation to school-age population as the bottom 20% of districts.

7.26 High variances are shown by the PSLE performances. For example Dodoma Rural has an average pass rate performance of 12% and Kigoma Urban 45%. The average PSLE score in the first quintile is almost twice the score in the 5th quintile. Generally the average score is very low. Kigoma Urban was the only district with an average score superior to the pass-mark (45%) in 1995.

7.27 The key features of the low status performing districts can be characterized as follows:

(a) lack of classrooms in proportion to the school-age population; with an average of school-age children per classroom above 125 ***(T 7.11 says 113)***

(b) slightly above average teacher-pupil ratio in some districts due to the fact that enrolment is low for these districts, and a very low teacher-pupil ratio (1:77) in some districts together with a low enrolment ratio, indicating a severe shortage of teachers.

(c) high proportion of Grade A teachers in some districts despite having a very low teacher-pupil ratio and low performances in PSLE (13%)

(d) less variance in terms of output with PSLE performance around 20% below the national average. ***(Variance by quintiles - at least between top and bottom quintile - greater for PSLE than TPR).***

Table 7.12: Selected Education Indicators on the Six School Mapped Districts in Tanzania

District	*Source*	*NER*[2] (%)*	*GER (%)*	*NIR (%)*	*AIR (%)*	*No. of students*	*No. of teachers*	*Pupil Teacher ratio*	*Qualified Teachers (%)*	*No. of schools*
Kisarawe	*1997 School Map*	*66.0*	*88.0*	*30.0*	*89.0*	*16153*	*427*	*37.8*	*54.3*	*62*
	1998 MOEC[1]*	*69.5*	*91.7*	*-*	*-*	*-*	*-*	*-*	*-*	*-*
Bagamoyo	*1998 School Map*	*-*	*70.0*	*-*	*-*	*28928*	*794*	*36.4*	*42.9*	*90*
	1998 MOEC	*51.3*	*83.8*	*-*	*-*	*-*	*-*	*-*	*-*	*-*
Serengeti	*1998 School Map*	*62.0*	*86.0*	*39.0*	*110.0*	*24598*	*581*	*42.3*	*-*	*80*
	1998 MOEC	*68.7*	*88.1*	*-*	*-*	*-*	*-*	*-*	*-*	*-*
Magu	*1999 School Map*	*-*	*61.0*	*13.0*	*42.0*	*53183*	*1279*	*41.6*	*42.0*	*-*
	1998 MOEC	*51.1*	*69.8*	*-*	*-*	*-*	*-*	*-*	*-*	*-*
Morogoro	*1999 School Map*	*70.0*	*84.6*	*-*	*-*	*25233*	*886*	*28.5*	*54.3*	*34*
Urban	*1998 MOEC*	*73.4*	*95.7*	*-*	*-*	*-*	*-*	*-*	*-*	*-*
Musoma	*1998 School Map*	*30.0*	*69.0*	*29.1*	*63.9*	*52473*	*1302*	*40.3*	*37.0*	*150*
Rural	*1998 MOEC*	*61.0*	*90.0*	*-*	*-*	*-*	*-*	*-*	*-*	*-*
Tanzania	*1998 MOEC*	*57.0*	*76.0*	*13.3*	*77.5*	*4035209*	*106041*	*38.l0*	*44.2*	*11306*

***1** 1998 MOEC: Basic Education Statistics in Tanzania Regional Data 1998*
***2** NER: Net Enrolment Ratio, GER: Gross Enrolment Ratio,*
NIR: Net Intake Ratio (Net Enrolment Ratio of the first grade,
AIR: Apparent Intake Ratio (Gross Enrolment of the first grade)

Urban-Rural Disparities

7.28 Table 7.13 shows variations between districts by urban/rural location. Education deprivation appears to be more concentrated in rural areas. According to the Global Educational Index cited by Cooksey, Balre and Berner (1998), 13 of the top 20 districts are urban while the bottom 20 are all rural. Urban-rural differences are particularly significant in terms of access to school facilities (PCR) and general primary education performance (PSLE). Thirteen out of the 20 top districts in terms of PSLE scores are urban; while the distribution of Grade A teachers also shows an urban district bias. Seventeen of the top 20 districts ranked according to the percentage of Grade A teachers are urban. The only urban district in the bottom 20 in this index is Dodoma urban with 29% Grade A teachers. Attempting to rectify the urban-rural imbalances in education inputs and outputs poses a challenge.

Table 7.13: Education Indicators for Urban and Rural Districts (%)

District	*PSLE*	*GER*	*NER*	*TAR*	*TPR*	*PCR*
Urban	*29%*	*90%*	*70%*	*47%*	*1:33*	*85:1*
Rural	*17%*	*74%*	*53%*	*37%*	*1:38*	*121:1*

***Source:** Cooksey et al (1998); MOEC BEST various*

7.29 Table 7.14 shows average pupil: teacher ratios, stream (class) sizes, and teacher per stream in surveyed urban and rural districts. Overall, these ratios are low compared to other African countries at a similar level of income (45:1). They are significantly lower in urban (33:1) than in rural areas (38:1). Urban districts enjoy a larger percentage of the more qualified grade A teachers[2].

Disparities by School Type

Secondary-School Teacher-Student Ratios by School Type as Sources of Inequities

Table 7.14: Selected Indicators of the Situation in Urban and Rural Primary Schools in Tanzania

	All	*Urban*	*Rural*
Teacher-Pupil	*1:36*	*1:33*	*1:38*
Student: Class	*1:10*	*1:85*	*1:12*
Teacher: Class	*3*	*1.56*	*1*
Percent Grade A	*1.0*	*47%*	*0.84*
Median Class Size	*42%*	*51.2*	*37%*
	55.7		*60.2*

Source: *MOEC, BEST Statistics and Survey Data, 2000*

7.30 On average the teacher-student ratios are around 1:18 in secondary schools – an indication that the situation has not changed appreciably since 1993 when the "Teachers and the Financing of Education" Report by the World Bank was issued. There is also a spectrum of variations across schools indicating a high degree of inequity and inefficiency. The TSRs are 1:17.4 in rural schools, 1:19.1 in urban schools, and as shown in Tables 7.15 and 7.16 they vary between 1:14.5 in community schools and 1:17.7 in private schools, rising to 1:18.3 in government secondary schools.

Table 7.15: STRs by School Location in Tanzania 1998 – 1999

	1998		*1999*	
	Mean	***STD***	***Mean***	***STD***
Rural	*17.40*	*6.50*	*17.35*	*6.50*
Urban	*19.06*	*5.67*	*19.06*	*5.67*
Average	*18.41*	*6.04*	*18.41*	*6.04*

Source: *Education Status Report Survey (2000)*

Table 7.16: STRs by School Ownership in Tanzania, 1998

	1 9 9 8		
	Mean	**STD**	**(n)**
Government	*18.32*	*5.08*	*60*
Private	*17.65*	*5.93*	*58*
Community	*19.51*	*4.29*	*6*
Other	*18.51*	*0.000*	*6*
Average	*18.41*	*3.8*	*117*

Source: *Education Status Report Survey (2000)*

7.31 The above data suggests that Students Teacher Ratios Ratios have not improved in public secondary schools, they are at around 18.3 in year 2000. However, these ratios are still low when compared with the averages for sub-Saharan Africa as a whole (about 23.1). It should also be noted that the STRs are around 14.3 in boarding schools compared to 19.18 in day secondary schools. However the STRs standard deviation across schools are high, indicating a considerable variation in deployment of teachers[3].

Graduate-Student Teacher Ratios in Secondary Schools as a Source of Inequities

7.32 Another source of inequity in secondary schools is the number of "graduate" teachers. Table 7.17 shows the variation of mean graduate teacher-student ratio across categories of secondary schools surveyed for the year 1998, suggesting that:

(a) generally the graduate teacher-student ratios are very low indicating that there are large numbers of students for each graduate teacher available in schools (1:154.5);

(b) rural schools have a higher graduate teacher-student ratio (1:149.1) than that of urban schools (1:157.9);
(c) private schools have a higher graduate teacher-student ratio (1:140) compared with government schools (1:171);
(d) boarding schools regardless of ownership have the highest graduate teacher- student ratio (1:61.3).

Table 7.17: Graduate Teachers-Student Ratio in Tanzania

	Mean	STD
Rural	*149.1*	*141.2*
Urban	*157.9*	*146.7*
Government	*171.1*	*163.2*
Private	***140.0***	*121.8*
Community	*212.0*	-
Other	*14.0*	-
Boarding	*61.3*	*77.24*
Day	*190.0*	*107.90*
Average	*154.5*	*144.10*

Source: *Education Sector Survey (2000)*

7.33 The findings as portrayed in Table 7.17 have some implications for the secondary school system that may need to be addressed. These are:

(a) if university degree level qualification is an indicator of teacher quality then the secondary school system is understaffed with "quality" teachers since the number of students per graduate teacher is very high;'
(b) there are more students per graduate teacher in urban schools than in rural schools;
(c) there are more students per graduate teacher in public schools than in private schools, an indication that at the moment the private sector is taking proportionately more of the graduate teachers;
(d) graduate teachers prefer being posted or teaching in boarding schools;
(e) other things being equal, graduate teachers would prefer to teach in a private, boarding, rural secondary school.

Disparities by Income-Group

Benefit Incidence of Public Expenditure in Education by Income Group

7.34 With the introduction of cost-sharing and the liberalisation of secondary school provision, transition to advanced levels is confined very much to children from advantaged homes, because of the high private costs involved. Yet private enrolment is generally sought, if entry to public schools is unsuccessful, and this offers a viable alternative route to entry into higher education. A World Bank Social Sector Review (1995) noted that in 1994 only 1% of the Tanzanian "real poor" were likely to have completed secondary education compared to over 11% of the "better off". This actually means the "real poor" have a remote chance of entering higher education institutions.

Table 7.18: Access to Schooling According to Level of Income in Tanzania (1994) (%)

	Govt. Primary	*Govt. Secondary*	*Mission Secondary*	*Private Secondary*
Level 5	*18*	*36*	*41*	*43*
Level 4	*20*	*24*	*25*	*30*
Level 3	*20*	*17*	*21*	*17*
Level 2	*22*	*15*	*11*	*13*
Level 1	*20*	*8*	*2*	*1*

Notes: *Level 5 Level of income in Quintile 5*
Level 4: Level of income in Quintile 4
Level 3 Level of Income in Quintile 3
Level 2 Level of Income in Quintile 2
Level 1 Level of income in Quintile 1

Source*: Galabawa and Mbelle, (2000)*

7.35 Grosh and **Forgy** (1994) estimate that the top 20% of the population, in terms of wealth, consume 40% of all government spending on education; chiefly because they are over-represented in secondary and higher education. Table 7.19 is an attempt to illustrate Grosh and Forgy's findings concerning representation in enrolments and access for different groups defined by level of income. Representation appears to be more even at government primary school level.

7.36 The percent age of attendance from each income quintile at different types of schooling varies in such a manner that the wealthy are over represented in government, mission and private schools at secondary level. This finding is also supported by Vipio and Hoebink (1998) in a study that uses the incidence of social sector (education) expenditure to show that the benefits of public expenditure on higher education accrue to the richest 20% (Table 7:19).

Table 7.19: Incidence of Social Sector (Education) Expenditure (Quintiles) in Mainland Tanzania

	Poorest				***Richest***
Primary	*19*	*22*	*21*	*20*	*18*
Secondary	*8*	*14*	*17*	*24*	*37*
University	*0*	*0*	*0*	*0*	*100*
Overall	*13*	*16*	*16*	*17*	*38*

Source: *Galabawa and Mbelle (2000).*

Household Expenditures on Primary/Secondary Schooling

7.37 Table 7.20 shows the total household expenditures on education per year in households with at least one child in school. On average, people in Dar es Salaam spent Tsh. 31,894, those in other urban areas spent Tsh. 22,197, and those in rural areas spent Tsh. 9,495 in 1994. The average for the whole group was Tsh. 21,195 in 1994. The variance between the poorest 20% and the richest 20% is very high. On average, the richest spend six times the amount spent by the poorest on education. This variance is highest in the urban areas while it is lowest in the rural areas; i.e. there is high differentiation in household expenditure on education in urban areas, but the situation in rural areas appears to be more homogeneous.

Table 7.20: Total Household Expenditures on Education per Year, in Households with at least One Child in School in Tanzania (Tsh) 1994

Residence	***Poorest 20%***	***Richest 20%***	***Ratio Rich: Poor***	***All***
Dar es Salaam	*14,732*	*77,064*	*5.2*	*31,894*
Other Urban	*8,181*	*47,082*	*5.9*	*22,197*
Rural	*5,332*	*17,739*	*3.3*	*9,495*
Average	*9,415*	*47,295*	*6.0*	*21,195.3*

Source*: HRDS 1993/94*

7.38 Tables 7.21 and 7.22 show the effect of flat grants/subsidy to the education system by central government. In 1995 when the average government recurrent expenditure per student was Tsh. 6,600 and Tsh. 75,000 for primary and

secondary levels respectively, the total effect was advantageous to the richest 20% or to the urban areas. Thus at primary school level overall expenditures for Dar es Salaam and urban areas were Tsh. 9,976 and Tsh. 5,458 respectively while for rural areas the average expenditure was Tsh. 2,948.

Table 7.21: Government and Household Expenditures per Student Enrolled in Primary Schools in Tanzania (Tsh)

Residence	Government Recurrent Expenditures	Household Expenditures			
		Poorest 20%	Richest 20%	Ratio Rich: Poor	All
Dar es Salaam	*6,600*	*6,654*	*20,626*	*3.1*	*9,976*
Other Urban	*6,600*	*2,930*	*10,752*	*3.7*	*5,458*
Rural	*6,600*	*1,987*	*5,449*	*2.7*	*2,948*
All	*6,600*	*2,009*	*8,189*	*4.1*	*3,842*

***Source**: World Bank (1995) Social Sector Review*

Table 7.22: Government and Household Expenditures per Student Enrolled in Secondary School per Year by Welfare Level in Tanzania (Tsh)

Residence	Government Recurrent Expenditures	Household Expenditures			
		Poorest 20%	Richest 20%	Ratio Rich: Poor	All
Dar es Salaam	*75,000*	*26,719*	*87,418*	*3.3*	*49,180*
Other Urban	*75,000*	*26,429*	*58,198*	*2.2*	*41,697*
Rural	*75,000*	*33,625*	*44,759*	*1.3*	*40,037*
All	*75,000*	*28,387*	*53,658*	*1.9*	*41,438*

***Source**: World Bank (1995)*

Average Unit Costs/Expenditures at Primary-School Level

7.39 A survey was undertaken of costs and expenditures at 203 primary schools. All were government-owned, which means that any significant variation in levels of expenditure raises fiscal equity questions. The picture that emerges from the analysis is that the average total cost/expenditure per school per pupil in 1998 was Tsh. 92,144. There is a high standard deviation of 60,490 and this high expenditure variation across schools can mainly be attributed to high cost/expenditures levels in urban and "outlier" schools.

7.40 In Table 7.23 the components of this expenditure are set out under public/social expenditures by government, and private expenditures by parents.

Table 7.23: Average Unit Costs/Expenditures for Primary Schools in Tanzania 1998/99

*Social Costs/**Expenditures***	
Teacher Emoluments	*41,805 (95.8%)*
Non-teacher Emoluments	*565 (1.3%)*
Other Costs: Teaching Materials	*850 (1.9%)*
Other Costs: Examinations & Games	*420 (1.0%)*
Total Social Unit Costs/Exp. (1)	***43,640 (100%)***
Private Costs/Expenditures	
Fees	*6,481 (13%)*
Uniforms	*9,965 (21%)*
School Materials & Books	*9,464 (21%)*
Examinations & Games	*420 (0.1%)*
Other Contributions	
(Buildings, Desks)	*4,398 (9%)*
Other Costs – Lunch/Catering/Transport	*17,322 (36%)*
Total Private Unit Costs/Exp.(2)	***48,050 (100%)***
Total Average Unit Costs (1) + (2)	***91,690***

***Source**: Education Status Report Survey (2000)*

7.41 Table 7.23 shows the sample primary school average unit costs/expenditure figures. The government (social) average unit cost/expenditure per pupil is Tsh. 43,640. The major component is salaries at Tsh. 41,805 per unit constituting about 96% of the total. About 2% goes into teaching materials, and the remaining 2% is split be tween non-teacher emoluments and examinations and games.

7.42 The total average private unit costs/expenditure (as incurred by parents) is estimated at Tsh. 48,050. Some (23%) of these private expenditure items are paid direct to the school such as the fees, other contributions and payments for examinations and games. A second group (42%) are school-related expenditures on uniforms and school materials and books which parents purchase in the market-place. Third are non-academic support costs of lunch, catering and transport costs. For the purpose of this analysis all the categories, even the third, are included in school costs/expenditures.

7.43 When an analysis is made of the fees component interesting differences emerge according to school type. The fees component in rural schools at Tshs. 2,948 is not so far from the policy-set figure of Tsh. 2,000 UPE fees. But on average the fees paid are Tsh. 3,842 per child (Table 7.21), being influenced by the much higher figure for urban schools where spending averages Tsh. 8,635 per child for fees. The two hundred (200) day primary schools on average charge a fee of Tsh. 4,943 while the three "mixed" category primary schools charge an average Tsh. 108,500.

7.44 Table 7.24 shows that there are wide variations in average unit cost/expenditure between rural and urban primary schools. Urban schools spend on average Tsh. 95,950 per school per child while rural schools spend Tsh. 70,397. In both cases the standard deviations are high an indication of high variance in spending patterns across schools in general.

7.45 Table 7.24 also analyses parental contributions by income group. Surprisingly, medium-income parents on average contribute higher amounts to the total costs of schooling than the other income group parents, and the higher income group parents contribute less on average than the lower-income group parents[5]. This finding might suggest that the motivation and drive to contribute towards primary schooling among parents may not be as strongly influenced parental income levels much as by the value attached by the family to education, or by factors like different mobilisation levels in schools and parent-teacher relations.

Table 7.24: Primary Average Total Unit Costs/Expenditures by School Location, Economic Status of Type and Parents in Tanzania 1998/99

	Mean	*Std. Dev.*
Rural (Total)	*70,397*	*24,655*
Urban (Total)	*95,950*	*64,211*
Day (Total)	*86,497*	*46,998*
Boarding (Total)	*351,900*	*00000*
Parents (Private)		
Lower Income	*21,026*	*10,095*
Medium Income	*85,039*	*40,158*
Higher Income	*48,916*	*26,755*

Source: *Education Status Report Survey (2000)*

7.46 Major explanatory variables for sources of variation in total average unit costs/expenditures for primary schools were school location (urban or rural) and parents' willingness to contribute financially towards schooling as indicated by total average parental private expenses incurred. Other factors like teacher-pupil ratio, type of school (ownership) proportion of grade A teachers, rank in PSLE were not significant and had zero-order influence on the variation of total social (public) plus private unit costs. Of course, because teachers' salaries account for 96% of social costs a different picture would emerge if the analysis were confined to social costs only.

Table 7.25: Results: Regression Analysis for Primary School Average Unit Costs/ Expenditures

Regression Statistics

Adjusted R Square	*0.02*
Standard Error	*80001.97*
Observations	

	Coefficients	*Std. Error*	*T- stat.*	*P. Value*
Intercept	*-42038.20*	*101378.8*	*-0.415*	*0.620*
Parents Expenses	*-7409.84*	*19430.56*	*0.3802*	*0.706*
School Location	*58856.52*	*49386.96*	*1.2508*	*0.247*

7.47 The amount of variation in average unit costs at primary school level that is explained by the assumed variables (parental expenses and location) is low. Both variables have the right sign (positive) although they are not statistically significant at conventional test levels.

Average Unit Costs Variations in Secondary Schools

7.48 The major components of average social unit costs in secondary schools are the emoluments of teachers and non-teachers. The secondary school system spent on average Tsh. 80,970 per unit on teacher emoluments. Rural secondary schools

spend on average Tsh. 85,909 per unit on teachers' emoluments compared to Tsh. 77,913 per unit spent by urban secondary schools.

Table 7.26: Average Teachers'/Non-Teachers' Emoluments in Secondary Schools in Tanzania 1998/99 (Tsh. Per Month)

	Teachers	*Non-Teachers*
Rural	*85,909 (88,088)*	*16,330 (13,341)*
Urban	*77,913 (125,298)*	*13,428 (6,813)*
Government	*49,478 (18,570)*	*12,737 (6,763)*
Private	*126,690 (170,111)*	*20,148 (12,898)*
Community	*36,840 (0000)*	*1,960 (1,128)*
Boarding	*114,851 (169,986)*	*21,352 (11,017)*
Day	*85,528 (99,537)*	*10,086 (8,990)*
Average	*80,970 (112,125)*	*14,607 (10,031)*

**** Numbers in brackets indicate standard deviations***

Source: *Education Status Report Survey (2000)*

7.49 As shown in Table 7.26, the standard deviations for salary emoluments are high in both rural and urban schools, indicating a high variation in salaries paid to teachers in them ***(both private and public schools)***. In fact, the average variation was Tsh. 112,125. The emolument standard deviation is lower in rural areas than in urban areas, however, indicating that although urban teachers on average receive lower emoluments within the same group, there is particularly high variation in the emoluments received by urban teachers. Rural teachers are closer to each other in terms of emoluments. Of course, these variations may also indicate different levels of student enrolment in rural and urban areas.

7.50 As expected teachers' average emoluments per unit are lower in government schools (Tsh. 49,478) than in non-community private schools (Tsh. 126,690). The standard deviation is also lower in government schools (at Tsh. 18,570) than in private schools (at Tsh. 170,111). This would suggest that salary emoluments in government schools are fairly uniform while those in private schools show high variations within the group with several outliers. Given that non-community private secondary schools have higher TSRs as well, the implication would be that the average teacher is paid three times as much in a private school as in a government school. Given that most of the private schools studied were non-community schools this would not be considered scarcely credible.

7.51 Whereas, as Table 7.27 shows, teachers' emoluments account for about 52% of the total average scocial unit costs/expenditures in secondary schools, non-teachers emoluments per unit contributed just 9%. They are as low as Tsh. 1,960. in community schools. They show high values (over Tshs. 20,000) in private and boarding schools, but are lower at Tsh. 12,737 in government schools.

Table 7.27: Average Unit Costs/Expenditures for Secondary Schools in Tanzania (1998/2000)[1]

Social, - Costs/Expenditures		
	- *Teacher Emoluments*	*80,970 (52%)*
	- *Non-Teacher Emoluments*	*14,607 (9%)*
	- *Other Costs – Catering*	*49,867 (32%)*
	- *Other Costs – Teaching & Others*	*10,503 (7%)*
Total Social Unit Costs/Expenditure (1)		***155,947 (100%)***
Private - Costs/Expenditures		
	- *Contributions (Buildings etc)*	*12,162 (8%)*
	- *Games & Sports*	*2,862 (2%)*
	- *Transport*	*25,897 (17%)*
	- *Examinations*	*4,353 (3%)*
	- *Fees*	*86,103 (56%)*
	- *Uniforms & Books*	*22,630 (14%)*
	- *Lunch*	*N. A.*
Total Private Unit Costs/Expenditure (2)		***154,007 (100%)***
Total Average Unit Costs (1) + (2)		***309,954***

Notes 1 *These figures should be taken as average for Tanzania Sec. School Sector regardless of ownership. In this case it is assumed that fees paid in non-profit making private schools contain a subsidy element from founding bodies.*

Source: *Education Status Report Survey (2000)*

Explaining Secondary School Unit Costs

7.52 In explaining the variations in unit costs across secondary schools a step-wise regression analysis was performed assuming that:

(a) since the central government per capita allocation is fixed, parental expenses explain significantly variations in the average unit costs/expenditures;
(b) the rural-urban dichotomy may explain variations in unit costs with urban schools tending to consume more resources per unit of output;
(c) schools with high rankings in NECTA examinations tend also to have lower unit costs;
(d) lower teacher-student ratios tend to lower unit costs;
(e) higher graduate teacher-student ratios tend to increase unit costs;
(f) type of school ownership affects unit costs in favour of private schools.

7.53 Table 7.28 shows the regression results for average unit costs/expenditures with the explanatory variables: parent expenses, school location, NECTA-Rank, TSRs, Graduate Teacher Ratio and School ownership (type of school). The results tend to suggest that:

(a) the amount of variation in unit costs across secondary schools which is explained by the independent variables is high (Adjusted R-Square = 0.70);
(b) without the effect of the assumed variables (inputs) the value of unit-costs (expenses) would be equal to Tsh. 276,942 (the intercept);
(c) a change of location from urban to rural reduces the unit costs by 68.6%[4];
(d) the increase in average unit costs for each unit change in school ranking in NECTA is 19.47%;
(e) the expected change in average unit cost for each unit change in TSR is 40.8%;

(f) the expected change in average unit costs for each unit change (increase) in the graduate-teacher-student ratio is a decrease of 39.1%;
(g) the expected change in average unit costs for a unit change in the type of school (ownership) is a decrease of 71%;
(h) however, only location and number of graduate teachers are significant at the conventional test levels.

Table 7.28: Regression Analysis: Secondary School Average Unit Costs (Expenditures)

Regression Statistics

Adjusted R Square			*0.53*	
Standard Error			*8639.07*	
Observations				
	Coefficients	***Std. Error***	***T- stat.***	***P. Value***
Intercept	*276,942.80*	*15988.28*	*17.320*	*0.000*
Parents Expenses	*951.31*	*2309.02*	*0.412*	*0.686*
Location	*-68,602.13*	*12120.63*	*-5.660*	*0.001*
NECTA Rank	*-19.47*	*44.02*	*-0.442*	*0.665*
TS Ratio	*407.93*	*1288.73*	*0.316*	*0.756*
Graduate Teachers	*-391.09*	*45.78*	*-8.540*	*0.000*
Type of School	*-7,101.20*	*12796.02*	*-0.555*	*0.587*
	F = 85.962	*Signif. F*	*= 0.000*	

F = 85.962Signif. F = 0.000
Source: *Education Status Report Survey 2000*

7.54 The other costs per unit, which mainly include catering, constitute around 32% out of the total at an average figure of Tsh. 49,867 per unit. Urban Schools spend more money on catering at Tsh. 51,242 than rural schools which spend around Tsh. 47,029 per unit. Incidentally, government schools spend less money on catering at Tsh. 39,039 per unit as compared to private schools which spend Tsh. 66,178, while community schools spend Tsh. 15,133 per unit. However, it should be noted that the variations between schools on catering unit expenditures are very high, an indication that either the level of efficiency and utilization of funds on catering differs between schools or schools provide quite different catering services in terms of quantity and quality. In boarding schools the government provides between Tsh. 70 and 150 per day per student for catering expenses.

7.55 Teaching materials unit costs/expenditures are on average at Tsh. 10,503 per student with a standard deviation of around 14,154 indicating a high variation between schools. What is rather surprising is that rural schools spend more on teaching materials per student Tsh. 14,625 than urban schools (Tsh. 7,754) with a low variation in urban schools. As expected, government schools spend less only Tsh. 7,732 per unit on teaching materials a figure lower than that spent by private and community secondary schools at Tsh. 14,814 and Tsh. 10,983 respectively. Again, boarding schools spend more on teaching materials per student (Tsh. 17,607) than day schools (Tsh. 7,719). At national level, the average unit costs/expenditures for secondary school materials is Tsh. 10,503 (7% of the total society unit costs) as shown in Table 7.27.

7.56 The secondary school private unit costs or expenditures sources were shown in Table 7.25. The sources are: contributions (8%), games and sports (2%), transport costs (17%), examinations (3%), fees (56%) and uniforms and books (14%).

7.57 The specific highlights of secondary school private unit costs/expenditures are:

(a) rural secondary schools spend on average more on students games/sports (Tsh. 4,640) than urban schools (Tsh. 1,710);
(b) private schools spend more on games and sports (Tsh. 4,895) than government schools (Tsh. 1,518) and community schools (Tsh. 1,000);
(c) boarding schools spend more per student (Tsh. 6,012) on games and sports than day schools (Tsh. 1,966): the national average expenditure is Tsh. 2,862.

Notes on Chapter Seven

1 *To some extent, of course, increasing enrolment when 70% already in school automatically implies that the more marginalised populations will now be brought into the net, and does imply much greater equity in the distribution of the effects of schooling. However, the equitable effect of expanding enrolment must also be weighed against other forms of equity like programme quality, tax-payers equity, inputs equity and general school quality which can be available to marginalized groups.*

2 *Possibly the reason why there are more over-age girls is not that they are "***given more opportunities"** *but that they had less opportunities in the past so there is more of a backlog of unschooled girls. Also, because of distances of schools from home and for other socio-cultural reasons, parents may start female children in school at a later age than males.*

3 *One reason why STRs are lower in boarding schools may be that teachers in boarding schools, have many more out-of-class supervision and extra-curricular responsibilities towards the students. It is not necessarily something that could or should be seen as an easily corrected sign of inefficiency.*

4 *These differences presumably apply to both boarding and day schools in each case. We are not sure if the different day/boarding mix between urban and rural is the cause of the difference. Further studies need to isolate this difference!*

5 *The phrase "relatively lower" is used to mean an impressionistic valuation of households/parents income which is assumed to high for the " higher income group" and thus their contribution ought to be (other things being equal) as high*

CHAPTER EIGHT

MANAGEMENT ISSUES IN EDUCATION

Introduction

8.1 A number of basic issues related to management of education need to be addressed as priorities by any future education strategy. They include the need for better inter-ministerial co-ordination that was touched upon in Chapter 2, where the existing divisions of ministerial responsibility were described. With the current emphasis on sector-wide approaches to development of education, it is important to ensure proper co-ordination and articulation between the different parts of the education and training system.

8.2 Another issue is the need for improved management of resources, discussed in Chapter 6. The basis challenge confronting Tanzania is to mobilise more resources and effort, both internal and external, for development of education: but asking local communities, parents and external donors to contribute on a larger scale is only justifiable to the extent that it is possible to show existing resources are used efficiently and effectively. A number of areas where there is scope for increased productivity were identified.

8.3 A principal concern in education management stems from the thrusts of public service reform and the Local Government Reform Programme. These are closely related in the sense that both involve basic changes in the role of central government in education management. Instead of being the principal provider of education services, government is to be more of a facilitator and enabler, making policies and setting standards but no longer being the main executive agent. In this scheme of things the local councils, the private sector, non-government organisations and communities will have a larger role to play in delivering education services to the public. The central ministry or ministries will have to change their role to one of strategic direction; ensuring that adequate resources in terms of finance and qualified teachers are available; making sure the policy and legal framework is conducive to education expansion and improvement; setting and monitoring standards so that consumers of education services have proper quality safeguards.

Planning, Strategy and Information

8.4 A key component of central government's new role is to give strategic direction to the system and this requires a greatly improved education management information system (EMIS), capacity to collect and analyse data and to prepare reliable projections based on an understanding of past and current trends. One area of fundamental importance in this regard is the analysis of demographic trends, including the future impact of HIV/AIDS, in relation to education enrolment and the supply and demand of teachers.

8.5 The inadequacy of current information on the stock and flow of teachers can be taken as just one example of the need for better information. Poor planning of teacher supply in relation to demand is partly responsible for the current anomalous position where the teachers' colleges have over-capacity and there are unemployed qualified teachers at the same time as enrolment is far below target and many schools are short staffed.

8.6 Williams and Mwaga (1999) point out that in order to plan teacher supply or to make informed decisions on teacher rationalisation and retrenchment, good information on the age structure of the teaching force and distribution of teachers by salary point, on the subject qualifications of teachers, and on flows into and out of the profession, is required. It is also necessary to have detailed information on the actual deployment of teachers

8.7 It is only possible to determine the future rate of retirements if information by age is available. This suggests the need for a register of individual teachers recording the salient personal characteristics of the teacher (gender, age, posting) and information on qualifications and service record.

8.8 Information showing distribution of teachers by salary point is necessary for getting the correct wage bill and the possible impact of salary changes. This information is vital when it comes to allocating block grants for primary education and helps to differentiate the salary bills among districts depending on the proportion of teachers by grade.

8.9 For projections of teacher supply and demand, it is vital to have better information on flows. The TSC has limited capacity to provide reliable information even on the forms of outflow like dismissals, retirements and deaths about which it is regularly notified for administrative reasons. But there is an even more serious lack of adequate information on the most substantial varieties of exodus such as resignations, transfers to other duties in the education service like administration, re-designation of primary teachers as secondary teachers after improving their qualifications, and study leave/in-service courses. Regarding inflows, information on quantity entering a grade of teaching from pre-service training, upgrading through in-service and transfers from and different sub-sector of education is vital.

8.10 The need for such improved information cannot be over emphasised, for several reasons. First is the fact that for MOEC to take correct decisions about teacher redeployment and retrenchment, key data have to be available. Second, better estimates of the level of input and throughput of teachers in the colleges is required in order to calculate what level of college intake is necessary to get a defined number of new teachers into service in the public school system. Third, as the private sector increasingly enters the education industry, information is needed to predict the teacher requirement for private institutions.

8.11 The inadequacy of data for teacher planning has been cited as one example only. There are obvious parallels in school enrolment and student flows through the system, the suplly of books and materials to schools, adequacy of classrooms and so forth.

Issues in the Decentralisation of Educational Management

8.12 Under the Local Government Reform Programme a process of transferring management of primary education to local control is under way. This should make a reality of the division of functions and roles in primary education between the centre and localities. In the primary school sector, policy, planning, teacher training and inspection are the responsibilities of the MOEC. Curriculum development and examinations are under semi-autonomous statutory bodies, linked to MOEC but seemingly operating largely independently of Government control (and of each other). Finance (teachers salaries and other charges) are under the Ministry of Local Government and Regional Administration, which supervises local government, the main service provider of primary level education through the district councils.

8.13 The decentralisation initiative should define clearly the functional decision-making domains of central and local governments, individual schools (private and public), NGOs; CBOs, parents and communities as to include: financial and resource mobilisation, supervision and accountability, representation and participation and general linkage with district structures, the idea being to let the theory underlying the decentralisation effort is that central government will play a broad policy and supervisory role while implementation functions, including local decisions on resource allocation, will be the responsibility of communities and localities/umbrella organisations.

8.14 Supply-side and management issues in the government system as a whole have been covered in a World Bank (1999) report. Four major issues addressed in the report are relevant to education:

- ***Central financial control*:** as shown in the analysis of primary school average unit costs, public expenditure on the primary education sector is funded almost 98% by the central government. The fiscal capacity of the district councils is inadequate to meet demand for education, while the available revenue instruments are not sensitive to growth in the local economy. Moreover, investment programmes for education development are centrally controlled: local government has no capability to borrow money for schools infrastructure and other education facilities. The ability of local councils to fund education is poorly connected to the community's demand for education. Central government control and unrealistic fees for education, set nationally, further limit the ability to finance education[5] on the part of both local government and the providing institutions themselves.

- ***Central control over personnel:*** local governments have little control over personnel posted by the centre to manage education development programmes.

- ***Separation between education budget decisions and local education needs:*** education budget cuts made at the centre reflect central government constraints and priorities rather than local needs. Local authorities have limited capacity to make up the shortfall and this leaves them little room for manoeuvre in trying to effect changes on the ground.

- ***Inefficiency*****:** in general there is a lack of political and administrative accountability and efficiency in local authorities. Evidence of this is their inability to implement policies and deliver roles and functions devolved from the centre, like collecting the revenues (taxes, fees/charges) available to them.

8.15 Future efforts thus need to be directed at giving households more choice over education providers and a stronger voice in the operation of the education system by moving authority over schools and funds further down into the system.

District, School and Community Relations in Management

8.16 Decentralisation of education is essentially related to household and community participation, cost sharing and accountability. A majority of rural respondents interviewed by TADREG (1999) thought that parental involvement in school management was inadequate and should be increased. TADREG gives two fundamental preconditions for decentralisation cost-sharing to work. These are:

(a) parental contributions should be additional to and not a substitute for government spending;
(b) the additional funds parents contribute should be translated into improved quality.

8.17 To date, neither of these two conditions seems to have been met even though in recent years parental outlays per primary school pupil have risen faster than government per capita expenditure, which has stagnated or risen only marginally (TADREG, 1999).

8.18 Frequent complaints are heard about the lack of accountability for parental contributions to school funds, which on top of school fees and other private costs amounted to Tsh. 4,400 per primary school pupil in government schools in 1998 (See Annex II). The variation between parental contributions that is Tsh. 3,100 for the lower income group, Tsh. 4,500 for those with medium incomes, and Tsh. 5,800 for those with higher incomes - across income groups is significant.

8.19 Narayan (1997) found a decline in popular trust in local government and other officials among the rural poor. According to Narayan, there is a significant relationship between village level social capital, of which trust is a major determinant, and parental participation in school related activities. Although

parents retain a degree of confidence in the school committee and the head teacher, there is widespread mistrust of local government as a service provider. This stems from a perception that school fees and other obligatory payments are neither accounted for nor turned into better education. As long as local governments remain under-resourced, it will be a major challenge to turn this situation around.

8.20 There is a tendency among communities to view schools as part of government although this thinking contradicts public affirmations that primary schools belong to communities who are supposed to resource the schools with textbooks, teachers' houses, classrooms and desks. Although the role of the communities is officially emphasised, the following evidence suggests a different reality:

(a) inactive school committees which do not transfer responsibilities and accountability to parents and teachers;

(b) lack of clarity about the responsibilities and powers of school committees and parents;

(c) low value attached to primary education as compared with secondary education;

(d) general lack at local level of mandated legal authority and other powers to support implementation responsibilities of stakeholders;

(e) lack of authority on the part of school committees and parents to control what happens in the school and to ensure the maintenance of discipline

(f) lack of transparency in the way teachers and school heads control/ influence school income, finances and academic performance.

8.21 Ownership of primary schools ostensibly lies with the community, but there are few privileges of ownership, as there is no local control over such major inputs as teachers and finances. In addition, there are problems of budgetary constraints, expenditure control and accountability in local government and the locally organised system.

Capacity Building Requirements

8.22 Decentralisation implies that schools, school heads and school committees will have to play new roles in the education system. This requires enhanced capacity in schools and districts to manage education provision and to use effectively the funds contributed by government, households and donor agencies. Development of skills in school planning and management is a pre-condition for successful decentralisation. In this context NGOs with relevant experience in participatory planning, information systems, decentralised teacher training and local skills mobilisation can play a valuable role.

8.23 A needs survey conducted by Galabawa and Ndalichako (2000) indicated that a substantial proportion of school heads, 49.1%, had not received training in educational management. The situation was worse for classroom teachers, 67.7% of whom indicated they had not received such training (Table 8.1). Of those who received training, only 20.1% attended a course in education management, and 20.5% a course in finance and accounts. Areas mentioned by less than 5% of respondents were curriculum development, leadership, statistics and school committees. The training appears to be general in nature. Current issues like school-community relations, or participatory methods and micro-planning at school level, have not been addressed even though they should be central to the concerns of school heads in a decentralised system.

Table 8.1: Training in Management among School Heads/Teachers (Survey)

Training	*Teachers*	*Heads*
Received	*103 (26.6%)*	*85 (48.6%)*
Not Received	*262 (67.7%)*	*86 (49.1%)*
Not Applicable	*22 (5.7%)*	*4 (2.3%)*
Total	***387 (100%)***	***175 (100%)***

Source: *Galabawa and Ndalichako (2000)*

8.24 Findings from the school mapping exercise on building local capacity and competence the need to develop an overall institution-building framework with due attention to concepts of school improvement, district educational planning and sound governance. This calls for strong skill components related to:

- identification of education problems and of measures to improve education quality;
- establishment of a data base for use in improving the situation;
- use of participatory rural appraisal techniques in identifying problems and prioritising programmes for implementation;
- use of community-based decisions and solutions to effect change;
- use of efficiency and effectiveness indicators in planning for general school development and success.

8.25 The school mapping exercise indicates that hierarchical relationships between the districts (councils), the ward system and the village government on one hand, and parents, communities and teachers on the other hand, are the major constraint to decentralisation, and capacity- and competence-building. Any efforts that are mobilised through the formal government system tend to be looked at as another exploitative relationship that is deemed to be resource wasteful.

Notes on Chapter Eight

[1] *The criteria for sufficiency or shortage of teachers is not always clear in the MOEC documents. The TPR of 1:36 indicates there are enough teachers as compared to the 1:45 policy figure. The individual district data indicate high variations of TPR with clear teacher shortages in several districts.*

[2] *To suggest that PTRs are low in Tanzania when they are 36 or almost 40 would of course be dangerous because a PTR of 40 suggests class sizes of 45 – 50. However, by comparison with other countries that have higher enrolments relative to population the* **inefficient phrase** *may be true. If it is inefficient it is because the PTR is too high for small children to get the attention they need not because there are too few children per class or many teachers per class!*

[3] *The Table gives the teaching period per week calculated from the observed activity*

[4] *Low student-teacher ratios may reflect low density of school-age population. They may involve higher costs per student but may not necessarily be* **inefficient.**

[5] *The study shows that parents bear very considerable expenses in funding primary education.*

CHAPTER NINE

CURRENT POLICY CONCERNS OF THE EDUCATON SECTOR

Introduction

9.1 Earlier chapter of this report describe and analysed the education system of Tanzania from a rather static perspective, with only passing reference to policies and programmes designed to shape and improve it. Yet the trends observed in the foregoing analysis reflect, at least partially changing policies/practices implemented by the authorities. To redress the balance, therefore, this chapter briefly reviews current programmes and policy concerns of the Ministries dealing with education. This is intended to convey a more "dynamic" picture of education in Tanzania as a system that is in part the product of active policy intervention, successful or otherwise.

Policy and Reform Initiatives

9.2 Tanzania has consistently centred its development strategies on combating ignorance, disease and poverty. Investment in human capital was at an early stage recognised as central to the quality of lives of Tanzanians. Development efforts in the years following Independence resulted in increased access to education and public health. Through campaigns initiated in the 1970s, universal primary education and near-universal adult literacy were at least nominally achieved. Unfortunately, the performance on the per-capita income side was far less impressive. Policy weakness and a combination of domestic and external economic shocks meant that these educational gains could not be sustained in the 1980s and 1990s.

9.3 In 1986 a series of macro-economic reforms was introduce, liberalising the economy and giving far greater scope to the private sector. Economic and political reforms laid emphasis on liberalisation, political participation and multiparty democracy, decentralisation, and cost sharing relation to provision of public services.

9.4 Effort to redefine the role of the state in Tanzania have been the thrust of the Public Service Reform Programme that began in 1993. Such redefinition has included government withdrawal from direct production/provision of goods and services; restructuring of the public service and reduction of employment levels by approximately 25%; rationalisation of tiers of government through a restructuring of the regional administration; and the launching of the Local Government Reform Programme (LRGP) to spearhead the decentralisation process. The overall goal of the Public Service Reform Programme is to reshape the public service so that it provides quality service to the public that are delivered

efficiently, effectively and economically. All public interventions focused on primary education are now being realigned to correspond with the LGRP. Equally important, on-going programmes and projects are designed to benefit local communities by the provision of services, and develop their capacity for active participation in planning, financial management, monitoring and evaluation, and implementation of education programmes.

9.5 A notable achievement management of the public finances has been the development of the Public Expenditure Review (PER) mechanism and the Medium-Term Expenditure Framework. These assist in balancing available resources with priority programmes. Their purpose is to enhance efficiency and effectiveness in resource use.

9.6 The new perspectives gave rise to a re-thinking of education strategy. A series of policy reviews and planning initiatives, articulating the long-term vision of the education sector, culminated in the formulation of the Education and Training Policy (ETP) in 1995. Unlike previous education policies whose orientation was particular sub-sector, the ETP covers the entire education sector. Subsequently the Ministry of Science, Technology and Higher Education (MSTHE) issued the Technical Education and Training Policy (1995) and the National Higher Education Policy (1999). The main thrust of the policy framework in these various documents is broadening of base of sources of revenue and seeking to improve financial efficiency and effectiveness in executing the medium-term mission for the education sector: this mission is to achieve quality provision, equitable access at the basic level, expansion of facilities and efficiency gains.

9.7 Longer-term policy objectives are articulated through a series of complementary policy initiatives set out in Table 9.1. The Poverty reduction Strategy, formulated in 2000, focuses efforts on (i) reducing income poverty (ii) improving human capabilities, survival and social well-being and (iii) containing extreme vulnerability among the poor. Vision 2005 and Mission 2025 have as their aim the creation of a well-educated nation and a high quality of life for all Tanzanians.

Table 9.1: Tanzania Policy Planning Process

Policy Planning Initiative	*Policy Planning Process*
1. Vision 2025	*National Vision to attain a well educated nation able to competently and competitively solve development challenges, and high quality of life for all Tanzanians.*
2. Mission 2025	*Medium term mission for the sector is quality provision all level, equitable access at basic, facility expansion and efficiency gains.*
3. Tanzania Assistance Strategy	• *Ensure local ownership and leadership,* • *Promote partnership in designing and executing development programmes.* • *Encourage good governance, transparency,* • *Capacity building and effectiveness of aid*
4. Poverty Reduction Strategy	*Prioritise sector activities to reduce poverty at basic education e.g. target school children girls, completely basic education (COBET), ICBAE and Youth Education Programme, DBSPE Community Education Fund (CEF) and Girls Secondary Education Support (GSES). Eliminate Incidence of HIV/AIDS*

9.8 The Tanzania assistance strategy is designed to ensure local ownership and leadership, to promote partnership in designing and executing development programmes; encourage good governance and transparency and capacity-building and effectiveness of aid.

Sector-wide Approach to Education Development

9.9 Experience has shown that the project approach to education development has often resulted in serious vertical and horizontal dislocations in the education system. Inherent in the approach are the inequities that have emerged in access and quality between districts, school, gender and disadvantaged groups. Because the project-style approach often demands unique management and reporting systems for each project, it can leads to inordinate expenditure of resources both financial and human, and of time of executives in separate consultants and other persons. Some projects are national, others operate directly at district level; some managed by ministries or local government authorities. This approach greatly complicates by ministries or local government authorities. This approach greatly complicates efforts to integrate the various programmes, (some of which are quite effective) into a coherent strategy for effective delivery of education nationally.

9.10 The sector wide approach to education development has been initiated to redress the problem of fragmented interventions. The essence of the approach is the pooling together of resources (human, financial and materials) in support of comprehensive programmes for the development of sector as a whole. The involvement of all key stakeholders in education planning implementation, and monitoring and evaluation is intended to be part of the process.

9.11 The sector wide development approach, however, requires a new relationship between the Government and development partners. As well as among assistance

agencies themselves. These relationships must be characterised by partnership, co-ordination, co-operation and collaboration among all stakeholders in the provision of education and training at all levels.

The Education Sector Development Programme (ESDP)

9.12 The ESDP is designed to contribute to the achievement of the Government's long-term human development and poverty eradication targets. It defines government priorities through a set of policies, to guide sector-wide, development in education. These broad policies are then advanced by detailed sub-programmes set out in sub-sector 'master plans', which are supposed to be based on priorities and cost-strategies**.**

9.13 A Basic Education Master Plan (BEMP) was the first to be prepared and subsequently sub-sector master pans for secondary education (SEMP), teacher education (TEMP), and higher education have been initiated and are at various stages of development. Some sub-programmes are usefully involving local capacity within the ministries. More control is being excised. The major bottleneck is that some sub-programmes are not framed in terms of ESDP strategic priorities, but rather resemble a long shopping/wish list meant to framework for dialogue with stakeholders and donors through the Government Donor Consultative group on education. It is this frame work that could be used as a basis for joint programming of expenditures and for reporting of results.

9.14 The overall human development targets of ESDP and the strategies adopted to achieve them are coherent and focused. However, since the requirement for implementation of these policy objectives are complex and the resources' requirements are huge while the available resources are limited, it is imperative to prioritise programmes. The ESDP has defined the following main strategies:

- priority in spending on basic education;
- improvement in secondary school opportunities;
- more demand driven and market oriented post-secondary and higher education; and
- institutional development to improve sector management and strengthen capacity to monitor progress**.**

Progress with the ESDP

9.15 Experience with institutionalising the "sector-wide" approach is mixed. Progress appears to be registered in the most important areas but there are deficiencies need to be corrected in the early stage of implementation. Thus endorsement of the highest levels of Government has been achieved, but at the lower levels of MOEC, MRALG and MSTHE the programme needs a critical group committed to the implementation process. Moreover, cross-ministerial involvement MOEC with, in particular, CSD, MRALG and MSTHE appears to have weakened. The challenge remains of making the ESDP intelligible to local stakeholders.

9.16 The sector-wide development programme is still in the formative stags of development. Education reform has to be seen as a process, and full realisation of the reforms being envisaged may take time. There appears to be some understandable frustration among MOEC Staff with the degree of donor involvement and with the modest amount of funding channelled through the programme so far. To date this donor funding has mostly been confined to financing of programme preparation. Seemingly, however, many donors remain supportive and it appears likely that a sound sector-investment priorities document will bring more donors on board.

9.17 The development of an education sector concept document in early 1999 can be seen as an achievement. The document was subject to critical assessment by an appraisal team and response the two education-sector Ministries have further refined the Ed-SDP document, taking account of the expressed and recommendations made.

9.18 Regarding the broader involvement of sector stakeholders, the ESDP has fallen short of ideal (PER, 1999). In the development of viable programmes, it is very important to involve all key stakeholders in order to obtain consensus as well as gain national acceptance. The consultative system established has afforded adequate representation and participation by all key stakeholders. A number of technical working groups and committees have been established – for basic education, secondary education, teacher education, higher education, education policy planning and management, financial planning and management, and monitoring and evaluation. In additions, there is an Education Sector Standing Committee and the Steering Committee. Civil, society, represented through NGOs, on each of the technical working groups and in the Education Sector Standing Committee. But systematic representation of parents' associations, NGOs or private sector schools within the ESDP decision-making structures needs to be promoted even further. Education is a sensitive sector with perhaps the greatest multiplier effects of any sector in the economy, given that it touches the lives of every person in the country.

Current Programmes of the MOEC

9.19 Currently, the education sector is executing a wide range of programmes and projects that are in line sector priorities. These include

- Whole School Development Programme[2]
- (WSDP), Community Education Fund[3]
- (CEF), Ward Based Education Management Programme
- (WABEM), District-Based Support to Primary Education[4]
- DBSPE), Textbook Provision programme for Primary Schools[5],
- School Mapping and Micro-Planning Programme[6],
- Primary Education Facilities Programme[7] (PEDFAC)
- Complementary Based Education in Tanzania[8] (COBET),

- Integrated Community Based Adult Education[9] (ICBAE),
- Girls Secondary Education Support[10] (GSES),
- Science Education in Secondary School and Education II Project.

Further information on these will be found in notes at the end of the chapter

9.20 ***Improvement of the teaching learning environment at all levels:*** The main of development in the education sector is to enhance learning. To achieve this, emphasis should be given to essential programmes such as classroom construction/rehabilitation, supply of textbook, and learning materials, enhancing teachers' competencies and expansion of Complementary Basic Education in Tanzania (COBET) and Integrated Community Based Adult Education (ICBAE).

9.21 ***Strengthening Management Capacity at all levels*:** Within the priority area, capacity-building programmes focusing on Whole School Development and Ward Based Education Management are of paramount importance. The main emphasis is to put in place a sustainable management, improved co-ordination and monitoring and evaluation of the education delivery system. Capacity building in management, administration and financial management will focus on; national and regional leadership, District Executive Directors, District Education Officers, District Adult Education Co-ordinators, heads of schools/colleges, managers, and school inspectors.

9.22 ***Improving Education Management Information System:*** This priority area calls for school mapping, teacher adult and rationalisation of Institutions of higher learning[1]. School Mapping aims at identifying basic problem facing the education system and the means of finding appropriate solutions. This programme collects detailed data and information, including community view on the status of education at the local levels and actions to be taken to improve education provision. As follow-up the school mapping exercise, it is anticipated that micro plans will be prepared at district, ward and school levels to accelerate the education development and hence improve enrolment, retention, school management and quality education.

9.23 ***Controlling the spread of HIV/AIDS/STI through the education system:*** Knowledge on HIV/AIDS has not been adequately imparted to school, colleges and higher learning institutions. Information reaching students in HIV/AIDS is mainly informal. Family life education, guidance counselling are not fully integrated into the school curriculum. Campaign in learning institutions against HIV/AIDS need to be treated as a matter of urgency. There is an inherent need to establish a strong sensitisation and advocacy campaign among teachers, pupils/students and community to change their attitude and practices

ESDP and the way forward

9.24 The proposed ESDP was appraised in May 1999, but since then, progress has been slow and there are a number of unresolved issues. There is uncertainty

regarding the total costs and financial needs for the education system, the efficiency with which funds are used and the impact of education expenditures on poverty alleviation. It was therefore agreed that as a priority, and consistent with the conclusions of the appraisal, a strategic framework for the sector should be developed, based on a systematic analysis of the costs and financing of education, as a backdrop for completing the preparation of the ESDP.

9.25 Other issues identified at appraisal related to financial management, monitoring and evaluation, donor funding mechanism(s), and technical assistance modalities. Some of these issues are being addressed in some form by the government and donor community, but often the efforts are uncoordinated and there is uncertainty about what the other side is doing or why. This sometimes leads to duplication of efforts and conflicting approaches. The conclusion arrived at by both sides, was that success would only be assured if agreement could be reached on a clear policy framework, within which objectives could be defined and prioritised, as a backdrop for developing strategies for addressing issues in the sector. This approach would also enhance greater transparency and clarity on both sides, a prerequisite for maximising the inputs of the various parties.

9.26 In carrying forward the ESDP attention should focus on (a)improving the performance assessment framework, (b) projection of recurrent cost implications of the ESDP (c) implication for education financing policy (d) how to address the key allocative and efficiency issues (e) improving the institutional and regulatory structure.

9.27 At the recent Consultative Group Meeting in Dar, both the government and Donors expressed frustration that their joint efforts had not resulted in a more aggressive programme to develop education. However, both sides re-affirmed their commitment to continue collaboration, but perhaps in a more structured environment. It was recognised that to be able to have an impact on education, it is imperative that the Government of Tanzania and the development co-operation agencies act together to support education reform and substantially increase funding to education through the mechanism of an education sector development programme, the ESDP.

9.28 Consistent with this, the Government and donors agreed at a joint meeting on Friday, June 9, 2000, that in addition to continuing with the implementation of current programmes, there would be a renewed commitment to a process that would lead to the completion of the ESDP preparation in six to nine months. Towards this end the programme, budget and schedule for completing preparation of the ESDP would be established as soon as possible, to guide future government and donor collaboration. It was agreed that to remain faithful to the spirit of partnership in all respects, the work programme would be developed jointly with the donors. Given the diverse expectations of the various donor agencies and the need to ensure that they are taken into account as the programme is finalised.

Possible Approach to Development of a Work Programme

9.29 There is an urgent need to determine the analytical work that is needed to establish a strategic framework for the sector, within which policy interventions and investments that would form the main elements of the programme can be identified. It is also important to incorporate the substantial amount of work that has been done to data on the PER, MTEF and on going projects so that a complete ESDP is put in place. The starting point is to analyse the current policy interventions and investments against the issues identified in the education status report.

9.30 The main item of analytical work to be undertaken would be the study on the costs and financing of education. Another one would be a strategy for the delivery of primary education, especially at the village level, building on the success of on-going programme. The exercise would also take account of the Basic Education Master Plan, the draft Secondary Education Master Plan, and related documents.

9.31 In addition to the mainstream education programmes, work also needs to be done on thematic issues such as gender and HIV/AIDS. To prepare the system for sector/budget support, measures for strengthening the management of the system, including financial management, should be introduced.

Notes to Chapter Nine

[1] ***Teaching Staff and Training Institutions Rationalisation***
The more recent data gives a TPR of 1:36 for primary education, This gives the impression that basic education is adequately staffed. However, it is not very clear whether ward and district education staff are included in the calculation of the said efficiency indicator. In order to clear this likely anomaly, the government has recently conduct primary teachers head count. The Data from the just completed survey is being processed and will consequently give a guide for equitable distribution of the teachers and enhance quality provision of primary education

[2] ***The Whole School Development Programme(WSDP).***
This is a school-based intervention programme aimed at developing management capacity to school committees and school management to plan, implement the requisite school plans as well as manage efficiently and effectively available resources.

[3] ***Community Education Fund(CEF)***
A matching grant intended to promote community financing of basic education as well as enhancing ownership of schools. In the 16 Districts where this grant has been extended, community awareness and participation in planning, implementation and monitoring of school development plans has been very effective. Consequently the quality of the physical environment and achievements have improved significantly

[4] ***The District Based Support to Primary Education(DBSPE).***
The project facilitates implementation of major components of the Basic Education Master Plan. The programme creates in each district, a system of Teachers' Resource Centres (TRCs) and school clusters to carry out in-service teacher training close to schools. Likewise ,it works with schools in the districts to develop whole school plans covering provision of school materials, school rehabilitation, teacher development and improved school management

[5] ***Textbook Supply***
The poor state of primary school teaching and learning materials grossly effect the quality of basic education. Quality is also effected by the curriculum itself Generally there is shortage of books for most subjects taught in primary schools often the books available are out of data and some do not reflect recent revisions of the curriculum. Textbook development and distribution has been liberalised but the publishing industry needs to be developed to enhance its ability to handle all publishing functions. The Book Management Unit (BMU) initiatives need to strengthened

[6] ***School Mapping and Micro-Planning.***
School Mapping and Micro-Planning aim at identifying basic problems facing the education system. They also aim at finding the means of finding appropriate solutions. Since 1997 the MOEC in collaboration with various international organisations has initiated school mapping as a prerequisite to sound education micro-planning at the district level. The micro-planning has been thought as a necessary strategy by which Master-plans at various educational levels. The main objective of this exercise is to gather information and data-related to basic education information at community level and to assist districts to prepare plans and programmes. The exercise s under taken by involving local communities and therefore enable them to capture with precision educational problems in a given society by taking a small geographical area eg. village, ward or district as a unit of operation. The school mapping is in line with the wider Local Government Reform towards a decentralised system whereby more powers and responsibilities are removed from the central government to the local authorities.
.

[7] ***Primary Education Facilities Programme (PEDFAC)***
The programme undertakes selective construction and rehabilitation of primary school facilities. This is in realisation that in order to ensure access and equity in education and training, facilities occupy a central position. These consists of classrooms, teachers' house, offices and working places, and libraries. The facilities do not only provide shelter and work space for students and teachers but also provide conducive environment for teacher and students to stay in school, thus reducing absenteeism, truancy and drop-outs. The Government is committed to providing good physical facilities on an incremental basis in the initial 38 local government pilot districts

[8] ***Complementary Basic Education in Tanzania (COBET)***
COBET is an interim measure whose objective is to enable children of age 8 – 18 acquire competencies in reading, writing, numeracy, life and survival skills. The programme provide an opportunity for children who go through the programme to mainstream the formal system. The major concern is to provide the out of-school children with quality

basic education in the shortest time possible. It has the potential to eradicate illiteracy among all young adults and adults, and will be expanded all over one country to promote the achievement of the EFA target.

[9] ***Integrated Community Based Adult Education (ICBAE)***
ICBAE programme is an intervention in adult education aiming at redressing the ailing Adult Education Programme. The programme is designed specifically to combat illiteracy among the adult population. It uses a decentralised approach that empowers communities to the full responsibility for planning, decision making, implementation and evaluation of the programmes. In ICBAE, participants design for their own curriculum, based on local issues such as health, poverty alleviation civic and environmental issues. Reading, writing and numeracy are tied to the groups income generating project initiated to earn their income and solve social and community problems by the introduction of revolving loan funds

[10] ***Girls Secondary Education Support (GSES)***
The project is running at expanding educational opportunity and improving quality at secondary education level, particularly gives from poor households. The programme has initially been targeting academically capable girls from poor households. Girls from poor households who perform very well in the Primary School Leaving Examination are eligible for this support.

REFERENCES.

Abayo, A.G and Mbwette, T.S (2000) Higher Education Quality: Case Study of the University of Dar es Salaam in Galabawa , J.C.J et al (eds) (2000) *The Quality of Education in Tanzania: "Issues and Experiences",* Institute of Kiswahili Research, Dar es Salaam.

Alfonse, N. (1993); "Teacher Management in Tanzania", *Proceedings of the National College on Teacher Management and Support*. MANTEP, Bagamoyo, 11th – 13th October.

Athumani, A & Ngowi, E.N. *Vocational Education and Training in Tanzania: The Reform Experience 1990 – 1990*, Dar es Salaam: VETA/DANIDA, April 1999.

Bank of Tanzania (various) "*Economic and Operations Report"*.

Bank of Tanzania. *Monthly Economic Review:* (Dar es Salaam: September 1999).

Bureau of Statistics: Planning Commission (1999) "*Tanzania Demographic Health Survey*".

Clarke, G (1998) "*Recurrent Cost Projections Study 1995 – 2015 – Education Sector Public Expenditure Review*". A report for the United Republic of Tanzania.

Commonwealth Secretariat (1993) *Foundation for the Future: Human Resource Development*, Pall Mall: London.

Cooksey, B and Ishumi, A. (1986); "*A critical Review of Policy and Practice in Tanzania Secondary Education Since 1967*" Dar es Salaam. (Mimeo).

Cooksey, B., Ishumi A., Nalekela G. and Galabawa, J.C.J, (1991); *A Survey of Living and Working Conditions of Primary and Secondary School Teachers. Dar es Salaam: Tanzania Development Research Group* (TADREG).

Cooksey, B. and Malekela , G. (1990); *Education for Girls in Tanzania*, Dar es Salaam; TADREG.

Cooksey, B., Ndabi D., Mukyanuzi F. and Galabawa, J.C.J. (1992); *Poverty Focused Primary Education*, Dar es Salaam; TADREG.

DANIDA (1995) "*Vocational Educational Education and Training: Tanzania*", Royal Danish Embassy, Dar es Salaam.

ESRF (1999) "*Vocational Education, Training and Capacity Building*". Paper prepared for ILO, mimeo, Dar es Salaam.

F*amily Health International. AIDS Control and Prevention Project*, Final Report vol 2 (Arlington: FHI, December 1997).

Galabawa, J.C.J. (1989); *Cost-Benefit Analysis of University Schooling in Tanzania*, Ph.D. Thesis University of Alberta, Canada.

Galabawa, J.C.J & A. Kilindo (2000) *Unit costs Analysis* A Research Report submitted to the Ministry of Education and Culture, Dar es Salaam, (Unpublished).

Galabawa J.C.J and A Mbelle (2000) "*Public Expenditure Preview and Higher Education Development*" World Bank/Ministry of Higher Education, Science and Technology, Dar es Salaam.

Galabawa, J. C. J and A.V.Y. Mbelle (2000) "*High and Technical Education Study: Sub-Sector Performance and Public Expenditure Review: A Report to the Ministry of Science Technology & Higher Education and the World Bank*", Dar es Salaam.

Galabawa, J. C. J. and Ndalichako, J. L. (2000) "Management and Training of Education Managers (Tanzania): *Training Needs Assessment for School Heads",*; Unpublished

Getao, F.N (1996) *International Educational Systems: A text book in Comparative Education,* Nairobi Lectern Publications.

Grosh, M and Forgy, B (1994) "*Incidence of Selected Social Service in Tanzania*". The World Bank: Dar es Salaam.

GURT. *Country Co-operation Framework with UNDP for the Period 1997–2001* (Dar es Salaam.

GURT. *Tanzania's Development Vision and Long Term Development strategy*, (Dar es Salaam: 26 September 1997). Paper prepared for the Government and DAC-OECD Donars Meeting.

GURT. Letter of Inent to the IMF, (Dar es Salaam: GURT, 13 July, 1999). ILO. *Strengthening Vocational Education and Training for Employment and Development*, (Addis Ababa: ILO/EAMAT, February 1997) vols 1 – 3.

GURT. *National Poverty Eradication strategy*, (Dar es Salaam: June 1998).

GURT. Health Statistics Abstract 1998, vol I: *Morbidity and Mortality Data*. (Dar es Salaam: July 1998).

GURT. Health Statistics Abstract 1998, vol 2: *Inventory Data*. (Dar es Salaam: July 1998).

GURT. *Strategic Framework for the Protection of Women and Children against HIV/AIDS/STD 1998 – 2002*. (Dar es Salaam: Ministry of Community Development, Women's Affairs and Children, November 1998).

GURT. *Poverty and Welfare Indicators, (Dar es Salaam: Vice President's Office* , September 1999) with UNDP.

GURT. *Education Sector Development Programme – The Process Management System* (Dar es Salaam: 2 September 1999).

GURT. *National AIDS Control Programme – strategic Plan for Medium Term Plan III for HIV/AIDS/STDs Prevention and control in Tanzania 1998 – 2002*. (Dar es Salaam: January 1998).

ILO (1991) "*Tanzania: Meeting the Employment Challenge*" Report of an ILO/UNDP Employment Sector Review Mission.

ILO. *Strengthening Vocational and Training for Employment and Development in Tanzania*, Background Reports and Summary of Vocational Educational and Training Workshop Findings, (Addis Ababa: ILO/EAMAT, 8 March 1996).

ILO (1997) "*Strengthening Vocational Education and Training for Employment and Development. ILO/Ministry of Labour and Youth Development (MLYD) (1999)"*National Round Table on Employment Policy Review". Dar es Salaam.

Ireland, Government of Irish *Education Sector Support Programme 1997 – 1999*. Dar es Salaam: 1997).

Ireland Government of Irish *Aid Tanzania – Country Strategy Paper 2000 – 2002*. (Dar es Salaam: unpublished draft, 27 July 1999).

Kahyarara, G. W. (1999) "*Strengthening Labour Market Information System in Tanzania*". Mimeo, ESRF.

Katabaro, J.K. (1999) *School Performance and Perceptions of "AIDS"Orphaned Primary School Pupils: A Case Study of the Bukoba District in Tanzania,* Unpublished Ph.D. Thesis submitted to the School of Education, University of Cambridge, U.K.

Kelly, M.J (1991) "*Education in a Declining Economic: The Case of Zambia 1975 – 1985*" World Bank: Economic Development Institute.

Kent, D. W. (1995), *The Education and Training of Artisans for the Informal Sector in Tanzania,*ODA.

Kilambo, Lucian & Omari, Beatrice. *Report on Education Sector Development and Irish Aid Support to the MOEC*. (Dar es Salaam: August 1999).

Kinunda, M et al., *Tanzania Education Sector Development Appraisal – Final Overview Report* (Dar es Salaam: April 1999).

Kitula, M.D.N (2000). *School Mapping Songea Rural District A Report*", memo.

Knight, J. and Sabot H. (1990); *Education, Productivity and Inequality*, Oxford University Press, New York.

Kuleana Centre for children rights (1999) "*The State of Education in Tanzania*". Crisis and Opportunity. Dar es Salaam.

Lawson, A.P Ward, R Craig and J. Hough (1999) "*Tanzania: Education Sector Public Expenditure Review*". Report for the Ministry of Education and Culture, Tanzania.

Lawson, Andrew et al. *Tanzania Education Sector Public Expenditure Review.* (Oxford: Policy Group, February 1999).

Maliyamkono, T. L. and Bagachwa, M. S. D. (1990) *The Second Economy in Tanzania,*Ohio University Press, Athens, U. S. A.

Mashauri, D.A M.H Mkumbwa and Kundy, B.J. F(1989) GS 89 *Draft Report: Survey of Engineering Graduate* (mimeo), FOE, UDSM.

Mbelle, A.V.Y. (1999) "*Prospects for Implementation of the 20/20 Initiative on Budget and Aid Restructuring in Favour of Basic Social Services in Mainland Tanzania*", Report to UNICEF/UNDP, Dar es Salaam.

Mbelle, A V.Y. and A.A. Kilindo (1997) "*Prospects for Implementation of the 20/30 Initiative on Budget and Aid Restructure in favour of Basic Social Services in Tanzania*". Report to UNICEF, Dsm.

Mbelle, A.V. Y. and A.A. L Kilindo (1999) "*Prospects for Implementation of the 20/20 Initiative on Budget and Aid Restructuring in Favour of Basic Social Services in Zanzibar*", Report to UNICEF/UNDP, Dar es Salaam.

Mbilinyi, M. Patricia Mbughuni, Ruth Meena and Priscilla Ole Kambaine (1991); *Education in Tanzania in Tanzania with a Gender Perspective*, Stockholm; SIDA.

Ministry of Industry and Commerce. *A Strategic Plan to Develop Tanzania's National Policy Framework for Small Business*. (Dar es Salaam: Commonwealth Secretariat, November 1998).

Mjema, G. D and A.A. Kilindo (2000) "*External Debt Relief and Financing of Social Services in Tanzania*". Paper Presented at The 12th National Economic Policy Workshop, Dar es Salaam.

Mkuku, Mlongetcha. *Junior Achievement Foundation – Tanzania.* (Dar es Salaam: December 1998).

Mushi, P.S.D (1999) "*Training Engineers in Tanzania: Relationship between Formal Industry and the Faculty of Engineering at UDSM*", Unpublished. Ph.D. Thesis, University of Leeds, Leeds 2000.

MOEC (1990) *Basic Educational Statistics (BEST) 1989–93* Ministry of Education and Culture (MOEC), Dar es Salaam.

MOEC (1994) *Basic Education Statistics (BEST) 1989–93*, Ministry of Education and Culture, Dar es Salaam.

MOEC. *Basic Statistics in Education–1996 Regional Data*, (Dar es Salaam: GURT, October 1997).

MOEC. *Basic Education Master Plan*. (Dar es Salaam: 1998).

MOEC. *Basic Statistics in Education 1994 – 1998* (Dar es Salaam: GURT, June 1999).

MOEC. *Education Indicators in Tanzania*, (Dar es Salaam: GURT, March 1999).

MOEC and MOSTHE, *Education Sector Development Programme – Medium Term Expenditure Framework (MTEF)*. (Dar es Salaam: GURT, 30 August, 1999).

MOEC, *Secondary Education Master Plan – 1999 – 2004*. (Dar es Salaam: April 1999)

MOEC and UNICEF, *School Mapping in Kyela District*, (Dar es Salaam: July 1999).

MOEC and UNICEF, *School Mapping Micro-Planning in Morogoro Municipal District.* (Dar es Salaam: April 1999).

MOEC and UNICEF. *School Mapping in Magu District*. (Dar es Salaam: February 1999).

MOEC and UNICEF, *School Mapping in Serengeti District.* (Dar es Salaam: October 1998).

MOEC and UNICEF, *School Mapping in Kisarawe District*. (Dar es Salaam: October 1997).

MOEC and UNICEF, *School Mapping in Bagamoyo District*. (Dar es Salaam: May 1998).

MOEC. *Teacher Training Colleges Audit and Cost Efficiency Analysis* (Dar es Salaam: March 1998).

MOEC (1999) "*Education for All*: The 2000 Assessment Mimeo. Dar es Salaam.

MOEC (Various years) *Basic Statistic s in Education*.

MOEC (1999) "*Basic Statistics in Education: Regional Data*".

MOEC and JICA (2000) "*School Mapping for Kinondoni Municipality*" mimeo, Dar es Salaam.

MOEC (2000) *Basic Education Statistics (BEST) 1995 – 99*, Ministry of Education and Culture, Dar es Salaam.

MOEC (2000) "*Hotuba ya Waziri wa Elimu na Utamaduni Mh. Alh. Juma A. Kapuya (MB) Kuhusu Makadirio ya Matumizi ya Fedha kwa mwaka 2000/2001*.

Narayan. Deepa, *Voice of the Poor – Poverty and Social Capital in Tanzania*. (Washingtone, DC: The World Bank, 1997).

NORAD (1999) *Annual Report*, Dar es Salaam.

Omari, I and Mosha H. (1987); *The Quality of Primary Education in Tanzania* Nairobi: Man-Graphics.

Oxford Policy Management. *Meeting the International Development Targets in Tanzania*, (Dar es Salaam: REPOA, May 1999).

Policy Development and Research Centre (PDRC). *Tanzania Human Development Report 1998* (Dar es Salaam: unpublished draft, November 1998).

Psacharopolous, G. and Loxley, (1985); *Diversified Secondary Education and Development,* Baltimore: John-Hopkins University Press.

Revolutionary Government of Zanzibar (1996) "*Zanzibar Education Master Pan, 1996-2006*". Ministry of Education, Zanzibar.

Revolutionary Government of Zanzibar (1999) "*Speech by the Minister for Education for the year 1999/2000*" Zanzibar.

Royal Danish Embassy. *Overiew of Donor Support HIV/AIDS Activities in Tanzania*. (Dar es Salaam).

Shinyanga Regional Government. Shinyanga Human Development Report. (Shinyanga: December 1998) with UNDP.

SIDA, Partnership in Development – Sweden and Tanzania (Dar es Salaam: Embassy of Sweden, 1998).

SIDA. *Progressive Assessment of the Implementation of the SAP: Vocational Education and Training Authority*, (Stockholm, April 1999).

Stella, Ernest; Udo Etukudo and Stefan Bruni. *Tanzania Debt Profile and Prospect for Relief* (Dar es Salaam: UNDP, June 1999).

Summers, L. H. (1992); "*Investing in All the people*" Policy Research paper 905 Washington, D.C. World Bank.

Tanzania AIDS Project. *The AIDSCAP Response 1993 – 1997*. (Washington, DC: USAID, 1997).

UNDP. *Development Co-operation Report for 1997* (Dar es Salaam: UNDP, December 1998).

UNDP (1999) "*Tanzania Human Development Report*".

UNDP (1999) "*Tanzania Human Development Report: The State of Progression Human Resources Development*". UNDP, Dar es Salaam.

UNESCO (1994) "*World Education Report, 1993*".

UNICEF. *Tanzania School Mapping Report by District*, (Dar es Salaam: 1997 – 99).

UNICEF (1998) "*Indicators on Primary Education in Eastern and Southern Africa*".

UNICEF. *Children in Need of Special Protection Measures*, (Dar es Salaam: June 1999).

UNICEF. *Basic Statistic on Women and Children in Tanzania*. (Dar es Salaam: 9 September 1999). Memorandum.

UNICEF (1999) "*Indicators III on Primary Education in Eastern and Southern Africa; with Special Reference to the Education of Girls*. UNICEF.

UNIDO. *Integrated Industrial Development Programme for Capacity Building – Project Document*, (Dar es Salaam: 16 July 1999).

United Republic of Tanzania (1992); *Basic Education Statistics,* Dar es Salaam; Ministry of Education and Culture.

United Republic of Tanzania (1993); Report of the Taskforce. *The Tanzania Education System for 21st century*, Dar es Salaam; Ministry of Education and Culture.

United Republic of Tanzania (1994) "*Statistical Abstract, 1993*".

United Republic of Tanzania (1995) "*Education and Training Policy*", Ministry of Education and Culture, Dar es Salaam.

United Republic of Tanzania (1995) "*Higher Education Policy*", Ministry of Science, Technology and Higher Education, Dar es Salaam.

United Republic of Tanzania (1998) "*Financial Sustainability f Higher Education: A Report of the Task Force on Financial Sustainability of Higher Education in Tanzania*", MSTHE: Dar es Salaam.

United Republic of Tanzania (1998a) "*The Education Sector development Programme (ED-SDP) Pre-appraisal Report*", Ministry of Education and Culture, Dar es Salaam.

United Republic of Tanzania (1998b) "*National Higher education Policy*", Ministry of Science, Technology and Higher Education, Dar es Salaam.

United Republic of Tanzania (1998c) "*Financial Sustainability of Higher Education in Tanzania*" Ministry of Science, Technology and Higher Education, Dar es Salaam.

United Republic of Tanzania (1999) "*Economic Survey: 1998*".

United Republic of Tanzania (1999), *Higher and Technical Education Statistics in Tanzania, 1992/93 – 19996/97*, Dar es Salaam DUP.

United Republic of Tanzania (1999), "*Some Basic Statistics on Higher Learning Institutions in Tanzania, 1994/95 – 1998/99*", Dar es Salaam, DUP.

United Republic of Tanzania/World Bank (1999) "*Public Expenditure Review*", Dar es Salaam.

United Republic of Tanzania (1999b) "*Tanzania Education Sector Development Programme Appraisal – March 1999*", Ministry of Education and Culture Dar es Salaam.

United Republic of Tanzania (1999) "*National Accounts: 1987–99*".

United Republic of Tanzania (URT) (2000) "*Public Expenditure Review: Vol. I & II, 1999*".

United Republic of Tanzania (2000) "*Economic Survey for 1999*" Planning Commission, Dar es Salaam.

United Republic of Tanzania "*Economic Survey*" various.

University of Dar es Salaam (1999) "*Five Years Rolling Strategic Plan 1999/2000–2003/2004*", Version 3, Dar es Salaam: IKR.

University of Dar es Salaam (1999) "*Institutional Transformation Programme; UDSM, 2000 Facts and Figures*", Dar es Salaam University Press, Dar es Salaam.

Van Der Werf, R (2000) "*The Value of Technical Education: A Cost/Benefit Analysis of Technical Education and other Subjects of Education Tanzania*" mimeo, Dar es Salaam, ESRF/Eindhoven University

VETA (1999) "*Progressive Assessment of the Implementation of SAP*", Dar es Salaam.

VETA. A Consolidated Report on Skills Development for the Informal Sector (Dar es Salaam: June 1999).

VETA. A Report on the Formal Sector Labour Market Survey (Dar es Salaam: January 1999).

VETA. National Vocational Education and Training Catalogue (Dar es Salaam: 1999).

Vocational Education and Training Authority (VETA) (1999)"*A report on the Formal Sector Labour Market Survey*". VETA, mimeo, Dar es Salaam.

Wangwe, S. and Y. M. Tsikata, (1999)"*Macro-economic Developments and Employment in Tanzania*". Report for ILO, mimeo, ESRF.

World Bank (1980) "*Education Sector Policy Paper*" World Bank, Washington DC.

World Bank (1996) "*Post- Primary Education and Training in Tanzania*; *Investment, Returns and Future Opportunities*". mimeo.

World Bank. Staff Appraisal Report – Tanzania Human Resources Development Pilot Project (Washington, DC: August 26, 1997).

World Bank, Tanzania Country Assistance Strategy Concept Paper, (Dar es Salaam: 10 March 1997).

World Bank. Tanzania: Policy Framework Paper 1998/99 – 2000/2001, (Dar es Salaam: GURT/World Bank/IMF, 5 February 1999).