

**WHERE HAS ALL THE EDUCATION GONE IN TANZANIA?  
EMPLOYMENT OUTCOMES AMONG SECONDARY SCHOOL  
AND UNIVERSITY LEAVERS**

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# Contents

<b>PREFACE</b>	viii
<b>ACKNOWLEDGEMENTS</b>	ix
<b>ACRONYMS</b>	x
<b>EXECUTIVE SUMMARY</b>	xi
<b>1 INTRODUCTION</b>	<b>1</b>
1.1 STUDY OBJECTIVES	1
1.2 PREVIOUS TRACER STUDIES IN TANZANIA	2
1.3 EDUCATION AND LABOUR MARKETS	4
1.3.1 <i>Economic reforms and the impact on the labour market (1980–2000)</i>	4
1.3.2 <i>Labour market composition and trends</i>	5
1.3.3 <i>Secondary and higher education</i>	5
<b>2 METHODOLOGY</b>	<b>7</b>
2.1 SAMPLE SELECTION	7
2.2 THE TRACING PROCESS AND RESPONSE RATES	8
<b>3 OVERVIEW</b>	<b>12</b>
3.1 THE SECONDARY SCHOOL SAMPLE	12
3.1.1 <i>Sample profile</i>	12
3.1.2 <i>The activity profile</i>	12
3.1.3 <i>Socio-economic characteristics</i>	15
3.1.4 <i>Mortality and international migration</i>	16
3.2 THE UNIVERSITY SAMPLE	17
3.2.1 <i>Sample profile</i>	17
3.2.2 <i>The activity profile</i>	17
3.2.3 <i>Socio-economic characteristics</i>	19
3.2.4 <i>Mortality and international migration</i>	20
3.3 SECONDARY SCHOOL LEAVERS AND UNIVERSITY GRADUATES COMPARED	20
<b>4 FURTHER EDUCATION AND TRAINING</b>	<b>21</b>
4.1 THE SECONDARY SCHOOL SAMPLE	21
4.1.1 <i>Private tuition while at secondary school</i>	21
4.1.2 <i>The overall incidence of further education and training</i>	21
4.1.3 <i>Types of training</i>	21
4.1.4 <i>Public and private training provision</i>	22

4.2	THE UNIVERSITY SAMPLE	22
4.2.1	<i>Proportion of university graduates with additional training</i>	23
4.2.2	<i>Types of training</i>	24
4.2.3	<i>Overseas training</i>	25
4.2.4	<i>Public and private training provision</i>	25
<b>5</b>	<b>WAGE EMPLOYMENT</b>	<b>26</b>
5.1	THE SECONDARY SCHOOL SAMPLE	26
5.1.1	<i>Wage employment profiles</i>	26
5.1.2	<i>Occupational Profiles</i>	27
5.1.3	<i>Wage employment by sector</i>	27
5.1.4	<i>Secondary activities</i>	28
5.1.5	<i>Academic performance and wage employment</i>	29
5.1.6	<i>Location</i>	29
5.2	THE UNIVERSITY SAMPLE	29
5.2.1	<i>Wage employment by sector</i>	29
5.2.2	<i>Occupational profile of graduates</i>	30
5.2.3	<i>Secondary activities</i>	30
5.2.4	<i>Migration to urban areas</i>	31
5.3	WAGE EMPLOYMENT OF SECONDARY SCHOOL LEAVERS AND UNIVERSITY GRADUATES COMPARED	31
<b>6</b>	<b>SELF-EMPLOYMENT</b>	<b>32</b>
6.1	THE SECONDARY SCHOOL SAMPLE	32
6.1.1	<i>Main characteristics</i>	32
6.2	THE UNIVERSITY SAMPLE	34
6.2.1	<i>Main characteristics</i>	34
6.3	SELF-EMPLOYMENT OF SECONDARY SCHOOL LEAVERS AND UNIVERSITY GRADUATES COMPARED	35
<b>7</b>	<b>UNEMPLOYMENT</b>	<b>36</b>
7.1	THE SECONDARY SCHOOL SAMPLE	36
7.2	THE UNIVERSITY SAMPLE	38
<b>8</b>	<b>INCOME</b>	<b>39</b>
8.1	THE SECONDARY SCHOOL SAMPLE	39
8.1.1	<i>Income by type of activity</i>	39

8.1.2	<i>Examination performance and earnings</i>	39
8.1.3	<i>Secondary income</i>	40
8.1.4	<i>Public/private sector incomes</i>	40
8.1.5	<i>Target incomes</i>	41
8.2	THE UNIVERSITY SAMPLE	41
8.2.1	<i>Income by type of activity</i>	41
8.2.2	<i>Graduate performance and earnings</i>	42
8.2.3	<i>Secondary income</i>	42
8.2.4	<i>Public/private sector incomes</i>	43
8.2.5	<i>Target incomes</i>	43
8.3	SECONDARY SCHOOL LEAVERS AND UNIVERSITY GRADUATES COMPARED	44
<b>9</b>	<b>CONCLUSION AND POLICY IMPLICATIONS</b>	<b>45</b>
9.1	THE SECONDARY SCHOOL SAMPLE	45
9.1.1	<i>Perceived strengths and weaknesses</i>	45
9.1.2	<i>Satisfaction ratings</i>	46
9.1.3	<i>Recommendations</i>	46
9.2	THE UNIVERSITY SAMPLE	46
9.2.1	<i>Perceived strengths and weaknesses</i>	46
9.2.2	<i>Satisfaction ratings</i>	47
9.2.3	<i>Recommendations</i>	47
9.3	KEY POLICY ISSUES	47
9.3.1	<i>The Ministries of Education</i>	48
9.3.2	<i>The role of the Ministry of Community Development, Gender and Children's Affairs</i>	49
9.3.3	<i>The role of the Ministry of Labour, Sports and Youth Development</i>	50
	<b>APPENDIX</b>	<b>51</b>
	<b>BIBLIOGRAPHY</b>	<b>61</b>

## Figures

Figure 3.1:	Activity profile for 1990 secondary school leavers	15
Figure 3.2:	Activity profile for 1995 secondary school leavers	15
Figure 3.3:	Activity profile for 1980 university graduates	18
Figure 3.4:	Activity profile for 1994 university graduates	19
Figure 5.1:	Proportion of Form IV leavers in wage employment by months after leaving school	26
Figure 6.1:	Proportion of Form IV leavers in self-employment by months after leaving school	34
Figure 7.1:	Proportion of Form IV leavers unemployed and looking for work by months after leaving school	37

## Tables

Table 2.1:	Schools selected for the secondary school sample	7
Table 2.2:	Tanzania tracer survey response rates	9
Table 3.1:	Activity profiles for 1990 and 1995 secondary school leavers	13
Table 3.2:	Activity profiles for university graduates	18
Table 4.1:	Percentage of leavers receiving private tuition while at secondary school	21
Table 4.2:	Frequency of additional training for school leavers	22
Table 4.3:	Further training undertaken by secondary school leavers (multiple responses, full- and part-time)	23
Table 4.4:	Training by service providers, Form IV leavers (multiple responses, full- and part-time)	23
Table 4.5:	Frequency of additional training for university graduates	24
Table 4.6:	Type of training by university discipline	24
Table 4.7:	Number and percentage of graduates who have trained abroad	25
Table 4.8:	University graduate training by service provider	25
Table 5.1:	Secondary school leaver occupations	27
Table 5.2:	Wage employment by employer (per cent)	28
Table 5.3:	Secondary employment among secondary school leavers in wage employment	29
Table 5.4:	University graduates' wage employment by employer (per cent)	30
Table 5.5:	Graduates' occupations (per cent)	30
Table 5.6:	Secondary employment among university graduates in wage employment (per cent)	31
Table 6.1:	Secondary school-leavers' self-employment activities	33
Table 6.2:	Number of employees of self-employed secondary school leavers	33
Table 6.3:	Secondary employment among secondary school leavers in self-employment	33
Table 7.1:	Reasons given by secondary school leavers for their inability to find employment (per cent)	36
Table 7.2:	Percentage of secondary school leavers who have ever been unemployed and looking for work	37
Table 7.3:	Ever unemployed (and looking for work) rates among university graduates	38
Table 8.1:	Total monthly income by employment activity for secondary school leavers (TSh)	40
Table 8.2:	Secondary incomes of secondary school leavers (% of total income)	40
Table 8.3:	Monthly wage income by public and private sector	41
Table 8.4:	Monthly target income and total income as a proportion of target income	41
Table 8.5:	Total monthly income by employment activity for university graduates (TSh)	42

Table 8.6:	Secondary income as a percentage of total income for university graduates in wage and self-employment	43
Table 8.7:	Monthly wage income by public and private sector for university graduates	43
Table 8.8:	Monthly target income and total income as a proportion of target income for graduate wage employees	44
Table 9.1:	Strengths and weaknesses of secondary school leavers' secondary schooling	45
Table 9.2:	Secondary school leaver recommendations for improving secondary education	46
Table 9.3:	Strengths and weaknesses of university education	47
Table 9.4:	Graduates' recommendations for improving university education	47

## Appendix Tables

Table A1.1:	Labour market trends (000's), 1991–2000	51
Table A1.2:	Employment by main sector	51
Table A1.3:	Employment by status	51
Table A1.4:	Average monthly income of paid employees by occupation and sex, 1991 (Tanzanian Shillings)	51
Table A1.5:	Form IV performance, 1991–1995 (per cent)	52
Table A3.1:	Activity profiles for 1990 and 1995 secondary school leavers by school location	52
Table A3.2:	Father's education for 1990 and 1995 secondary school leavers	52
Table A3.3:	Occupation of fathers of secondary school leavers	53
Table A3.4:	Marital status and family size of secondary school leavers	53
Table A3.5:	Secondary school-leaver mortality	53
Table A3.6:	Activity profiles for university graduates by discipline	54
Table A3.7:	Graduates' fathers' education	54
Table A3.8:	University graduates' fathers' occupation by cohort	54
Table A3.9:	Marital status and number of children of university graduates	55
Table A3.10:	Mortality rates among university graduates by gender and cohort	55
Table A3.11:	International migration among university graduates by cohort and gender	55
Table A5.1:	Wage employment by economic sector (per cent)	56
Table A5.2:	Examination performance of Form IV leavers in wage employment	56
Table A5.3:	Graduates in wage employment by economic sector and year of graduation (per cent)	57
Table A5.4:	University graduates' wage employment by economic sector and discipline (per cent)	57
Table A5.5:	University graduates' employers by discipline (per cent)	57
Table A5.6:	Location of university graduates	57
Table A6.1:	Examination performance of Form IV leavers in self-employment	58
Table A7.1:	Examination performance of unemployed Form IV leavers	58
Table A8.1:	Total income by examination performance of Form IV leavers	59
Table A8.2:	Total monthly income by employment activity and degree discipline for university graduates (TSh)	59
Table A8.3:	Total income by examination performance of Form IV leavers	59
Table A8.4:	Secondary income as a percentage of total income for university graduates by discipline in wage and self-employment	59
Table A9.1:	Response to attitudinal questions for secondary school leavers (per cent)	60
Table A9.2:	Response to attitudinal questions for university graduates (per cent)	60

## **PREFACE**

Obtaining a comprehensive and detailed picture of the labour market outcomes of secondary school leavers and university graduates is essential in order to enable governments, donor agencies and other key stakeholders in civil society to develop well-designed education and employment policies. Anecdotal evidence and generalisations abound concerning the employment outcomes of secondary school leavers and university graduates, but there is very little solid, accurate information on what these groups in African countries do after they have completed their education. The main objective of the research project has been to fill this gap in Malawi, Tanzania, Uganda and Zimbabwe. Standard tracer survey methodology has been used to generate comprehensive time-series information on the activity profiles of representative samples of secondary school leavers and university graduates. This information provides an invaluable source of data for monitoring and evaluating the impact of educational reforms.

The research project explores the types of employment activities secondary school leavers and university graduates engage in currently and how these have changed over the last twenty years. In addition, the research details the further education and training activities leavers and graduates undertake to improve their labour market opportunities. The research also describes the major trends and patterns of international migration and explores the extent to which the “brain drain” is an important and growing problem for low-income African countries. The research project explores the opinions of school leavers and graduates on their education, in light of their employment experiences, and analyses the changes they think would improve the link between education and employment.

This report presents the research conducted in Tanzania and is part of a set of country case studies that also includes Malawi, Uganda and Zimbabwe. In addition to the country reports a synthesis report has also been produced which compares the experiences of secondary school leavers and university graduates across the four countries.

The research project was managed and co-ordinated by Paul Bennell, Knowledge and Skills for Development and Samer Al-Samarrai, Institute of Development Studies. The research project has been entirely funded by the Education Department of the UK Department for International Development. We would like to thank DFID for their support and funding of this research project.

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## ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
BEST	Basic Education Statistics
DFID	Department for International Development
FCM	Faculty of Commerce and Management
FoE	Faculty of Engineering
MOEC	Ministry of Education and Culture
MSTHE	Ministry of Science, Technology and Higher Education
NGO	Non-governmental organisation
RAs	Research Assistants
TSh	Tanzania Shillings
UK	The United Kingdom
USA	The United States of America
VETA	Vocational Education and Training Authority

# **EXECUTIVE SUMMARY**

## **FOCUS OF INQUIRY**

Although in Tanzania investments in education and training have consistently been increasing to groom graduates for the world of work, the outcome of such initiatives has rarely been systematically evaluated. Put differently, school leavers and graduates have rarely been traced to find out what they do once they have completed their education. In an environment in which public wage employment has been falling and self-employment increasing, it is important to find out what has happened to school leavers and university graduates, especially since the mid-1980s when macro-economic policies and reforms toward this end were introduced.

The objective of the study was to find out the current whereabouts and employment histories of secondary school and university graduates who completed their studies between 1980 and 1999. The specific issues of inquiry revolved around: (i) employment and career histories; (ii) employment opportunities in public as compared to private workplaces; (iii) unemployment; (iv) the relationship between employment and training; (v) differences in labour market experiences due to gender and socio-economic status; (vi) education relevance; and (vii) mortality and international migration.

## **THE SAMPLE AND THE TRACING STRATEGY**

The study comprised a total of 1000 secondary school leavers and 500 university graduates. The 1000 secondary school graduates included 500 who had completed Form IV in 1990 and 500 who had completed Form IV in 1995. These were selected from 10 secondary schools, five from the predominantly urban environment of Dar es Salaam, and five from the mainly rural Dodoma region. The university sample consisted of four graduate cohorts drawn from the five faculties of engineering (civil), education, commerce, medicine and agriculture, each comprising 100 graduates. The four cohorts completed their first degrees in 1980, 1987, 1994 and 1999.

After the sample had been selected, training started, following which the tracing began. This initial stage required the completion of the 'where are they now' form, which covered the graduates' names, addresses, gender, date of school/university completion, grade of performance and other key background information which would enable us to trace them.

With the information from the 'where are they now' form, we derived a list of graduates (i) living in the locality, (ii) residing elsewhere and (iii) with no information on their whereabouts. Interviewing started with those residing in the locality, most of whom we managed to trace and interview. For the others, who had moved elsewhere, we interviewed their parents, who provided basic information on their behalf and directed us to where their offspring could be found. Those who could be located in this way were then traced and interviewed. The process of tracing was initially undertaken by 15 research assistants (RAs), who underwent five days of training. Of the 15 RAs, five were earmarked for the

Dodoma schools and 10 worked in Dar es Salaam, tracing and interviewing both secondary school leavers and graduates. Interviewing was piloted to ensure that the interviewers were familiar with what was required of them.

Of the 1000 secondary school graduates, a total of 965 (96.5 per cent) were traced. Of these leavers, 874 were interviewed, 16 completed postal questionnaires, and information on 50 leavers was obtained from their parents (see Table 2.2). Of the remaining 25 leavers who were traced, 21 were deceased and 4 were abroad. The whereabouts of 35 leavers (3.5 per cent) were unknown. Before analysing the secondary school leaver information the sample was split between those secondary school leavers who terminated their formal education at the end of Form IV, those who had completed senior secondary, and those who had completed university. Approximately, 58 per cent of leavers that were traced did not go any further than Form IV. Of the 500 university graduates, a total of 451 (90 per cent) were traced and 383 were interviewed, 12 completed postal questionnaires, information on one graduate was obtained from their parents, 28 were abroad and 24 graduates were deceased.

## **OVERVIEW OF EMPLOYMENT OUTCOMES**

Chapter 3 provides an overview of the socio-economic characteristics of graduates, including trends in mortality and international migration, as well as employment activity profiles.

### ***Employment activity profiles***

#### ***Secondary school leavers***

Of the 249 Form IV leavers from 1990, in mid-2001 53 per cent were in wage employment, 29 per cent were self-employed, 4 per cent were in full-time training, 5 per cent were unemployed and a further 8 per cent were unemployed but not seeking employment. Among the 1995 Form IV leavers, 36 per cent were in wage employment, 29 per cent were self-employed, 14 per cent were unemployed and looking for work, 12 per cent in full-time training and 8 per cent were unemployed but not looking for work. Thus relatively fewer 1995 Form IV secondary school leavers were in wage employment than their 1990 counterparts. For respondents who continued to senior secondary school the picture was similar although a greater proportion of 1990 leavers were in wage employment than the Form IV leavers. In addition, the majority of 1995 Form VI leavers were still in full-time education and training.

For both cohorts and Form IV and Form VI leavers, a higher proportion of women than men were in wage employment and a greater proportion of men than women were self-employed. For the 1990 Form IV leavers, wage employment figures were 51 per cent for males and 56 per cent for female school leavers, 39 per cent male and 19 per cent female in self-employment, while there were no gender differences in unemployment. For the 1995 Form IV leavers, 27 per cent of men and 45 per cent of women were in wage employment, 43 per cent of men and 16 per cent women in self-employment, 17 per cent of men and 11 per cent were unemployed, and 9 per cent of men and 15 per cent of women were in training (see Table 3.1).

### *University Graduates*

Women university graduates were also more likely than male graduates to secure wage employment. As a whole, university graduates are more likely than secondary school leavers to be in wage employment, with 90 to 100 per cent of university graduates in wage employment during the 1980s and early 1990s, although only about 70 per cent of 1999 graduates are currently in wage employment (see Table 3.2). Self-employment rates are low amongst graduates from the early 1980s, at less than ten per cent, and they continued to be low for more recent cohorts of graduates. Unemployment was non-existent among university graduates from 1980, but for graduates from the 1990s unemployment stood at around 10 per cent.

Self-employment was undertaken by a higher proportion of males than females, and is closely associated with medicine, commerce and engineering graduates. By discipline, the wage employment rate has been almost uniform among all faculty graduates, but has been highest for agriculture and education, and lowest for graduates of engineering and medicine.

### ***Socio-economic characteristics of leavers and graduates***

Parents' education and occupation and the marital status and family size of graduates may influence the extent to which leavers and graduates look for employment and or training. The findings indicate that more recent cohorts of students come from households with better-educated parents. However, this finding is difficult to interpret given the general increase in educational standards over the last 20 years.

### ***Mortality and international migration***

Among secondary school leavers, 21 had died, 11 from the 1990 cohort, and 10 from the 1995 cohort. Four school leavers, three from 1995, had gone abroad. All were from urban backgrounds, and two were women. Among university graduates, 24 had died, including 5 women. As might be expected, these were mainly from the older cohorts. Of the 28 university graduates who had gone abroad, 5 were women and 23 were men. More than half of these were from the 1987 cohort, and most were medicine or engineering graduates.

## **FURTHER EDUCATION AND TRAINING**

### ***Private tuition while at secondary school***

Approximately one-third of all 1990 secondary school leavers interviewed had received private tuition while at school (see Table 4.1). Furthermore, private tuition appears to have increased over the nineties; nearly half of the 1995 school leavers interviewed had private tuition while at school. Private tuition is more commonplace in urban than in rural secondary schools.

### ***Frequency and types of training***

It is very common for 1990 secondary school leavers to pursue further training. By mid-2001 two-thirds of 1990 Form IV leavers had undertaken some form of additional training since leaving school. The most popular training courses were military training, computing, business, and management courses (see Table 4.3). An equal proportion of public and private training institutions provided training courses for the 1990 cohort. However, the relative importance of private training institutions was much higher among the 1995 cohort (see Table 4.4).

Approximately 42 per cent of all university graduates had undertaken some form of additional training since completing their first degrees (see Table 4.5). Postgraduate study was the most common form of further training pursued by university graduates.

### ***Overseas training for university graduates***

Approximately 18 per cent of all university graduates interviewed for this report had undertaken some training overseas (see Table 4.7). Graduates went to many different countries, but the UK, Kenya and the USA were particularly popular destinations. The faculties whose graduates have consistently benefited from overseas training were mainly engineering and medicine.

## **WAGE EMPLOYMENT**

### ***Employment by sector***

The largest number of Form IV leavers in wage employment were employed in the education and health/social work sectors, although this sector employed a higher proportion of the 1990 than the 1995 graduates, and a higher proportion of women than men. Transport and public administration were prominent sectors among rural male graduates, while urban male graduates tended to enter the construction and transport sectors, and urban women were in the electricity/gas/water and tourism sectors. The 353 university graduates were employed in 13 sectors. The most important sectors were education (23 per cent), health (23 per cent), agriculture (15 per cent), finance (10 per cent), and construction (9 per cent).

### ***Wage employment by employer***

Private companies employed the greater proportion of secondary school leavers regardless of the year they left school or whether they were Form IV or senior secondary school leavers (see Table 5.1). The 1980 university graduates were mostly central government employees. However, more recent cohorts of university graduates are more concentrated in parastatals and private organisations, particularly among engineers, doctors and commerce graduates (see Table 5.4).

### ***Wage employment profiles***

Comparing the proportion of 1990 and 1995 Form IV leavers who were in wage employment at the same time after leaving school shows that wage employment opportunities for the latter group declined during the mid-late nineties (see Figure 5.1). This has particularly been the case for male secondary school leavers who have seen wage opportunities decline dramatically during this period.

### ***Performance***

As many as 60 per cent of the Form IV leavers who performed poorly at school still managed to find wage employment. So the quality of academic performance is negatively correlated with entry into wage employment.

### ***Workplace locations***

Roughly four out of five Form IV leavers worked in urban areas. The large majority of graduates (76 per cent) also worked in urban areas.

### ***Secondary activities***

Approximately 14 per cent of 1990 Form IV leavers and 10 per cent from 1995 had part-time wage and/or self-employment activities in order to supplement their incomes (see Table 5.3). Secondary activities are more common amongst university graduates.

## **SELF-EMPLOYMENT**

So few university graduates are self-employed that this chapter therefore focuses on secondary school leavers.

### ***Examination performance and self-employment***

Academic performance may be considered to be an important variable in workplace performance, particularly in self-employment, which requires entrepreneurship and a high level of cognitive ability and skill. As with wage employees, academic achievement does not appear to affect the chances of secondary school leavers being self-employed.

### ***Self-employment activities***

Self-employment activities are similar across the sample of Form IV leavers. For both cohorts, business involves about 64 per cent, followed by hairdressing and farming with 6 per cent each, and tailoring with 5 per cent of self-employed secondary school leavers.

Among the university graduates, the trend across the five faculties and across the four cohorts was that self-employment activities in the 1980s were different from the 1990s. Increasingly, the focus has been on business, thus moving away from the activities the graduates originally dealt with, most of which were directly related to their university disciplines.

### ***Employment generation***

Most self-employed secondary school leavers employed very few additional workers. Only around one-quarter of these enterprises had more than three employees (see Table 6.2).

Of the 25 enterprises established by university graduates, most had between one and five employees. The average was 6 employees. Most of these small firms were owned by men, and agriculture, commerce and medicine-related activities predominated.

### ***Trends in self employment amongst secondary school leavers***

For 1990 and 1995 leavers male self-employment is much more common than female self-employment. A much greater proportion of 1995 leavers were in self-employment a year after they left secondary school than the 1990 leavers (see Figure 6.1). The same trend appears to occur for females although there is some convergence in the proportion in self-employment amongst 1990 and 1995 leavers after five years. Self-employment among male Form IV leavers increased dramatically during the 1990s while self-employment for women remained relatively constant.

## **UNEMPLOYMENT**

### ***Reasons for unemployment***

Most unemployed secondary school leavers feel that there are no job opportunities open to them and this is the main reason for their current unemployment. Some secondary school leavers also feel that they lack the qualifications needed to secure employment in the wage market and this explains why so many leavers pursue further education and training.

### ***Academic characteristics of the unemployed***

What kind of academic performance did unemployed Form IV leavers have compared to all Form IV leavers? Surprisingly, a very high proportion of Form IV leavers who are currently unemployed and looking for work have very good examination performance when compared to all Form IV leavers. Approximately 70 per cent of this group have Division I passes in the Form IV examination compared to only 1–2 per cent in the population as a whole.

### ***Ever unemployed rates among secondary school leavers***

Approximately 50 per cent of all Form IV leavers have experienced some unemployment since leaving school. Surprisingly, a slightly larger proportion of 1995 Form IV leavers have experienced unemployment compared to their 1990 counterparts. This suggests that unemployment has become an increasing problem for secondary school leavers over the nineties (see Table 7.2). Looking more closely at this trend it appears that unemployment rates seem to have increased for male leavers over the nineties although this trend is not apparent for female leavers.

### ***Unemployed university graduates***

Among the university graduates, 18 were unemployed. One was from 1994, and the remaining 17 from 1999. The unemployed were spread evenly across the disciplines and were all male.

## **INCOME**

### ***Wage and self-employment***

Among secondary leavers monthly income from self-employment was lower than income from wage employment, averaging TSh 113,816 (for the 1990 cohort) and TSh 91,466 (for the 1995 cohort). While male 1990 school leavers earned more than women, the reverse is true for 1995 secondary school leavers (see Table 8.1). Self-employment earnings for the university graduates were also lower than income for those in wage employment, averaging TSh 152,604 compared to TSh 291,146 for those in wage employment. Among university graduates, male wage employees earned more than women, while self-employed women earned more than men.

### ***Performance and earnings***

Earnings are not positively correlated with the quality of academic performance for either secondary school leavers or university graduates. In fact, total income appears to be negatively related to examination performance.

### ***Secondary income***

Secondary income is a key source of income for both secondary school leavers and university graduates. As a percentage of total income for Form IV leavers, secondary income averaged 26 per cent for the 1990 cohort and 37 per cent for the 1995 cohort (see Table 8.2). For the university graduates approximately one quarter of total income is earned from secondary activities (see Table 8.6). Furthermore, secondary income as a percentage of total income appears to be higher for the more recent graduates.

## **CONCLUSION AND POLICY IMPLICATIONS**

### ***Strengths of the education system***

The strengths of the education system most cited by school leavers included: competent teachers; good administration; provision of food; a conducive environment; and inter-student co-operation. Among university graduates, the later cohorts were more likely to note strengths of the system than earlier graduates, and medical graduates gave the strongest support. The strengths of the system were felt to include: committed tutors; sufficient materials; inter-student co-operation; and good facilities for practicals.

### ***Weaknesses of the education system***

Secondary school leavers and university graduates were also asked about weaknesses of their schooling and this in some cases mirrored the strengths other respondents had raised. Weaknesses included: teacher incompetence; material scarcity; lack of or poor school facilities; and insufficient teachers

Weaknesses cited by the university graduates were similar and included: the inadequacy of equipment and facilities; incompetent lecturers; lack of IT training; and the inadequacy of their allowances.

### ***Satisfaction levels***

Rating their level of satisfaction on 11 statements, the 1990 and 1995 leavers indicated 47 per cent, or a low level of satisfaction. By cohort, the 1990 urban leavers indicated an average of 52 per cent whereas the 1990 rural cohort indicated 57 per cent. The 1995 figures were 50 per cent (urban) and 30 per cent (rural), indicating a decline in satisfaction levels between 1990 and 1995.

The university graduate level of satisfaction was on average high at 77 per cent, although for certain aspects like information technology, it was low, at 17 per cent. When satisfaction is compared by cohort, it diminishes with the more recent graduates: 79 per cent for 1980, 78 per cent for 1987, 77 per cent for 1994 and 74 per cent for 1999. Faculty satisfaction has declined from 82 per cent to 78 per cent (agriculture), 83 per cent to 70 per cent (commerce), 83 per cent to 76 per cent (engineering), 64 per cent to 66 per cent (medicine).

### ***Recommendations***

The six recommendations most commonly given by secondary school leavers were: emphasis on practical work; increasing teacher-student initiatives; reviewing and improving the syllabus; improving the remuneration of teachers; providing IT courses; and increasing the number of competent teachers. The recommendations given by the university graduates included: increasing the resources available to the university; improving secondary school education; emphasising practical work; increasing the numbers of competent tutors; and reviewing and improving the syllabus at university.

### ***Policy implications***

Various ministries should implement their responsibilities accordingly. The Ministries of Education should enhance intra-sectoral relationships, diversify education resources, enhance career guidance, groom students for self-employment and embark on school-based tracer studies to provide better monitoring and evaluation. The Ministry of Community Development, Gender and Children's Affairs needs to enhance female participation in schooling and improve their academic performance. The Ministry of Labour, Sports and Youth Development should also translate the macro-policy aspects of the 'creation of an enabling environment' in the context of the development of self-employment. The Ministry of Labour, Sports and Youth Development, in collaboration with the Ministries of Education, Commerce and Trade and the Planning and Privatisation Commission, must resolve the problem of the narrowness of the labour market by studying community demand and strategizing for it.

# CHAPTER ONE

## INTRODUCTION

### **1.1 STUDY OBJECTIVES**

One of the most notable features of the education system in Tanzania during the last 20 years has been the very rapid expansion in secondary school and university enrolments. University enrolment was only about 3,000 in the early 1980s, but by the early 2000s, it had reached almost 17,000, with 92 per cent in public universities. Recurrent expenditure for the public universities increased from TS 5 billion in the 1980s to TS 26.4 billion in 2000/2001. Secondary school enrolments (Forms I–IV) rose from 164,000 in 1992 to nearly 240,000 in 2000. Despite government efforts to curtail the growth in expenditure on secondary education, recurrent spending on public secondary schools almost doubled between 1992 and 2000 (from TS 5 billion to TS 10.4 billion).

Increased enrolment and investment have occurred for many reasons. First, it was generally assumed that the knowledge and skills acquired through secondary and university education – essential for social and economic development – would also make graduates employable. Second, it was assumed that these graduates would be hired by both the formal public and private sectors, or would become self-employed in non-governmental and/or informal sectors. Some may also secure employment outside the country. All these possibilities take time, for while some graduates may quickly secure employment, others may spend years before they are successful. Much depends on the state of the labour market, recruitment policies, the relevance of their skills, the possibility of on-the-job training, and so on.

Despite the dramatic increases that have occurred in both university and secondary school enrolments in Tanzania over the last twenty years, relatively little is known about what these two key groups of educated labour do after they leave school and university. This report presents the main findings of a research project whose main objective is to assess the employment outcomes among representative samples of secondary and university leavers during the last 20 years. More specifically, the research addresses the following questions:

- What are the main features of the employment profiles of secondary school leavers and university graduates?
- How many graduates and school leavers continue to find jobs in the public sector?
- How many are employed in the occupations for which they were trained?
- Are there significant differences in labour market outcomes with respect to gender and socio-economic background?
- How many school leavers and graduates have died?
- What is the rate of international migration amongst these groups?
- How relevant do school leavers and graduates think their education has been?
- In the light of their employment experiences, what changes would school leavers and graduates make to the curriculum?

## **1.2 PREVIOUS TRACER STUDIES IN TANZANIA**

There have been a few studies of Tanzania, which could be described as tracer surveys, in that they trace the employment careers of former students. Tracer studies of Form IV leavers include those by Psacharopoulos and Loxley (1985) and Mukyanuzi (1985), while university graduate tracer studies include those by Winkler *et al.* (1985), Baldauf and Lwambuka (1989), and Kaijage (1996). The Psacharopoulos and Loxley (1985) study mainly explored whether the introduction of a diversified secondary school curriculum had led to differences in further training and labour market outcomes for different secondary school curriculum biases.<sup>1</sup> The study traced 1981 Form IV leavers one year later in 1982 and achieved a 60 per cent response rate. Due to the short duration between leaving junior secondary and being traced, as many as 70 per cent of the leavers were still in further education and training. Of the remaining leavers, 5 per cent were self-employed and 9 per cent were in wage employment, with the public sector accounting for 90 per cent of this employment. The findings also suggested that differences in the labour market outcomes of secondary school leavers from the different curriculum biases were relatively small. Mukyanuzi (1985) also explored whether the vocational secondary education curriculum had impacted on education and training outcomes of junior secondary school leavers. Data for a sample of 1981 Form IV leavers was collected from ministries, workplaces, post-Form IV institutions and villages. This data revealed that further education and training choices by leavers were correlated with the curriculum bias they pursued in secondary school. However, employment outcomes did not appear to be related to curriculum biases. Moreover, vocational students in post-Form IV institutions tended to perform worse than the non-bias graduates.

The tracer study by Winkler *et al.* (1985) studied graduates from the Faculty of Engineering (FoE), and collected information about graduate employment patterns, graduates' views on the appropriateness of the FoE's programme as employment training, and the views of FoE graduates' employers on the qualities they look for when recruiting. Winkler *et al.* found that three-quarters of all respondents felt their engineering studies had been useful for their employment, and covered all relevant requirements. Baldauf and Lwambuka (1989) also traced graduates of the FoE, with the objective of getting feedback about the appropriateness of the education provided at the FoE, the employment situation of engineering students who had graduated between 1976/77 and 1987/88, and the qualification requirements of the employment system. The main findings indicated that graduates had some gaps with respect to technology knowledge, and that staff qualifications – particularly in electrical and environmental engineering and development studies – were relatively low. There was also dissatisfaction with the supervision of practical training, adequacy of the equipment of the Faculty and the appropriateness of career counselling. On qualification requirements, it was found that technical qualifications were in themselves inadequate and that further training was difficult to come by.

A more recent tracer study by Kaijage (1996) sought feedback from Faculty of Commerce and Management (FCM) graduates (1981–1995) and their employers on the relevance of the various

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<sup>1</sup> These biases were academic, agriculture, technical and commercial.

programmes. Specific information sought included graduates' employment status and the relevance, strengths and weaknesses of their training. The research found that BCom graduates generally considered the strong contacts between students to be the greatest benefit of the course, followed by the quality of FCM lectures and the sound structure of the BCom programme. The study also found, however, that technical equipment and teaching materials, catering and accommodation facilities were unavailable or rated poorly.

The five studies briefly described above constitute the state of knowledge of the whereabouts and careers of secondary school and university graduates in Tanzania. Their strength is that they all focus on concrete curricular aspects, and permit comparisons of the performance of graduates of various university faculties and secondary curricula. However, most were conducted in the mid- to late 1980s, and many curriculum changes are likely to have taken place at secondary or university level since 1985. Furthermore, these studies can be of little contemporary practical relevance given the context of macro-economic and education sector policy changes that have been undertaken since then. In addition, these earlier tracer studies tended to be focused on a single group. The study by Kaijage in 1996, for example, comprehensively explores university graduates' location and employment status, but concentrated on Commerce and Management graduates. That is, no comprehensive tracer study has to date simultaneously explored the employment and training activities of graduates from various secondary school types and from a wide range of university faculties.

The present tracer study differs from earlier studies in a number of important respects. First, it differs in its approach to identifying the respondents. With the exception of the Psacharopoulos and Loxley study, previous studies identified and interviewed respondents by visiting firms, institutions and workplaces where graduates and secondary school leavers were likely to work. These studies were essentially confined to urban and/or formal sectors, omitting the informal and remote rural areas where many graduates, particularly those who completed Form IV, earn their living. The present study starts from the school or university faculty, from where the required number of names of the graduates of a given year were randomly selected. These were then traced to workplaces within the private, public, informal and rural sectors.

The present research is a longitudinal study, which therefore concentrates on the employment and training histories of graduates. In addition to understanding what graduates are currently doing, it also traces the kinds of employment and training activities they have been involved in since leaving college or school. By making such observations, it is possible to note how long it took to secure formal employment or in-service training, or the time each served within each employment activity. This history applies also to individual incomes. Most of the previous studies, however, concentrated on current employment and training activities of graduates and did not include information on previous employment and training outcomes. Therefore it was not possible to assess changes in employment outcomes for these groups over time.

### **1.3 EDUCATION AND LABOUR MARKETS**

This section describes major trends in education and labour markets in Tanzania in order that the main findings of the tracer studies can be properly contextualised and understood. As elsewhere, a key issue is the extent to which education expansion and consequently labour supply matched labour demand, particularly since the late 1980s when employment in the private rather than the public sector has been emphasised by the government. In Tanzania, demand for labour in the public wage employment sector has been declining, thus inducing increased demand for employment in the informal and private sectors. Similarly, the quality and relevance of education may also have constrained the demand for labour, even in the private sector.

#### *1.3.1 Economic reforms and the impact on the labour market (1980–2000)*

The macro-economic reforms introduced in the mid-1980s have impacted directly on the labour market. Three aims of the economic reforms according to the Rolling Plan of 1994/5–1996/97 include:

- combating poverty and deprivation to improve people's welfare
- creating an enabling environment for a strong private sector
- improving efficiency in the use of public resources.

To combat poverty and deprivation, the government targeted a rise in GDP of above 6 per cent, a reduction of inflation to around 5 per cent and a balancing of the value of imports and exports. In the labour market context, this implied not only increasing employment opportunities but also improving working conditions, by having in place a reformed and transparent pay structure.

Creating an enabling environment for a strong private sector in the context of education meant instituting enabling strategies so that education stakeholders take a more active role in the process of education provision. Education provision was to become an increasingly shared activity between government and non-government agencies. Thus, since the mid 1980s, through government initiatives such as the Presidential Commission on Education (1984), the Task Force on Education (1993), the Education and Training Policy (1995) – all of which stressed an increased role for the private sector in education provision – schooling expanded dramatically, particularly at the secondary and higher levels. In the wake of such expansion, the demand for teachers also increased very significantly.

The emphasis on improving efficiency in the use of public resources meant restructuring the civil service, such that the fiscal base could support the remaining number of civil servants at realistic rates of remuneration. Retrenchment and employment freezes on the civil service were undertaken, so while enrolment at almost all educational levels increased, public employment opportunities contracted sharply. It was expected that this would result in increased self-employment in the private sector. In the next sub-section, we examine these dynamics in the labour market.

### ***1.3.2 Labour market composition and trends***

The Labour Force Surveys of 1990/91 and 2000 show that the total active population increased from 15.6 million in 1991 to 23.7 million by 2000 (see Table A1.1). In 1991, 70 per cent were in productive employment of one sort or another compared to 77 per cent in 2000. However, over the same period the number unemployed and looking for work increased from 3 to 4 per cent. At the same time, those unemployed but not looking for work, in this case, the aged, the sick and those in training, declined as a proportion of the active population, from 27 per cent in 1991 to 19 per cent in 2000.

While employment in government and parastatals declined during the 1990s, it increased appreciably in the informal and private sectors - from 12 per cent of the economically active labour force in 1991 to 17 per cent in 2000 (see Tables A1.2 and A1.3). The share of wage employment declined slightly between 1991 and 2000, from 9 per cent to 6 per cent, while self-employment, including those working at home, increased from 8 per cent to 13 per cent over the same period. In summary, wage employment in the public sector declined in the 1990s, while self-employment rose. This situation seems to be in line with the government policy emphasis described above, and is consistent with the findings presented in chapter 6. With respect to income, by 1991 average income by occupation was TSh 4,950 for males and TSh 5,150 for females (see Table A1.4).

### ***1.3.3 Secondary and higher education***

The Tanzanian education system comprises five tiers or cycles: pre-primary, primary, secondary, tertiary and higher education. More than 0.9 million students were enrolled in pre-primary and 4.8 million in primary in 2000. This suggests that few primary school pupils acquire any education before being enrolled in Standard I. At the end of the seven-year primary school cycle, about nine per cent of primary graduates join public secondary schools, while another nine per cent join private secondary schools. Only 23 per cent of all Standard VII students pass the primary school leaving examination. The secondary school system is still very small with 918 schools and approximately 260,000 students. Junior secondary (O-level) enrolment is much greater than senior secondary (A-level) enrolment with 240,000 and 24,000 students in 2000 attending junior and senior secondary school respectively. 56 per cent of secondary schools are government and community-initiated schools; 12 per cent are aided schools; 8 per cent are seminaries and 24 per cent are other non-government secondary schools.

Form IV results are presented in Table A1.5. About 55 per cent of candidates achieve the lowest pass grade of Division IV, while 21 per cent fail. This means that three quarters of Form IV candidates either barely pass or fail altogether. The situation worsened during 1996–2000, when only 20 per cent attained Division I to III. Within this 20 to 25 per cent of candidates who were passing 'well', private candidates constituted about 2 per cent.

On selection and placement, school output is affected by the number of available opportunities and by performance. At the end of Form IV, all Division I and II candidates (20 per cent) usually get selected for Form V, along with some students with Division III. Some students with a Division IV on 'special' merit, may also be admitted into Form V at private schools. The remaining 80 per cent of candidates look

for courses and employment, most of which revolve around secretarial and computer-related training (see chapter 4).

More than 11,000 students were enrolled in teacher education in 2000, lower than the record heights of 1990–6. The number of teacher trainees declined between 1996 and 1998, as many of those who had been trained were not employed, as a result of tighter macro-economic policies discussed above. However, there are plans to double primary school enrolment by the year 2005, an initiative which will require about 9,000 more teachers (MOEC 2001: 36).

Enrolment in higher education in 2000, as already stated, reached almost 17,000, 92 per cent of whom are in public universities. The University of Dar es Salaam alone had 5,262 students, of whom 23 per cent were education students, 13 per cent commerce students, and 22 per cent engineering students, while medicine and agriculture had 32 per cent of total enrolment. At the Muhimbili Medical Centre, 69 per cent of undergraduates were medical students, and at Sokoine University, 31 per cent of undergraduates were in agriculture.

Enrolment data for 2000 indicate that there were 5,700 students enrolled in other tertiary education programmes, with 38 per cent pursuing technical education (MSTHE 2001: 9–27). Other disciplines with high enrolments include development management and finance (31 per cent) at Mzumbe (Morogoro) and the Institute of Finance Management in Dar-es-Salaam. The remaining 31 per cent of other tertiary education students are at the college of Business Education and the Dar es Salaam School of Accountancy.

## CHAPTER TWO

### METHODOLOGY

#### 2.1 SAMPLE SELECTION

The starting point was to select secondary school leavers from ten schools and university graduates from five faculties. Secondary school leavers were sampled from among those who had completed Form IV in 1990 and 1995, while university graduates were sampled from among those who had completed their undergraduate training in 1980, 1987, 1994 and 1999. Five of the secondary schools were urban, all in Dar es Salaam, while the other five are located in the Dodoma region, which was selected as a fairly typical up-country rural area. The years between 1980 and 1999 were chosen in order to have an adequately wide year-range during which two decades of employment and other outcomes could be comprehensively analysed.

The urban schools from Dar es Salaam were Azania, Kibasila, Zanaki, Forodhani and Shabaan Robert, while the rural ones were Dodoma, Bihawana, Mazengo, Msalato and Dodoma Central. Characteristics considered in selecting these schools included ownership, location, quality, and type.

**Table 2.1: Schools selected for the secondary school sample**

Intra-sample Rank	School	National Rank in Exam 1990	National Rank in Exam 1993 (420)	National Rank in Exam 1995 (500)	Ownership	Type	Day/boarding	Rural/urban	Level Category
1	Azania	25	25	39	Public	Boys	Day	Urban	I-VI
2	Bihawana	21	17	55	Public	Boys	Boarding	Rural	I-IV
3	Mazengo	44	30	69	Public	Boys	Boarding	Rural	I-VI
4	Forodhani	63	54	92	Public	Coed.	Day	Urban	I-IV
5	Dodoma/S	71	71	99	Public	Coed.	Day	Rural	I-IV
6	S/Robert	105	124	44	Private	Coed.	Day	Urban	I-IV
7	Kibasila	48	98	175	Public	Coed.	Day	Urban	I-IV
8	Zanaki	90	103	155	Public	Girls	Day	Urban	I-VI
9	Msalato	110	141	226	Public	Girls	Boarding	Rural	I-IV
10	D/Central	204	260	418	Private	Coed.	Day	Rural	I-IV

Source: Examination Results by the National Examination Council of Tanzania, 1990 and 1995 Records

Table 2.1 shows that most of these ten schools (except Dodoma Central) perform above the national average in terms of examination results (out of 500 by 1995). These ten schools were chosen because they had been established by 1986, the latest year when a school could have been set up in order to qualify for inclusion in our sample. It is for this reason that there are so few community schools in the sample. It should be noted that much of the secondary school expansion since then has been through community and private schools, which tend to have poorer performance than schools established before 1986.

On the whole, schools in Dar es Salaam perform better than other schools. These were deliberately selected in order to obtain the widest range of employment outcomes amongst our sample. Dodoma region was taken as the rural area. It was also a region in which schools could be reached fairly easily,

which was necessary because of resource limitations. As noted above, Dodoma had no other secondary schools established by 1986 (except Mpwapwa) from which to select.

The five university faculties selected were Education, Civil Engineering, Agriculture, Commerce, and Medicine. Most of these faculties are long-established and cover a comparatively large proportion of all university students. However, the demand for graduates from most of these faculties is likely to be more than for graduates from other faculties.

The total sample size was 1500, composed of 1000 secondary school leavers and 500 university graduates. For each of the ten secondary schools, 100 school leavers were randomly selected – 50 graduates from 1990 and 50 from 1995. For each of the five university faculties, 100 graduates were traced, 25 for each of the years 1980, 1987, 1994 and 1999. The selection of graduates was purely random for each cohort in our sample. After the sample had been selected, we started to trace these individuals, which required completing a ‘where are they now?’ form, comprising the graduate’s name, address, gender, date of completion, grade of performance, and other key background information.

## **2.2 THE TRACING PROCESS AND RESPONSE RATES**

With the use of the information on the ‘where are they now?’ form, we produced three lists: a) graduates living in the locality; b) those residing elsewhere; and c) those whose whereabouts were totally unknown. Interviewing started with those residing in the locality. Some of the targeted individuals were traced and interviewed, but others had moved, usually in search of employment. In cases of absence such as these, we interviewed parents, who either provided useful information on their behalf or who could direct us to where their children could be found.

Those who were residing beyond the locality were followed up either by physically meeting them, or by communicating with them through letters, e-mail, fax and telephone. But because most of their addresses had changed, we were constantly asking about their whereabouts from various informants, particularly the other respondents in our sample. This process of constantly searching was also used with respect to the third list, of those graduates whose location was initially unknown. Most of this last group were eventually traced and interviewed.

This process of tracing was initially undertaken by 15 research assistants (RAs) who underwent five days of research- and interview- training. Out of these, five researched the Dodoma schools, and the remaining ten traced Dar es Salaam graduates. To ensure RAs were familiar with what was required of them, interviewing was “piloted” so that, before starting this work on a large scale, each RA had the opportunity to interview at least one graduate.

Response rates are shown in Table 2.2. Information was solicited through questionnaires for graduates, who were the main source of information; for informants (parents); and through the postal questionnaire. These essentially covered the same questions, including respondents’ (i) socio-economic status; (ii) employment activities; (iii) employment and training history; (iv) income; and (v) views on

their education/training. Although these three types of questionnaire had common objectives and similar formats, they differed in the way information about the subject's employment and training history was collected.

**Table 2.2: Tanzania tracer survey response rates**

	Secondary			University		
	Male	Female	Total	Male	Female	Total
<b>Total Traced</b>	<b>510</b>	<b>455</b>	<b>965</b>	<b>351</b>	<b>100</b>	<b>451</b>
Interviewed	466	408	874	298	85	383
Postal	7	9	16	8	4	12
Parents	25	25	50	0	1	1
Abroad	2	2	4	23	5	28
Deceased	10	11	21	19	5	24
Not traced	16	19	35	45	4	49
Traced but not interviewed	0	0	0	3	0	3
Total sample	526	474	1000	396	104	500
Response rate (%)	97	96	97	89	96	90

The informants' questionnaire was only completed by parents once it was confirmed that their children, the graduates in question, were not available locally. This "third-party" source of information omitted two issues – graduates' income and their views and recommendations about secondary education. This was inevitable, as income is a personal matter, and parents' views on the curriculum could not represent those of their children. Thus the informant's questionnaire was designed to tap the kind of information it was thought parents could easily remember about their children. Information about graduates' personal details, current employment activities, employment and training history could all be easily provided by parents. Information given by parents was only used when we failed to reach the graduates themselves. Whenever it became possible to get information from the graduates themselves, information given by parents was discarded.

The postal questionnaire included all the main issues that the main or graduate questionnaire covered. The postal questionnaire was in Kiswahili (for the Form IV graduates) instead of English as in the graduate questionnaire, in order to maximise the probability that respondents would understand it, as many in this group are not assumed to be fluent in English. The sequence of questions in the postal questionnaire differed from the main questionnaire, and there were six sub-categories rather than five, as education/training was treated separately from employment history rather than combined as in the graduate questionnaire –this was to enable respondents to clearly understand the questions. The historical information about training and employment was also given less space in the postal than in the other two questionnaires.

Although we had planned to complete the tracing and interviewing of respondents in their respective localities within a month, this did not work out as planned. As a result, one month into the research, only 20 per cent of graduates had been reached. To reach the remaining 80 per cent, the RAs were paid on the basis of the actual number of graduates traced and interviewed. Payment for tracing became separate

from interviewing, and energetic new RAs were recruited. The new RAs were Form VI leavers, and therefore had lower academic qualifications than the other RAs, and a division of labour according to qualification was then inevitable. The Form VI leavers concentrated on tracing while the original RAs concentrated on the more sophisticated work of interviewing. In order to reduce costs, the new recruits for Dodoma were selected locally, to minimise feelings of “alienation” and because this meant that the team knew where most graduates were. Costs also declined because there were no longer boarding charges for the RAs. The new Dodoma recruits were also managed by a “local mobiliser” who had lived in Dodoma for over 20 years and who co-ordinated the work and liaised with the Dar es Salaam office. Interviewing in Dodoma during this second phase was also initially carried out by two RAs, one from Dar es Salaam and the other from Dodoma. The Dodoma trainee subsequently interviewed most Dodoma graduates, which cut travel costs.

During the follow-up stage, there were 408 graduates to follow up and 161 unknowns, making a total backlog of 569. We originally chose 15 major towns to visit for interviewing 547 of the graduates, initially leaving out six minor towns (Zanzibar, Mtwara, Lindi, Singida, Bukoba and Rukwa) in which approximately 22 graduates were living. Once graduates were identified, the Form VI RAs requested experienced interviewers to be sent to conduct the interviews. Where fewer than 15 graduates were found, the Form VI RAs carried out interviews themselves. Thus in Dar es Salaam, Coast, Morogoro, Kigoma and Dodoma, interviews were carried out by the original RAs. In Mbeya, Iringa, Songea, Tabora, Shinyanga, Mwanza, Arusha, Moshi, Tanga and Musoma interviews were done by Form VI RAs. In these latter towns it was expected that the numbers of graduates would average 20, while the average actually reached was 13.

In the minor towns, postal questionnaires were also completed. Some friends residing in those towns were identified, after which we described the task to them on the telephone, and then sent questionnaires either through the post office or by bus. These friends had to chase the earmarked graduates to complete the forms. This worked well in Lindi, Mtwara, Singida, Zanzibar, Kagera and Rukwa, from which we got a total of 16 responses. Questionnaires were also sent through the post office to 26 graduates whose parents had originally been interviewed. Only four responses were received through this method. Other questionnaires sent abroad, after having liaised with the graduates through email, telephone and fax, were on the whole not responded to. At the end of the research, 84 graduates could not be traced (see Table 2.2).

Despite some problems, the research process had some successes, including:

- The questionnaires used clear language, and were of the ideal length. Respondents took only between 30 and 40 minutes to complete each questionnaire
- The guidance and supervision on how interviewers should complete the questionnaires helped minimise errors and omissions on the part of respondents
- Respondents often felt free to use Kiswahili or English

- Several respondents felt that because they were being “traced for their whereabouts”, someone cared about their welfare, which sustained their enthusiasm in participating in the interview and taking it seriously
- The data were verified in a number of ways, including: using two different groups of RAs – tracers and interviewers – which meant that interviewers approached school leavers who had already been traced; informing RAs that randomly-selected follow-ups of some interviewees would be undertaken to ascertain their existence; and requesting updated contact details in order to reach contact respondents.

## **CHAPTER THREE**

### **OVERVIEW**

This chapter presents the general findings of the study, concentrating on the profile of graduates and their current activities, their socio-economic characteristics, and mortality trends and international migration. The chapter starts with an overview of the findings from the secondary school sample, and goes on to outline findings from the sample of university graduates.

#### **3.1 THE SECONDARY SCHOOL SAMPLE**

##### *3.1.1. Sample profile*

The secondary school sample comprised 1000 leavers, 500 for each of the years of 1990 and 1995. Of the 1990 sample, 472 leavers were interviewed, and of the remaining 28, 16 were not traced, 1 was abroad and 11 had died (see Table 3.1). Of the 1995 sample, 468 leavers were interviewed, and of the remaining 32, 19 were not traced, 3 were abroad and 10 had died (see Table 3.1). The sample of 940 interviewed leavers were disaggregated into three sub-categories: those who never went beyond Form IV; those who were selected for Form IV and completed Form VI; and from this last sub-group, those who went onto university. Throughout the report, however, the small secondary school sub-group who went onto university are not discussed, as the analysis of university graduates is covered within the larger university sample.

Table 3.1 shows that a total of 546 leavers did not go beyond Form IV (249 and 297 for 1990 and 1995 respectively), 320 leavers went on to complete senior secondary school and 74 completed first degrees at university (69 and 5 for 1990 and 1995 respectively). From this, we conclude that, for both years, approximately 47 (36) per cent of junior secondary leavers in 1990 (1995) went on to senior secondary school, which is higher than the national average of 20–25 per cent. This feature was predicted above where it was noted that the schools in our sample were above average performing schools. The 69 1990 students selected for university out of the 223 who completed senior secondary school represent about 31 per cent of that group, which appears to be slightly lower than current national transition rates between senior secondary school and university of around 35–40 per cent. A much lower percentage of 1995 leavers appear to complete university. However, this is partly due to the large numbers of 1995 leavers who are still studying at university – indicated by the large proportion of 1995 senior secondary school leavers still in full-time education and training.

##### *3.1.2 The activity profile*

Here we present general findings on the current activities of Form IV and Form VI leavers under the categories of wage employment, self-employment and unemployment. Unemployment breaks down into those who are looking for work, those in education and training, those working at home, and those

unable to work due to illness. It should be noted that the three latter sub-categories were groups not actively seeking work.

**Table 3.1: Activity profiles for 1990 and 1995 secondary school leavers**

	1990						1995					
	Male		Female		Total		Male		Female		Total	
	no.	%										
<b>Form IV leavers</b>												
Wage salary	64	51	69	56	133	53	38	27	69	45	107	36
Self employed	49	39	23	19	72	29	62	43	25	16	87	29
Looking for work	6	5	7	6	13	5	24	17	17	11	41	14
In full-time education & training	3	2	8	7	11	4	13	9	23	15	36	12
Working at home (house-wife)	1	1	16	13	17	7	3	2	19	12	22	7
Cannot work due to illness	3	2	0	0	3	1	3	2	1	1	4	1
<b>Total</b>	<b>126</b>	<b>100</b>	<b>123</b>	<b>100</b>	<b>249</b>	<b>100</b>	<b>143</b>	<b>100</b>	<b>154</b>	<b>100</b>	<b>297</b>	<b>100</b>
<b>Senior secondary leavers</b>												
Wage salary	49	55	43	66	92	60	13	14	21	28	34	20
Self employed	30	34	12	18	42	27	11	12	5	7	16	10
Looking for work	2	2	2	3	4	3	15	16	4	5	19	11
In full-time education & training	8	9	8	12	16	10	53	58	42	57	95	57
Working at home (house-wife)	0	0		0	0	0	0	0	2	3	2	1
<b>Total</b>	<b>89</b>	<b>100</b>	<b>65</b>	<b>100</b>	<b>154</b>	<b>100</b>	<b>92</b>	<b>100</b>	<b>74</b>	<b>100</b>	<b>166</b>	<b>100</b>
<b>University leaver</b>												
Deceased	3		8		11		7		3		10	
Abroad	1		0		1		1		2		3	
Not traced	11		5		16		5		14		19	
<b>Total</b>	<b>276</b>		<b>224</b>		<b>500</b>		<b>250</b>		<b>250</b>		<b>500</b>	

The general trend is that greater proportions of 1990 than 1995 leavers are currently in wage and self-employment. This is due to a greater proportion of 1995 leavers still in full-time education and training or unemployed and looking for work. For 1990 Form IV school leavers, 54 per cent were in wage employment, 28 per cent in self-employment and 18 per cent were unemployed. For the 1995 group, the pattern was 38 per cent, 28 per cent and 36 per cent, respectively.

### Rural-urban differences

It was noted in the previous chapter that half of the secondary school leaver sample attended schools in rural areas. Three of the five rural schools were boarding schools and it is likely that a large number of leavers from these schools were not from the local catchment area. Therefore, leavers from these schools do not necessarily live in the locality of these schools and many are currently located in urban centres. In fact, the majority of our secondary school sample were living in urban areas at the time of the survey in mid-late 2001 (see Chapter 5). This implies that differences in outcomes for secondary school leavers from rural and urban schools are likely to be due in part to differences in school characteristics between these areas as well as different opportunities facing rural and urban leavers.

Exploring the current activity profile of leavers from the rural and urban schools in our sample shows that there are no large differences between wage and self-employment outcomes for secondary school

leavers that attended rural and urban schools (see Table A3.1). Furthermore, unemployment rates appear to be very similar between rural and urban secondary school leavers. However, a slightly larger proportion of urban Form IV school leavers appear to be in full-time education and training than their rural counterparts.

### Gender differences

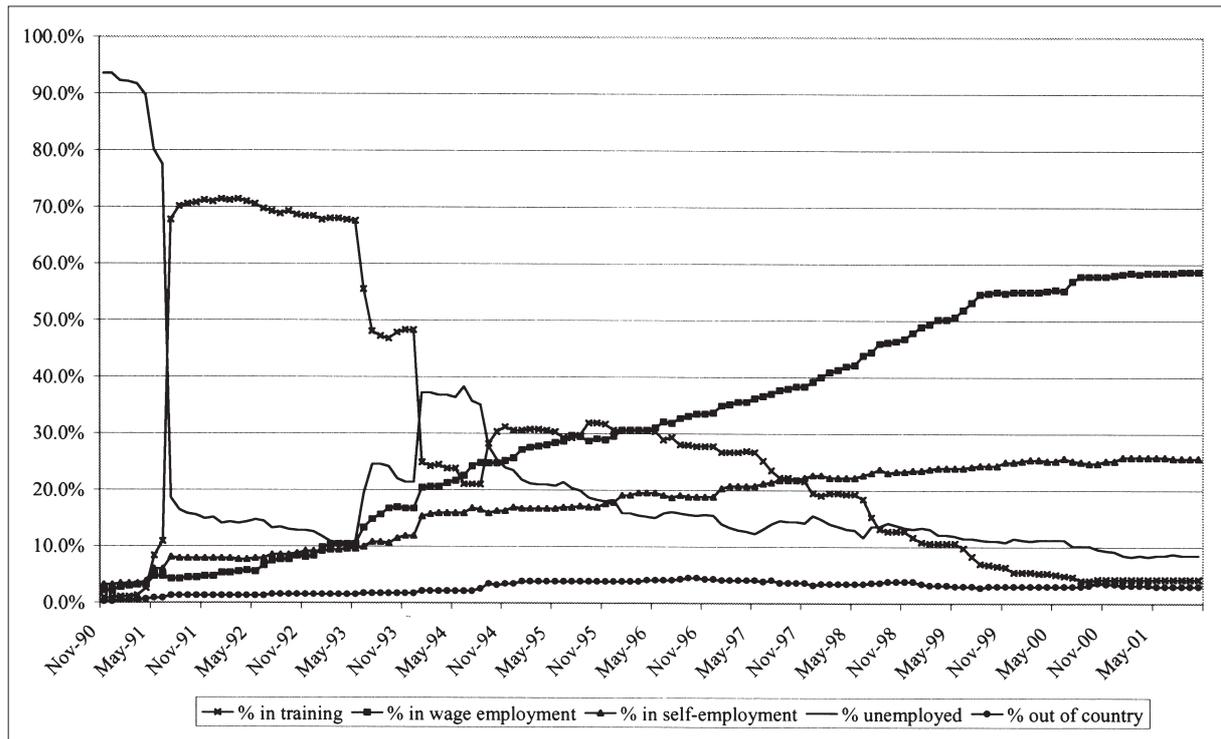
A particularly surprising finding is that, among Form IV leavers, women are more likely to be in wage employment than men from the same background. For Form IV leavers from 1995, 56 per cent of women compared to 33 per cent of men were in wage employment (see Table 3.1). More male than female secondary school leavers were self-employed, for both the 1990 and the 1995 cohorts. Unemployment rates tended to be higher for men than women particularly for the 1995 cohort. The pattern shows that while a smaller proportion of women are in the labour market (i.e. in wage or self-employment or unemployed and looking for work) a higher proportion of these women are in wage employment compared to male secondary school leavers.

### Activity Profile Trends

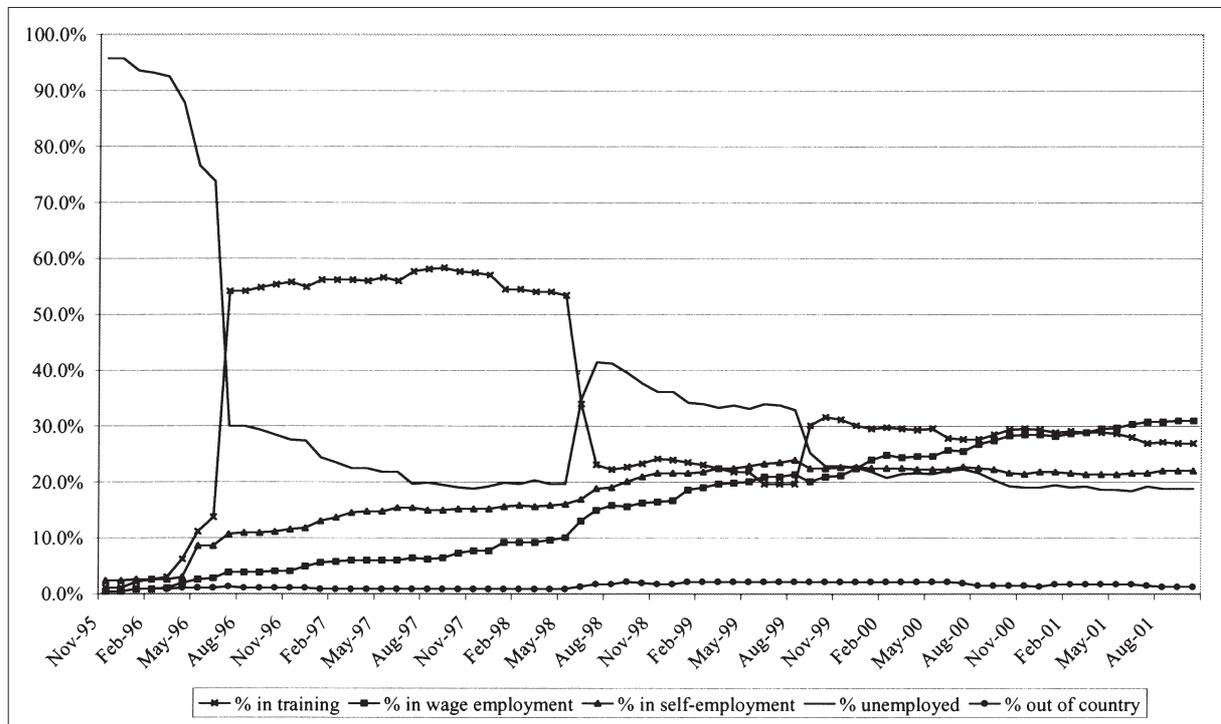
We now move on to discuss the career histories of our secondary school sample since they left Form IV. Figures 3.1 and 3.2 show the activities of 1990 and 1995 secondary school leavers in the sample since they completed Form IV. Each line on the graph represents the proportion of the sample involved in each activity at every point in time since junior secondary school completion. For example, Figure 3.1 shows that in November 1991 approximately 70 per cent of the 1990 leavers were in full-time education and training. It should be noted that all secondary school leavers, irrespective of whether or not they continued their formal schooling, are included in the figures.

Similar patterns emerge for both 1990 and 1995 leavers in terms of the shape and gradient of the lines. Directly after completion of Form IV unemployment rates are very high. This is largely due to leavers waiting to obtain their examination results before knowing whether they have been selected for Form V or not. Figures 3.1 and 3.2 show that the proportion of our samples in full-time education and training increases dramatically a few months later as Form IV completers begin their senior secondary education and decreases again approximately two years later as they complete senior secondary school. While a large proportion of the sample are in senior secondary school, the other leavers slowly begin to find employment either in wage or self-employment. Interestingly, a much larger proportion of 1990 leavers than 1995 leavers appear to be in wage employment during the same period. As the proportion of secondary school leavers in full-time education and training falls, the proportion in employment increases. Initially, a greater proportion of secondary school leavers are in self-employment than in wage employment. However, wage employment increases at a faster rate and, after approximately three years for 1990 leavers and four years for 1995 leavers, a greater proportion are in wage as opposed to self-employment. Figures 3.1 and 3.2 also show that a small but relatively constant proportion of the sample, who were traced and interviewed, have been abroad.

**Figure 3.1: Activity profile for 1990 secondary school leavers**



**Figure 3.2: Activity profile for 1995 secondary school leavers**



*Socio-economic characteristics*

Father's education is a potentially decisive influence on the extent to which a leaver can secure employment and/or be selected into higher education. Among the 1990 Form IV sub-group, 45 per cent

of leavers' fathers had only primary education, while 21 per cent had completed Form IV and 9 per cent had completed university (see Table A3.2). Among the 1995 sub-group, however, only 39 per cent of leavers' fathers had completed primary school, 26 per cent Form IV, and 18 per cent were university graduates; thus the fathers of the 1995 cohort tended to be educated to a higher level than those of the 1990 cohort. Form VI leavers tend to have fathers with higher education levels than junior secondary school leavers. Among the Form VI leavers, 38 per cent of fathers of 1990 leavers had only primary education, with 17 per cent having completed Form IV and 24 per cent university. Again, among Form VI leavers, the 1995 cohort shows that the proportion of leavers' fathers with university education increased to 30 per cent, while those with only primary education declined (27 per cent).

Fathers of secondary school leavers are divided between semi- and unskilled (36 per cent), skilled manual (29 per cent) and professional (18 per cent) categories. Two-thirds or 65 per cent of all fathers fell into the skilled manual and semi- and unskilled categories. These findings are consistent with the finding that 45 per cent of fathers have primary and 25 per cent secondary education. Comparing the two cohorts, we find the proportion in the skilled manual category increased from 25 per cent in 1990 to 32 per cent in 1995. Proportions for the other categories either declined or remained constant (see Table A3.3).

Whether leavers are married and have children is likely to influence the vigour with which they seek employment and/or further training. Table A3.4 shows that those who completed their studies in 1995 have fewer children than those who left school in 1990, and that a far smaller proportion of the 1995 cohort than of the 1990 cohort (16 compared to 50 per cent) are married. To some degree this is to be expected given that the 1990 leavers are older and therefore have had more time to get married and have children. More leavers from rural schools are married and tend to have a greater mean number of children than those from urban schools.

#### ***3.1.4 Mortality and international migration***

Of the 965 secondary school leavers who were traced, 21 had died while four had gone abroad, presumably for jobs (see Table 3.1). Total mortality as a percentage of the total traced sample averaged 2 per cent of leavers for each cohort. However, a slightly larger proportion of 4 per cent of female urban school leavers from 1990 had died as compared with only 1 per cent of their 1995 counterparts. For the 1995 cohort, 4 per cent of male urban school leavers had died, as opposed to zero for the 1990 cohort (see Table A3.5). It is very noticeable that a larger proportion of 1995 than 1990 male secondary school leavers are deceased. While the numbers are very small, it does appear that mortality has been higher for the younger cohort of male students. In overall terms, the AIDS epidemic does not appear to have had much impact on these groups of secondary school leavers.

Table 3.1 indicates that of the four leavers who were abroad, one was a male 1990 leaver, while the remainder were from the 1995 cohort of urban schools, including one male and two females. Therefore, permanent international migration by secondary school leavers in Tanzania appears to be very slight.

## **3.2 THE UNIVERSITY SAMPLE**

### *3.2.1 Sample profile*

Table 2.2 indicated that a total of 396 out of 500 university graduates were interviewed, including 306 men and 90 women. Disaggregated by cohort and gender, the leavers interviewed were 89 for the 1980 cohort (75 male and 14 female), 81 for 1987 (62 male and 19 female), 112 for 1994 (78 male and 34 female), and 114 for 1999 (91 male and 23 female). By discipline, they were 86 agriculture graduates, 82 commerce, 81 education, 77 medicine, and 70 engineering. In most cases, the more recent the year of completion, the greater the proportion of those who were traced and interviewed. It proved easier to trace and interview agriculture graduates, as they were easily traced from big agricultural estates and centres where their locations were known. It was most difficult to reach engineering graduates, as demand for their skills enabled many to migrate to other countries.

### *3.2.2 The activity profile*

Table 3.2 disaggregates the 306 university graduates according to their activity profiles. 89 per cent were in wage employment, 6 per cent in self-employment, 3 per cent were unemployed, and 1 per cent were in training. A higher proportion of female than male graduates were in wage employment (96 compared to 87 per cent). More men than women were self-employed (7 compared to 4 per cent) and in full-time training (2 per cent compared to none). By cohort, the trends for wage employment were 90 per cent for 1980, 94 per cent each for 1987 and 1994, and 81 per cent for the 1999 cohort. The trend in self-employment was 10 per cent for 1980; 6 per cent for 1987; 5 for 1994; and 4 per cent for the 1999 cohort. Unemployment was only found among the 1999 cohort, with 11 per cent of that group reporting they were unemployed/looking for work.

The activity profile of university graduates indicates that most university graduates, regardless of discipline, were in wage employment, although the incidence of wage employment was particularly high for agriculture and medicine, and lower for engineering and commerce graduates (see Table A3.6). Wage employment rates were slightly lower for the 1999 cohort because a larger proportion of these graduates were still in full-time education and others were still looking for work. Similar to the secondary school leavers, women university graduates were more likely to be in wage employment than men. The proportion of graduates in self-employment was low for all cohorts, at less than 10 per cent. Self-employment was also more common among men than women, and generally higher for commerce and engineering graduates.

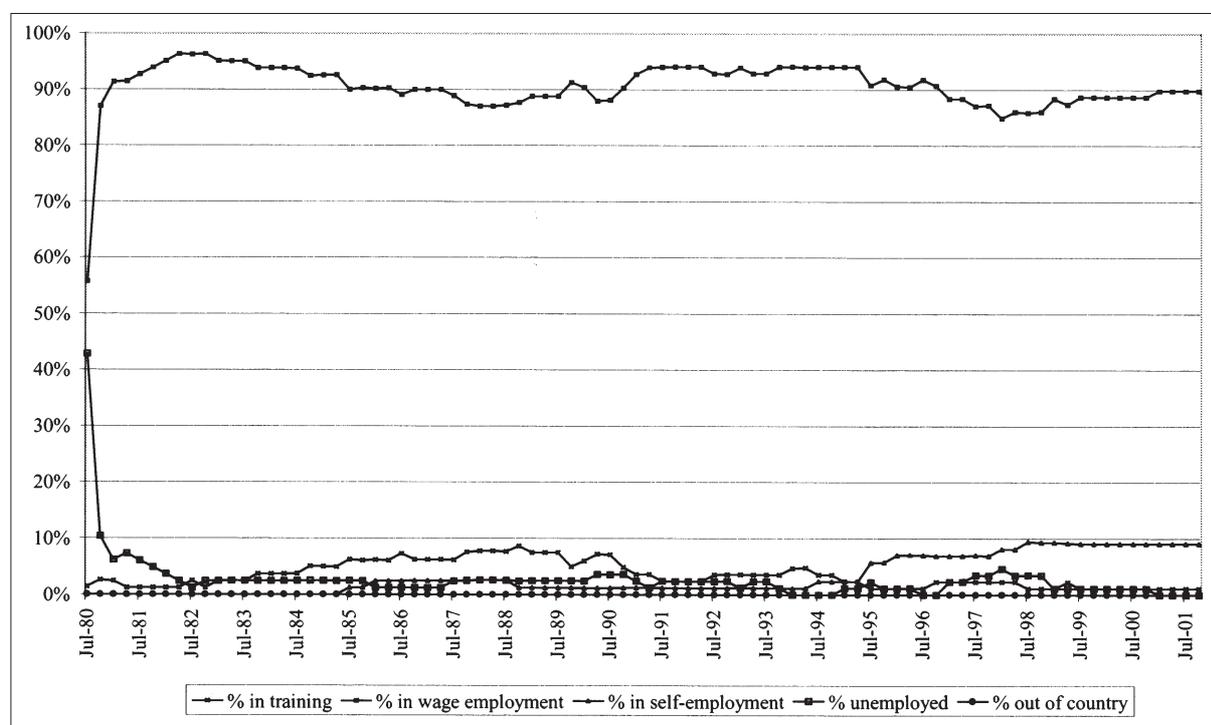
### **Trends**

We now move on to discuss the career histories of the university graduates in our sample since they left university after completing their first degrees. Figures 3.3 and 3.4 show the activities of 1980 and 1994 graduates in the sample since they completed their first degrees. The interpretation of these figures is the same as for Figures 3.1 and 3.2.

**Table 3.2: Activity profiles for university graduates**

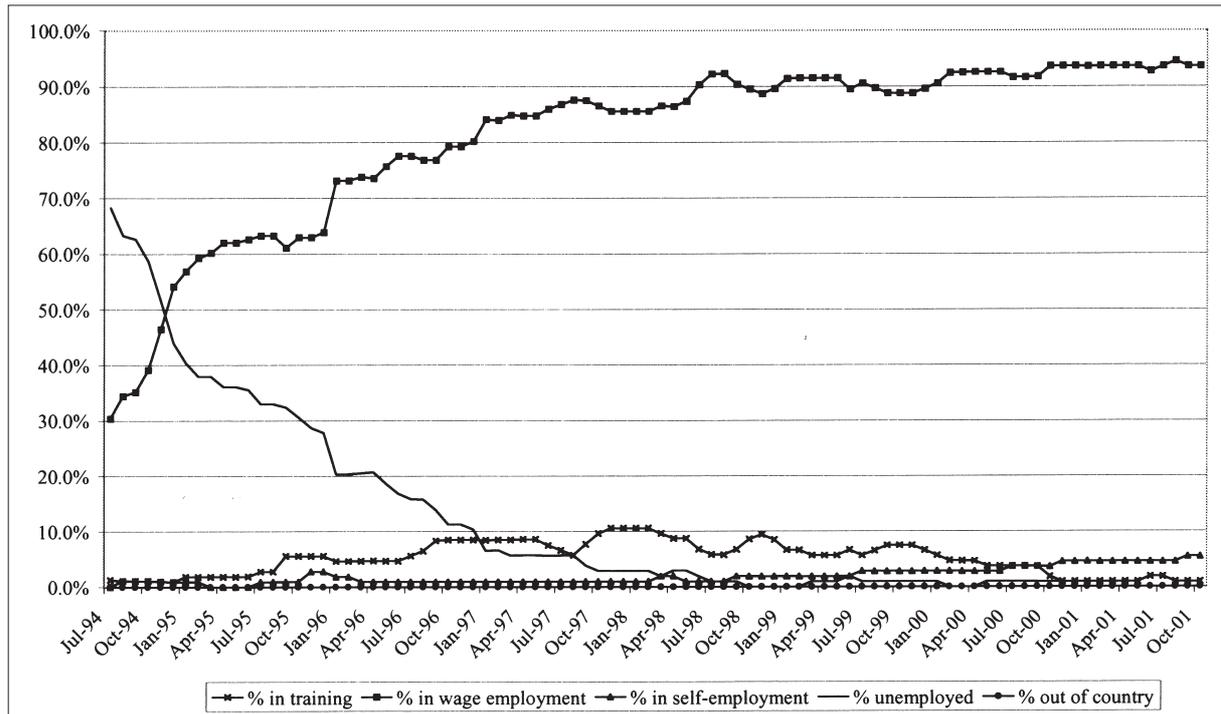
	1980		1987		1994		1999		Total	
	no.	%	no.	%	no.	%	no.	%	no.	%
<b>Male</b>										
Wage employment	67	89	57	92	72	94	70	76	266	87
Self-employment	7	9	5	8	4	5	5	5	21	7
Unemployed/looking for work	0	0	0	0	0	0	6	7	6	2
Full-time student	1	1	0	0	1	1	11	12	13	4
Total	75	100	62	100	77	100	92	100	306	100
<b>Female</b>										
Wage employment	13	93	19	100	32	94	23	100	87	97
Self-employment	1	7	0	0	2	6	0	0	3	3
Unemployed/looking for work	0	0	0	0	0	0	0	0	0	0
Full-time student	0	0	0	0	0	0	0	0	0	0
Total	14	100	19	100	34	100	23	100	90	100
<b>Total</b>										
Wage employment	80	90	76	94	104	94	93	81	353	89
Self-employment	8	9	5	6	6	5	5	4	24	6
Unemployed/looking for work	0	0	0	0	0	0	6	5	6	2
Full-time student	1	1	0	0	1	1	11	10	13	3
Total	89	100	81	100	111	100	115	100	396	100
Deceased	11		10		1		2		24	
Abroad	4		16		4		4		28	
Traced but not interviewed	1		1		1		0		3	
Not traced	20		17		8		4		49	
Total sample	125		125		125		125		500	

**Figure 3.3: Activity profile for 1980 university graduates<sup>2</sup>**



<sup>2</sup> To ensure that Figure 3.3 is clear, data for 1980 graduates is entered on a three-monthly basis.

**Figure 3.4: Activity profile for 1994 university graduates**



The most striking feature of Figures 3.3 and 3.4 is the dominance of wage employment throughout the graduates' career histories. For the 1980 cohort, almost immediately after completing their degrees the majority entered wage employment. The proportion of this cohort in wage employment remains relatively constant over the 21 years since they left university. A slightly different picture emerges for the 1994 graduates shown in Figure 3.4. While, at the time of the survey, over 90 per cent were engaged in wage employment, it took many of these graduates longer after leaving university to find wage employment. Comparing Figures 3.3 and 3.4, it appears that this is primarily due to longer periods of unemployment and slightly higher proportions of graduates from this year in full-time education and training.

### *Socio-economic characteristics*

The fathers of most university graduates had completed at least primary education. Only 31 per cent of fathers had no formal schooling or incomplete primary education. Almost half of university graduates' fathers had completed primary or had at least some secondary education, while 15 per cent had attended university or other forms of higher education (see Table A3.7).

With respect to fathers' occupation, the proportion of graduates whose fathers are professional and/or skilled non-manual workers increases with successive cohorts. While only 1 per cent of 1980 graduates' fathers were professionals and 11 per cent skilled non-manual workers, for the 1999 cohort, these figures rise to 15 per cent professionals and 21 per cent skilled non-manual workers. There was a corresponding decline in the proportions of graduates' fathers who were in semi- or unskilled work: 75 per cent of 1980 graduates' fathers were semi- or unskilled, but this figure declines steadily with successive cohorts, down to 49 per cent of the fathers of 1999 graduates (see Table A3.8).

Of the 396 university graduates interviewed, 69 per cent were married, 24 never married, and 7 per cent were divorced or widowed. There were no significant gender differences with respect to marital status (see Table A3.9). Unsurprisingly, the earliest cohorts from 1980 and 1987 were most likely to be married, and the most recent graduates, from 1994 and 1999, were less likely to have ever been married. The mean number of children among graduates is 2.4, although this figure varies across the four cohorts: the 1980 cohort had, on average, four children, whereas the 1994 graduates had an average of two children (see Table A3.9).

#### **3.2.4 Mortality and international migration**

A total of 24 graduates had died, 5 women and 19 men. 21 of the 1980 and 1987 graduates had died. These are likely to have been among the first AIDS victims, as on the whole, there had not been adequate education on AIDS by that time (see Table A3.10).

A total of 28 university graduates are living outside the country. Of these 28, each cohort sent four graduates abroad, except for the 1987 cohort, from which 16 graduates had emigrated. Therefore at the time of the survey approximately 3 per cent of the university graduates were living outside Tanzania. Migration rates were 3-4 per cent for all cohorts except the 1987 cohort where 15 per cent of graduates were abroad at the time of the survey.

### **3.3 SECONDARY SCHOOL LEAVERS AND UNIVERSITY GRADUATES COMPARED**

A comparison of secondary school leavers with university graduates reveals some systematic differences in the employment activities each group engages in. Only 37 per cent of Form IV school leavers are in wage employment, compared to nearly 90 per cent of university graduates. Conversely, a much larger proportion of secondary school leavers are in self-employment compared to university graduates. It may be that secondary school leavers move into self-employment as a last resort, after having failed to secure wage employment. In addition, unemployment rates among secondary school leavers also appear to be much higher than among graduates. As expected, a larger proportion of secondary school leavers than graduates were also engaged in full-time education and training.

Among both school leavers and university graduates, women were more successful in securing wage employment than men, and men were more likely to be self-employed or unemployed than women.

## CHAPTER FOUR

### FURTHER EDUCATION AND TRAINING

This chapter addresses issues of further education and training (FET) among secondary school leavers and university graduates. These include: (i) educational attainment; (ii) the prevalence of additional training; (iii) the type of training undertaken; (iv) the relationship between academic performance and training; (v) public and private training provision; and (vi) overseas training.

#### **4.1 THE SECONDARY SCHOOL SAMPLE**

##### *4.1.1 Private tuition while at secondary school*

Table 4.1 shows the percentage of leavers who received private tuition while they were at secondary school. There was an increasing trend during the 1990s; nearly half of the 1995 secondary school leavers had private tutors compared to only one-third of the 1990 leavers. Urban school students use private tuition more than rural students, although this gap appears to have been narrowing over time.

**Table 4.1: Percentage of leavers receiving private tuition while at secondary school**

	1990			1995		
	Rural	Urban	Total	Rural	Urban	Total
Male	22	46	34	34	59	45
Female	16	47	33	39	54	48
Total	20	47	33	37	57	47

##### *4.1.2 The overall incidence of further education and training*

Table 4.2 shows that it is very common for secondary school leavers to pursue further education and training; 66 per cent of 1990 Form IV leavers had undertaken some form of additional training since leaving school. Among the 1995 cohort, 56 per cent of Form IV leavers had had some additional training. The slightly lower figures for the 1995 cohort probably reflects the fact that these leavers left school five years later and is supported by the higher proportion of Form IV leavers from the 1990 cohort with more than one period of training. Interestingly, a greater proportion of 1995 senior secondary leavers had received additional training compared to the earlier cohort of leavers. This suggests that additional training became more important during the nineties for this group. In terms of gender, Table 4.2 shows that women are more likely to pursue FET than men.

##### *4.1.3 Types of training*

The frequency with which certain types of training are undertaken signals the high demand for these courses. However, Table 4.2 does not give a sense of what types of further education and training are being pursued by these graduates. Table 4.3 shows the types of training undertaken by the 1990 and 1995 secondary school leavers.

**Table 4.2: Frequency of additional training for school leavers**

No. of courses taken	1990						1995					
	Male		Female		Total		Male		Female		Total	
	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%
<b>Form IV leavers</b>												
0	49	39	36	29	85	34	79	55	52	34	131	44
1	48	38	43	35	91	37	49	34	58	38	107	36
2	20	16	38	31	58	23	12	8	38	25	50	17
3	8	6	6	5	14	6	3	2	6	4	9	3
4	0	0	0	0	0	0	0	0	0	0	0	0
5	1	1	0	0	1	0	0	0	0	0	0	0
Total	126	100	123	100	249	100	143	100	154	100	297	100
<b>Senior secondary leavers</b>												
0	23	26	7	11	30	19	24	26	10	14	34	20
1	34	38	21	32	55	36	50	54	49	66	99	60
2	25	28	26	40	51	33	13	14	12	16	25	15
3	6	7	10	15	16	10	5	5	1	1	6	4
4	1	1	1	2	2	1	0	0	1	1	1	1
5	0	0	0	0	0	0	0	0	1	1	1	1
Total	89	100	65	100	154	100	92	100	74	100	166	100

Notes: "Additional training" refers to any training (full- or part-time) undertaken by leavers after leaving secondary school (i.e. it does not include senior secondary for senior secondary leavers). The table also includes current training activities and therefore includes studying at university for senior secondary leavers if they are currently full-time students.

For the 1990 Form IV leavers, the most popular training courses were computing, business and management, followed by military and technical/vocational. The 1995 cohort similarly favoured computer and business), but teaching and technical/vocational training replaced military training in popularity.

Among Form VI leavers, popular training courses for the 1990 cohort included military training, followed by computing and business), and health. The 1995 cohort were more likely to attend university, while computer studies and technical/vocational training remained popular. 1995 Form VI leavers also undertook training in secretarial skills.

#### 4.1.4 Public and private training provision

Table 4.4 shows that 488 training courses were undertaken in total by Form IV leavers. Public institutions provided 53 per cent of this training for the 1990 leavers but only 35 per cent of training for 1995 leavers. Therefore, the uptake of public training opportunities is much lower for the later cohort and is in line with government policy of increasing private and reducing public sector participation in further education and training. Private sector training centres accounted for over 70 per cent of FET undertaken by 1995 female leavers.

## 4.2 THE UNIVERSITY SAMPLE

Private tutoring was very rare among university graduates with only two per cent of the traced graduates stating that they had any private tutoring while studying for their first degrees. The survey also asked university graduates if they had pursued any other qualifications while at university. Again, only a small proportion (5 per cent) of graduates had pursued additional training while at university.

**Table 4.3: Further training undertaken by secondary school leavers (multiple responses,**

	1990				1995			
	Male		Female		Male		Female	
	no.	%	no.	%	no.	%	no.	%
<b>Form IV leavers</b>								
Teacher ed./service	17	16	20	12	7	8	12	11
Computer/business/management	27	24	36	26	23	27	53	35
Secretarial	1	1	14	11	1	1	20	13
Military/political	25	20	22	15	6	7	1	0
Health	5	5	13	10	3	5	14	10
Agriculture		1		0		0	2	2
Technical/vocational	13	12	10	6	20	25	7	5
Arts and culture/social science	3	3	6	3	1	2	5	2
Journalism	3	3		0		0	3	1
Transport	4	4	1	1	4	5		0
Other	19	13	15	14	17	19	35	20
Total	117	100	137	99	82	100	152	100
<b>Senior secondary leavers</b>								
University	4	0	4	1	35	29	26	36
Teacher ed./service	15	14	9	9	2	3	7	7
computer/business/management	24	23	39	37	26	38	24	30
Secretarial		1	5	4	1	1	5	5
Military/political	45	48	33	33	8	10	5	5
Health	5	4	8	7	2	0	2	1
Research							1	
Agriculture		0		0		0	1	1
Technical/vocational	4	4		0	6	11	4	4
Arts and culture/social science		0	2	2	1	3		0
Journalism		0	2	1		0	1	1
Other		5	5	6		6	9	7
Total	97	100	107	100	81	100	85	97

**full- and part-time)**

	1990						1995					
	Male		Female		Total		Male		Female		Total	
	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%
Public	65	56	70	51	135	53	38	46	44	29	82	35
Private	52	44	67	49	119	47	44	54	108	71	152	65
Total	117	100	137	100	254	100	82	100	152	100	234	100

**Table 4.4: Training by service providers, Form IV leavers (multiple responses, full- and part-time)****4.2.1 Proportion of university graduates with additional training**

Among the university graduates, 42 per cent of the 396 traced graduates had undergone additional training. Over 50 per cent of graduates from the 1980s have had additional training compared to less than 50 per cent of graduates in the nineties. However, this is likely to be due to the longer time between leaving university and the time of the survey for these earlier cohorts. In general, female graduates are

more likely to have had additional training than male graduates.

#### 4.2.2 Types of training

Table 4.6 shows that the training courses pursued were similar for the four cohorts across the five disciplines.

Table 4.6 shows that out of the five types of courses, postgraduate studies were most popular, representing 55 per cent of all training courses taken by university graduates. Many university graduates also take business, financial management and related courses because these are currently in great demand in the business world, and promote entrepreneurship more than conventional masters degrees, which are declining in popularity.

No. of courses taken	1980		1987		1994		1999		Total		
	no.	%	no.	%	no.	%	no.	%	no.	%	
<b>Male</b>											
0	39	52	25	40	46	60	72	78	182	59	
1	17	23	19	31	25	32	18	20	79	26	
2	10	13	12	19	4	5	2	2	28	9	
3	4	5	4	6	0	0	0	0	8	3	
4	3	4	1	2	0	0	0	0	4	1	
5	1	1	1	2	1	1	0	0	3	1	
6	1	1	0	0	1	1	0	0	2	1	
Total	75	100	62	100	77	100	92	100	306	100	
<b>Female</b>											
0	5	36	4	21	17	50	22	96	48	53	
1	7	50	11	58	13	38	1	4	32	36	
2	0	0	4	21	3	9	0	0	7	8	
3	1	7	0	0	1	3	0	0	2	2	
4	1	7	0	0	0	0	0	0	1	1	
5	0	0	0	0	0	0	0	0	0	0	
6	0	0	0	0	0	0	0	0	0	0	
Total	14	100	19	100	34	100	23	100	90	100	
<b>Total</b>											
0	44	49	29	36	63	57	94	82	230	58	
1	24	27	30	37	38	34	19	17	111	28	
2	10	11	16	20	7	6	2	2	35	9	
3	5	6	4	5	1	1	0	0	10	3	
4	4	4	1	1	0	0	0	0	5	1	
5	1	1	1	1	1	1	0	0	3	1	
6	1	1	0	0	1	1	0	0	2	1	
Total	89	100	81	100	111	100	115	100	396	100	

**Table 4.5: Frequency of additional training for university graduates**

	Agriculture		Commerce		Education		Engineering		Medicine		Total	
	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%
IT, business, finance and management	5	9	30	53	5	11	5	9	1	2	46	18
Postgraduate studies	45	80	15	26	24	55	24	44	33	72	141	55
Secondary school teaching	1	2	0	0	2	5	0	0	1	2	4	2
Technical education	1	2	3	5	1	2	7	13	0	0	12	5
Others	4	7	9	16	12	27	19	35	11	24	55	21
Total	56	100	57	100	44	100	55	100	46	100	258	100

**Table 4.6: Type of training by university discipline**

### 4.2.3 Overseas training

Overall 18 per cent of the traced graduates had been abroad for further education and training (see Table 4.7). While the female sample size is small, relatively more women graduates had been overseas for training than men. Whereas almost one-third of the 1980s graduates had been trained overseas, this figure was only 16 per cent for the 1994 graduates. While clearly the 1980s graduates had had more time to go overseas, the much lower incidence of overseas training among the 1994 cohort does suggest that it has become increasingly difficult for more recent graduates to benefit from overseas training opportunities. Certainly, overseas scholarships for postgraduate study have fallen markedly during the last decade.

	1980		1987		1994		1999		Total	
	no.	%	no.	%	no.	%	no.	%	no.	%
Male	21	28	19	31	11	14	1	1	52	17
Female	7	50	6	32	7	21	0	0	20	22
Total	28	31	25	31	18	16	1	1	72	18

**Table 4.7: Number and percentage of graduates who have trained abroad**

The main training destinations for these graduates are the UK, Kenya and the USA. Courses in other European countries (most notably Germany and Norway) are also quite common. Overseas training opportunities appear to be fairly equally distributed across the disciplines, although education and commerce graduates are least likely to go abroad for training.

### 4.2.4 Public and private training provision

Table 4.8 compares the amount of training provided by private and public institutions. For all cohorts, public providers offered twice as much training to graduates as private institutions.

	1980		1987		1994		1999		All cohorts	
	no.	%	no.	%	no.	%	no.	%	no.	%
Public	56	65	57	69	40	61	15	65	168	65
Private	30	35	26	31	26	39	8	35	90	35
Total	86	100	83	100	66	100	23	100	258	100

**Table 4.8: University graduate training by service provider**

Looking across the different degree programmes and annual cohorts, the breakdown of public and private sector provision does not vary significantly. The same trend towards the privatisation of FET as has been noted with respect to school leavers is therefore not apparent among university graduates.

## CHAPTER FIVE

# WAGE EMPLOYMENT

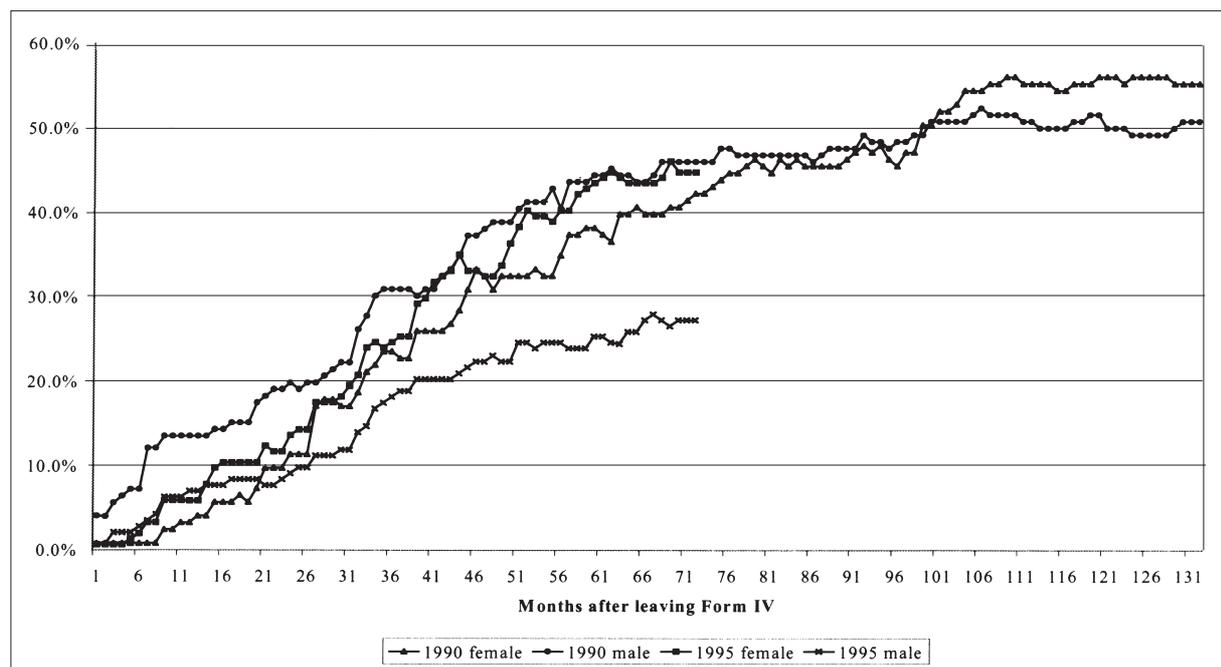
This chapter discusses in more detail the extent and nature of wage employment. The following topics will be covered: (i) wage employment by sector; (ii) wage employment by employer; (iii) the incidence of wage employment; (iv) part-time employment (“secondary activities”); (v) academic performance and wage employment; (vi) occupational profiles.

### 5.1 THE SECONDARY SCHOOL SAMPLE

#### 5.1.1 Wage employment profiles

Although the incidence of wage employment was a lot higher among the 1990 leavers, this could be because they had a lot longer than the 1995 leavers to get trained and look for employment. To take account of this Figure 5.1 compares the proportion of 1990 and 1995 Form IV leavers who were in wage employment at the same time since leaving school. Comparing 1995 male leavers with 1990 male leavers it is clear that the proportion of 1995 Form IV leavers in wage employment compared to 1990 leavers, after the same length of time since leaving school, has declined dramatically. For example, 5 years after leaving school 44 per cent of 1990 male leavers were in wage employment compared to only 25 per cent of 1995 leavers. For females there has been no such decline and perhaps a slight improvement. Therefore, it seems clear that wage employment opportunities for male Form IV leavers has declined dramatically over the nineties while similar opportunities for women have stayed relatively constant.

**Figure 5.1: Proportion of Form IV leavers in wage employment by months after leaving school**



### 5.1.2 Occupational Profiles

For expositional convenience, five main occupational categories were delineated: professionals, teachers, skilled non-manual, skilled manual and semi-unskilled occupations. Professional and skilled non-manual occupations were the most common occupations among Form IV leavers (see Table 5.1). The most noticeable difference between the two cohorts are (i) a much higher proportion of male 1995 leavers are in skilled manual and semi-unskilled jobs (31 per cent compared to 24 per cent among the 1990 cohort) whereas there was a much smaller percentage point increase for females (from 6 to 13 per cent); (ii) while 32 per cent of female and 20 per cent of male 1990 leavers were teachers, this was much lower among the 1995 cohort (13 per cent and 10 per cent respectively).

So there is some evidence to show that male secondary school leavers have been “filtering down” down into semi-unskilled occupations as it has become increasingly difficult to find wage employment. But only a small percentage of female leavers were in skilled manual and semi-unskilled employment. Economic reforms appear therefore to have impacted more on male school leavers than on females.

**Table 5.1: Secondary school leaver occupations**

	Male		1990 Female		Total		Male		1995 Female		Total	
	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%
<b>Form IV leaver</b>												
professionals	17	35	17	27	34	30	10	34	18	27	28	29
teachers	10	20	20	32	30	27	3	10	9	13	12	13
skilled non-manual	10	20	22	35	32	29	7	24	31	46	38	40
skilled manual	9	18	2	3	11	10	6	21	4	6	10	10
semi+unskilled	3	6	2	3	5	4	3	10	5	7	8	8
Total	49	100	63	100	112	100	29	100	67	100	96	100
Missing	15		6		21		9		2		11	
<b>Senior secondary leaver</b>												
professionals	12	29	22	52	34	41	2	20	9	45	11	37
teachers	6	15	6	14	12	14	1	10	5	25	6	20
skilled non-manual	16	39	11	26	27	33	5	50	6	30	11	37
skilled manual	5	12	2	5	7	8	1	10	0	0	1	3
semi+unskilled	2	5	1	2	3	4	1	10	0	0	1	3
Total	41	100	42	100	83	100	10	100	20	100	30	100
Missing	8		1		9		3		1		4	

The occupational profile for senior secondary school leavers is slightly different. As would be expected a much higher proportion of 1990 senior secondary leavers were in professional occupations compared to Form IV leavers. Far fewer 1990 senior secondary leavers were employed as teachers. While this is reversed for the 1995 cohorts, the small sample of senior secondary leavers warrants a cautious interpretation.

### 5.1.3 Wage employment by sector

Table A5.1 details wage employment by sector and shows that the most common economic sectors among terminal Form IV leavers are health and social work, education transport and trading. These four economic sectors accounted for approximately half of all wage employment amongst this group. Many

Form IV secondary school leavers are teachers and nurses. A similar pattern emerges for senior secondary leavers, although the transport sector absorbed a smaller share of this group, and finance a much larger share (see Table A5.1).

**Table 5.2: Wage employment by employer (per cent)<sup>3</sup>**

	1990						1995					
	Male		Female		Total		Male		Female		Total	
	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%
<b>Form IV leaver</b>												
Central Govt	11	17	14	20	25	19	8	22	3	4	11	10
Local Govt	9	14	18	26	27	20	4	11	7	10	11	10
Parastatal	9	14	5	7	14	11	3	8	3	4	6	6
Private company	35	55	32	46	67	50	22	59	56	81	78	74
Total	64	100	69	100	133	100	37	100	69	100	106	100
<b>Senior secondary leaver</b>												
Central Govt	12	24	6	14	18	20	3	23	1	5	4	12
Local Govt	4	8	2	5	6	7	1	8	1	5	2	6
Parastatal	7	14	4	9	11	12			1	5	1	3
Private company	26	53	31	72	57	62	9	69	17	85	26	79
Total	49	100	43	100	92	100	13	100	20	100	33	100

Table 5.2 shows that private enterprises were the main employers of Form IV leavers, although the incidence of private sector employment was only 50 per cent among 1990 leavers compared to 74 per cent among the 1995 cohort. Hardly any of the 1995 female Form IV leavers were employed in the public sector in mid-late 2001.

The incidence of private sector employment was even higher among the Form VI leavers. 62 per cent of the 1990 cohort and 79 per cent of the 1995 cohort worked in the private sector. Government employed 38 per cent of the 1990 cohort, with 20 per cent in central government, 7 per cent in local government and 12 per cent in parastatals. For the 1995 cohort, the government employment pattern was 12 per cent in central government, 6 per cent in parastatals and 3 per cent in local government.

There is no clear pattern in public and private sector employment between male and female junior secondary school leavers. However, male senior secondary leavers appear to be more concentrated in the public sector, particularly central government, compared to females.

#### 5.1.4 Secondary activities

Around 14 per cent of 1990 Form IV leavers and 10 per cent from 1995 had part-time jobs in order to supplement their incomes from their main wage employment.<sup>4</sup> Urban-based school leavers were more likely to undertake additional earning activities than those from rural-based schools. Table 5.3 details the percentage of secondary school leavers that undertake part-time wage and self-employment. It is clear from this table that for wage employees part-time self-employment is much more common than additional wage employment. In addition, female Form IV leavers are more likely to have a part-time job than male leavers.

<sup>3</sup> There are one 1995 male junior secondary and one 1995 female senior secondary leaver who were in wage employment but did not answer this question.

**Table 5.3: Secondary employment among secondary school leavers in wage employment**

	1990						1995					
	Male		Female		Total		Male		Female		Total	
	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%
<b>Form IV leaver</b>												
Part-time wage employment	2	3	4	6	6	5	0	0	1	1	1	1
Part-time self employment	8	13	11	16	19	14	1	3	10	14	11	10
<b>Senior secondary leaver</b>												
Part-time wage employment	1	2	1	2	2	2	1	8	1	5	2	6
Part-time self employment	2	4	1	2	3	3	1	8	1	5	2	6

These secondary activities were fairly varied, but farming and animal husbandry were the most common.

### 5.1.5 Academic performance and wage employment

Table A5.2 compares the School Certificate Examination results of all the Form IV leavers with those who were in wage employment. Surprisingly, the profile of examination results amongst leavers in wage employment is very similar to the sample as a whole, which suggests that performance in Form IV examinations did not have a strong positive impact on the chances of securing wage employment.

### 5.1.6 Location

A total of 81 per cent of 1990 and 77 per cent of 1995 school leavers resided in urban areas.

## 5.2 THE UNIVERSITY SAMPLE

### 5.2.1 Wage employment by sector

Table A5.4 shows the sectors where university graduates were employed. The education and health sectors were the largest employer, accounting for nearly one-half of all graduate employment, followed by agriculture (15 per cent), finance (10 per cent), and construction (9 per cent). No clear trends can be detected from the sectors in which successive cohorts are employed, although agriculture has absorbed fewer of the 1999 graduates than previous cohorts, while manufacturing, health and the NGO sector absorbed slightly more of the later cohorts (see Table A5.3). There are also few very noticeable gender differences, other than that the proportion of women graduates employed in the education sector was half that of men, and the proportion of women employed in administration, finance, and agriculture was slightly higher.

On the whole graduates worked in the sector relating to their discipline. For example, 95 per cent of medical graduates are working in the health sector (see Table A5.4). However agriculture and commerce graduates tend to be more widely spread across the economic sectors. Only 39 per cent of commerce graduates worked in the finance sector. It would appear that graduates of more interdisciplinary fields such as agriculture and commerce have higher labour mobility potential, as their skills make them more marketable across sectors.

<sup>4</sup> These percentages differ from the sum of part-time wage and self-employment in Table 5.3 as some individuals undertake both part-time wage and self-employment activities to supplement their main income.

**Table 5.4: University graduates' wage employment by employer (per cent)**

	1980	1987	1994	1999	Male	Female	Total
Central Government	41	38	30	28	34	33	34
Local Government		4	4	9	4	5	4
Parastatal	32	28	23	18	22	35	25
Private	28	30	43	45	40	27	37
Total	100	100	100	100	100	100	100

Table 5.4 indicates that most of the 353 university graduates interviewed were employed in the public sector. By cohort, the overall pattern is that a far greater proportion of 1980s graduates were government employees compared to more recent graduates. Within government employment, local government employed a slightly larger proportion of the more recent graduates. Male and female graduates tend to be employed in the same proportions by central and local government, but a higher proportion of women are employed by parastatals, and a higher proportion of men by the private sector.

By discipline, agriculture and education graduates were predominantly employed by central government or parastatals, while half of all graduates of commerce, 42 per cent of engineering and 38 per cent of medicine graduates were employed in the private sector (see Table A5.5).

### 5.2.2 Occupational profile of graduates

Table 5.5 shows that nearly all graduates from each cohort were in mainstream professional occupations or were teachers. Interestingly, a greater proportion of male graduates were teachers than females with 16 per cent of all male graduates in the teaching profession whereas relatively more female graduates were in skilled non-manual occupations.

**Table 5.5: Graduates' occupations (per cent)**

	1980		1987		1994		1999		Male		Female		Total	
	no.	%	no.	%	no.	%								
Professionals	63	81	64	84	88	85	65	71	209	79	71	84	280	80
Teachers	12	15	9	12	10	10	19	21	43	16	7	8	50	14
Skilled non-manual	3	4	3	4	5	5	6	7	10	4	7	8	17	5
Skilled manual	0	0	0	0	0	0	1	1	1	0	0	0	1	0
Total	78	100	76	100	103	100	91	100	263	100	85	100	348	100
Missing	2		0		1		2		3		2		5	

### 5.2.3 Secondary activities

Nearly 40 per cent of the graduates supplemented incomes with part-time employment activities (see Table 5.6). These secondary activities were more common amongst the earlier graduates, which is probably because it takes time before graduates can exploit secondary employment opportunities. Common secondary self-employment activities for graduates include farming, consultancy and teaching and lecturing. Part-time jobs were more common among male graduates.

**Table 5.6: Secondary employment among university graduates in wage employment (per cent)**

	1980	1987	1994	1999	Male	Female	Total
Part-time wage employment	11	12	12	6	11	9	10
Part-time self employment	31	37	29	18	31	21	28

#### 5.2.4 Migration to urban areas

Graduates were asked about their current workplace locations, to capture the extent to which university graduates work in rural or urban areas, bearing in mind that agriculture is the focus of the government's development thrust. Table A5.6 shows that three-quarters of graduates worked in urban areas. Not surprisingly, agriculture graduates were most likely to work in rural areas

### 5.3 WAGE EMPLOYMENT OF SECONDARY SCHOOL LEAVERS AND UNIVERSITY GRADUATES COMPARED

- A high proportion of school leavers and university graduate wage earners were employed in the social sector.
- For both groups, the proportions of women in wage employment were consistently higher than those for men.
- Wage employment by employer showed that greater proportions of secondary school leavers, especially those of the more recent cohort, were in private firms. Conversely for university graduates, the public sector was the main employer.
- While the private sector tends to offer more wage employment to school leavers than the public wage sector, it also employed more women than men, whereas the public sector employed men and women in roughly equal proportions. Among university graduates, the private sector employed a higher proportion of men than women.
- The single most common occupational category among junior secondary school leavers was the skilled non-manual category. By contrast, the single most common occupational category among university graduates was that of professional, including teaching.

## **CHAPTER SIX**

# **SELF-EMPLOYMENT**

As noted earlier, nearly 30 per cent of the terminal 1990 and 1995 Form IV leavers were self-employed in mid-late 2001. This chapter looks in more detail at (i) the incidence of self-employment among school leavers and graduates; (ii) the characteristics of the self-employed; (iii) self-employment activities; and (iv) the size of firms run by the self-employed.

### **6.1 THE SECONDARY SCHOOL SAMPLE**

#### *6.1.1 Main characteristics*

##### **Academic performance**

Table A6.1 compares the examination performance of the self-employed with that of the whole Form IV leaver sample and shows no major differences in performance between these two groups. As with wage employment, academic achievement at school does not therefore appear to affect the chances of leavers being self-employed. However, this does not necessarily mean that those with better performance are not more successful in self-employment.

##### **Self-employment activities**

Self-employment activities were much the same among the two groups of school leavers and between Form IV and Form VI leavers, although there were slight gender differences. Table 6.1 shows the main self-employment activities by cohort and gender. About half of self-employed women from both cohorts were in business, compared to approximately 72 per cent of men in each cohort. Unfortunately, “business” does not really give much indication of the type of business that these leavers were involved in and could include many different activities including some of the other activities listed in Table 6.1. Nearly a quarter of self-employed women were hairdressers and garment-makers. However, due to the large proportion of leavers reporting their activity as “business” these percentages can only be indicative.

##### **Size of self-employment firms**

Most self-employed school leavers employed very few additional workers. Only approximately 25 per cent of these leavers had more than three employees. Female enterprises had, on average, slightly more workers than those run by men (3.0 compared with 2.6).

##### **Secondary activities**

Only exceptionally did self-employed school leavers have other part-time employment activities (see Table 6.3).

**Table 6.1: Secondary school-leavers' self-employment activities**

	1990						1995					
	Male		Female		Total		Male		Female		Total	
	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%
<b>Form IV leaver</b>												
Selling provisions	3	6	2	9	5	7	3	5	1	4	4	5
Technician	5	10	0	0	5	7	2	3	0	0	2	2
Business	33	69	12	52	45	63	45	75	13	52	58	68
Storekeeper	1	2	1	4	2	3	1	2	1	4	2	2
Cooker	2	4	0	0	2	3	3	5	1	4	4	5
Driver	0	0	1	4	1	1	0	0	0	0	0	0
Tailor	2	4	4	17	6	8	0	0	3	12	3	4
Farmer	2	4	1	4	3	4	3	5	1	4	4	5
Sports	0	0	0	0	0	0	1	2	1	4	2	2
Hair dresser	0	0	2	9	2	3	2	3	4	16	6	7
Total	48	100	23	100	71	100	60	100	25	100	85	100
Missing	1	0	0	0	1	0	2	0	0	0	2	0
<b>Senior secondary leaver</b>												
Selling provisions	1	3	1	9	2	5	0	0	0	0	0	0
Technician	0	0	1	9	1	2	0	0	0	0	0	0
Business	24	80	7	64	31	76	11	100	2	40	13	81
Storekeeper	0	0	0	0	0	0	0	0	1	20	1	6
Cooker	1	3	0	0	1	2	0	0	0	0	0	0
Driver	1	3	0	0	1	2	0	0	0	0	0	0
Tailor	1	3	0	0	1	2	0	0	0	0	0	0
Farmer	1	3	1	9	2	5	0	0	0	0	0	0
Sports	0	0	1	9	1	2	0	0	0	0	0	0
Hair dresser	1	3	0	0	1	2	0	0	2	40	2	13
Total	30	100	11	100	41	100	11	100	5	100	16	100
Missing	0		1		1							

**Table 6.2: Number of employees of self-employed secondary school leavers<sup>5</sup>**

	1990						1995					
	Male		Female		Total		Male		Female		Total	
	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%
No employees	7	9	5	14	12	11	7	10	4	14	11	11
Between 1 and 3	50	64	18	51	68	60	53	75	18	62	71	71
Greater than 3	21	27	12	34	33	29	11	15	7	24	18	18
Total	78	100	35	100	113	100	71	100	29	100	100	100

**Table 6.3: Secondary employment among secondary school leavers in self-employment<sup>6</sup>**

	1990						1995					
	Male		Female		Total		Male		Female		Total	
	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%
<b>Form IV leaver</b>												
Additional self employment	3	6	1	4	4	6	3	5	1	4	4	5
<b>Senior secondary leaver</b>												
Additional self employment	1	3	1	8	2	5	1	9	1	20	2	13

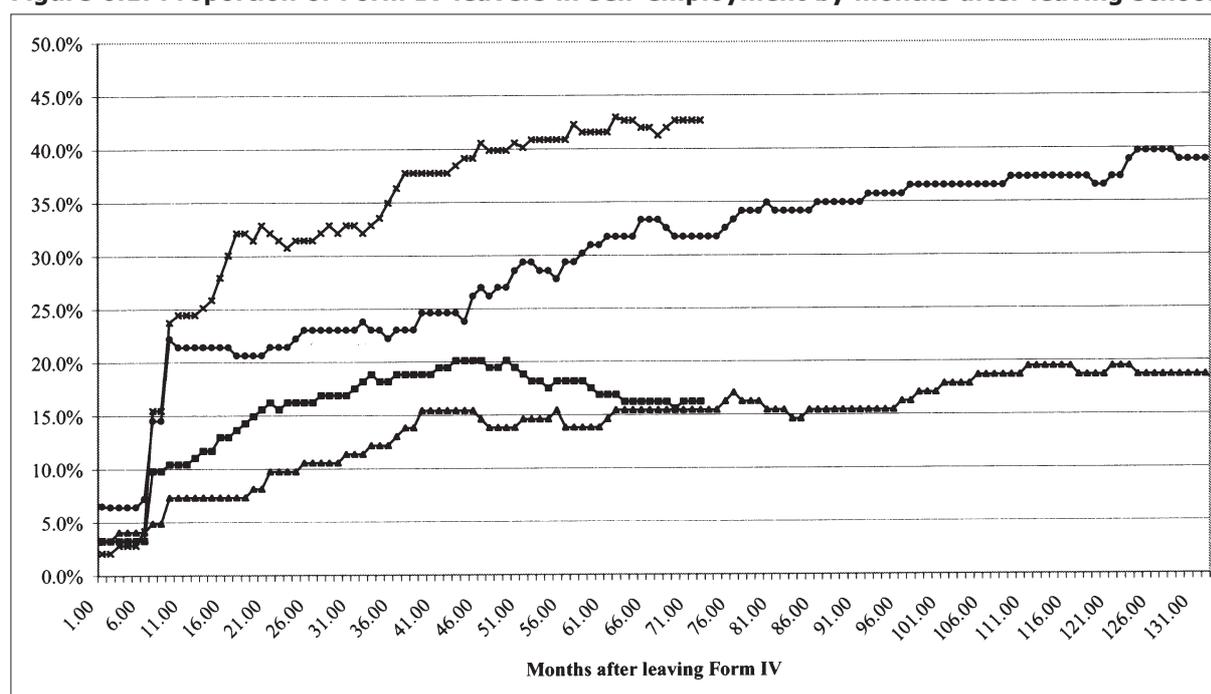
<sup>5</sup> 1 male 1990 leaver, 1 female and 2 male 1995 self-employed leavers did not answer this question.

<sup>6</sup> 2 1995 leavers did not answer the question on secondary activities.

## Trends

Figure 6.1 compares the incidence of self-employment among 1990 and 1995 Form IV leavers over time. Not only was self-employment far more common among male leavers, but six years after leaving school, 43 per cent of the 1995 male leavers were self-employed compared to only 32 per cent among the 1990 males after the same period. For females, on the other hand, the incidence of self-employment was almost the same six years after they had left school. Therefore, the importance of self-employment for male Form IV leavers increased dramatically over the nineties, but stayed largely unchanged for female leavers.

**Figure 6.1: Proportion of Form IV leavers in self-employment by months after leaving school**



## 6.2 THE UNIVERSITY SAMPLE

### 6.2.1 Main characteristics

Only 24 (6 per cent) of the 396 university graduates interviewed were self-employed. Nearly 10 per cent of the 1980 cohort were self-employed compared to only 4–6 per cent within the three more recent cohorts. Only four female graduates were self-employed. Most of the self-employed were graduates in commerce, engineering and education.

With such small numbers, it is difficult to reach any firm conclusions about self-employment among university graduates. In terms of activities, the self-employed agriculture graduates were mainly in agro-processing, while all other groups were involved primarily in various forms of business activities. Each self-employed graduate had, on average, six employees. The largest enterprise, which was a school, had forty staff.

### **6.3 SELF-EMPLOYMENT OF SECONDARY SCHOOL LEAVERS AND UNIVERSITY GRADUATES COMPARED**

- About 28 per cent of secondary school leavers from both cohorts were self-employed, as compared to only 6 per cent of university graduates. Among both groups, self-employment tends to be a predominantly male activity.
- For both university graduates and secondary school leavers, self-employment is more common among the more recent cohorts.
- For both university graduates and secondary school leavers, self-employment tends to involve small businesses, employing on average between zero and six employees.

## CHAPTER SEVEN

# UNEMPLOYMENT

This chapter discusses in more detail the main characteristics of the unemployed among school leavers and graduates. Defining and identifying is notoriously difficult, especially in the developing country context. This study focuses on leavers and graduates who were out of work, but who were actively looking for employment.

### 7.1 THE SECONDARY SCHOOL SAMPLE

Table 7.1 reports the reasons given for their current status by leavers who were unemployed and looking for work. Most secondary school leavers identified the limited number of job opportunities as the key factor. Some also felt they lacked the qualifications needed to secure wage employment. This explains why so many have pursued further education and training.

**Table 7.1: Reasons given by secondary school leavers for their inability to find employment (per cent)<sup>7</sup>**

	1990						1995					
	Male		Female		Total		Male		Female		Total	
	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%
Lack of job opportunity	7	100	3	33	10	63	29	76	14	74	43	75
Lack of professional qualifications	0	0	5	56	5	31	6	16	5	26	11	19
Lack of connections	0	0	1	11	1	6	3	8	0	0	3	5
Total	7	100	9	100	16	100	38	100	19	100	57	100
Missing	1		0		1		1		2		3	

What kind of academic performance did unemployed Form IV leavers have compared to all Form IV leavers? Surprisingly, a very high proportion of Form IV leavers who were unemployed and looking for work had relatively good Form IV examination results (see Table A7.1). Approximately 70 per cent had Division I passes compared to only 1–2 per cent among the school leaver sample as a whole. This may reflect the fact that leavers with good examination performance are more mobile and hence are more frequently unemployed or, alternatively, these leavers may be holding out for a good job. Excluding individuals who were in full-time training, very few of the school leavers who were not in the labour force did particularly well in the Form IV examination and they did much worse than the Form IV leaver sample as a whole – 80 per cent of this group among the 1990 leavers either failed or had only a Division IV pass compared to 64 per cent for the entire sample.

<sup>7</sup> The table aggregates Form IV and Form VI leavers.

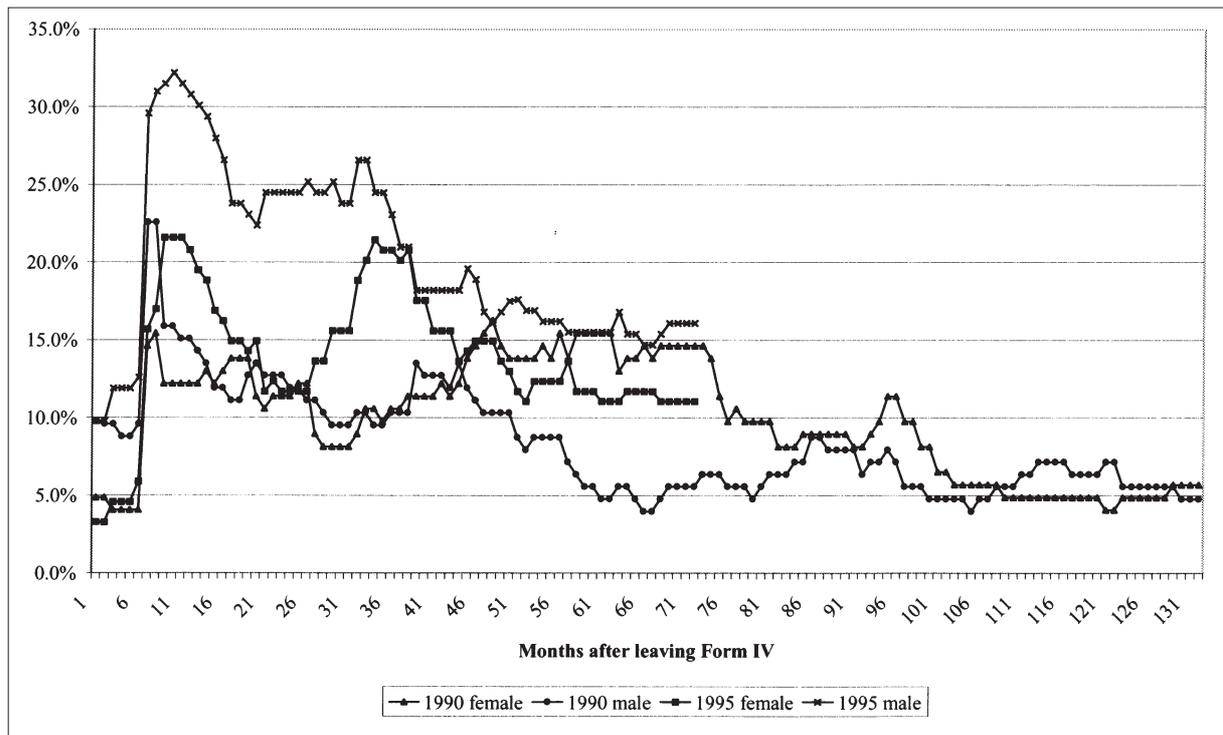
**Table 7.2: Percentage of secondary school leavers who have ever been unemployed and looking for work**

	1990						1995					
	Male		Female		Total		Male		Female		Total	
	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%
Form IV leaver	56	44	66	54	122	49	84	59	82	53	166	56
Form VI leaver	52	58	41	63	93	60	41	45	24	32	65	39

Around a half of all Form IV leavers had been unemployed at least once since leaving school. Surprisingly, a slightly higher proportion of the 1995 cohort have had some unemployment experience, which clearly shows that finding employment became increasingly difficult during the 1990s. As expected, the incidence of ever having been unemployed was much lower among Form VI leavers. The smaller figure for the 1995 group is probably due to the fact that a relatively large number were still in full-time education and training and had not, therefore, effectively joined the labour market.

Figure 7.1 shows the proportion of 1990 and 1995 Form IV leavers who were unemployed and looking for work after the same length of time since leaving school. It can be observed that the incidence of unemployment among the male 1995 leavers was much higher than for the male 1990 groups. However, among female leavers, there is no clear-cut trend. Unemployment rates for 1995 leavers were higher during the first four years after leaving school, but thereafter unemployment rates for the 1990 group were higher.

**Figure 7.1: Proportion of Form IV leavers unemployed and looking for work by months after leaving school**



## 7.2 THE UNIVERSITY SAMPLE

Only six out of a total of 451 graduates were unemployed in mid-late 2001. Not one female graduate was unemployed.

Table 7.3 presents ever unemployed rates for graduates. With the exception of the 1987 cohort, well over one-third of graduates had been unemployed at least once since leaving university. Again, it is clear that more recent graduates have found it a lot harder to find employment.

**Table 7.3: Ever unemployed (and looking for work) rates among university graduates**

1980		1987		1994		1999		Male		Female		Total	
no.	%	no.	%	no.	%								
40	45	23	28	36	32	50	43	119	39	30	33	149	38

## CHAPTER EIGHT

# INCOME

The incomes earned by school leavers and university graduates is a crucially important aspect of the employment outcomes of these relatively costly types of education. This chapter analyses income levels by type of employment activity, the relationship between examination performance and income, the relative importance of secondary income sources, and the size of public/private income differentials.

### **8.1 THE SECONDARY SCHOOL SAMPLE**

#### *8.1.1 Income by type of activity*

Income levels of school leavers are examined by comparing their incomes at the time of the survey in mid-late 2001.<sup>8</sup> Table 8.1 reports total incomes from their main employment as well their secondary employment activity. Not surprisingly, the average incomes of the more experienced 1990 cohort of school leavers were higher than the 1995 group. Similarly, most of the better-educated, Form VI leavers who were in wage employment earned more than Form IV leavers from the same cohort. The mean income differential between these two groups was around 50 per cent among the 1990 leavers, but only 16 per cent for the 1995 cohort. The gender gap in income was in favour of men for the 1990 cohort, but female 1995 leavers earned more than male leavers, regardless of whether they were in wage or self-employment.

Table 8.1 also shows that incomes from self-employment were generally lower than wage employment incomes. Income from self-employment among the 1990 Form IV cohort averaged TSh 70,476 compared to TSh 113,816 from wage employment. For the 1995 cohort, these figures are TSh 48,875 and TSh 91,466 respectively. Thus, mean incomes from wage employment were almost double those from self-employment. It is also interesting to note that the average incomes earned by self-employed senior secondary leavers were, with one exception, less than self-employed Form IV leavers.

#### *8.1.2 Examination performance and earnings*

If examination performance is a good proxy measure for ability, one would expect to find a strong positive relationship between examination performance and income. In fact, however, this relationship appears to be negative among school leavers in wage employment (see Table A8.1).

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<sup>8</sup> Respondents were asked to select a range in which their income fell and the midpoint of these intervals were used to produce average incomes reported in this chapter. The intervals were very small and some individuals reported their actual incomes. While the tables report monthly income, respondents who were engaged in self-employment were asked their income over the last six months.

**Table 8.1: Total monthly income by employment activity for secondary school leavers (TSh)**

	1990			1995		
	Male	Female	Total	Male	Female	Total
<b>Form IV leaver</b>						
Wage employment	118,815	109,179	113,816	89,815	92,341	91,466
n	64	69	133	38	69	107
Self-employment	76,507	58,152	70,476	43,715	54,333	46,875
n	49	23	72	62	25	87
<b>Senior secondary leaver</b>						
Wage employment	168,617	163,958	166,475	100,641	110,000	106,313
n	49	43	92	13	21	34
Self-employment	55,556	44,792	52,480	39,773	67,500	48,438
n	30	12	42	11	5	16

### 8.1.3 Secondary income

As discussed earlier, a significant proportion of secondary school leavers undertake part-time employment activities in order to supplement their incomes. Table 8.2 shows that this secondary income accounts for one-quarter of total earnings among 1990 Form IV leavers and well over one-third of total earnings among the 1995 cohort. The corresponding percentages for Form VI leavers are 43 per cent and 22 per cent respectively.

**Table 8.2: Secondary incomes of secondary school leavers (% of total income)<sup>9</sup>**

	1990			1995		
	Male	Female	Total	Male	Female	Total
<b>Form IV leaver</b>	28	24	26	37	37	37
n	113	92	205	100	94	194
<b>Form VI leaver</b>	41	50	43	19	24	22
n	79	55	134	24	26	50

There does not appear to be any major gender difference in the importance of secondary incomes for Form IV leavers although secondary income represents a greater proportion of total income for female Form VI leavers. Form VI 1990 leavers seem to be very dependent on additional sources of income. For women in this group half of total income is earned from secondary sources.

### 8.1.4 Public/private sector incomes

Table 8.3 shows that the mean incomes of 1990s males employed in the private sector were considerably higher than in the public sector. This differential also exists among the 1995 male cohorts, but it was considerably less. Among female school leavers, mean incomes tended to be higher in the public sector. What is more, the mean incomes of female public sector workers were higher than males employed in the public sector. Thus, it appears that wage discrimination against women is concentrated in the private sector.

<sup>9</sup> This table includes leavers in both wage and self-employment.

**Table 8.3: Monthly wage income by public and private sector**

	1990			1995		
	Male	Female	Total	Male	Female	Total
<b>Form IV leavers</b>						
Public	87,069	97,297	92,803	85,714	98,077	91,667
Private	131,429	114,063	123,134	88,636	81,364	83,442
Total	111,328	105,072	108,083	87,500	84,559	85,577
<b>Form VI leavers</b>						
Public	108,333	179,167	134,091	62,500	141,667	96,429
Private	205,769	157,143	180,556	116,667	101,471	106,731
Total	162,234	163,750	162,931	100,000	107,500	104,545

### 8.1.5 Target incomes

Secondary leavers were asked to estimate what their minimum, survival incomes would need to be in order to meet basic needs. Among Form IV leavers, target survival income ranged from TSh 190,000 to TSh 285,000 per month. Mean incomes from wage employment were 71–92 per cent of mean survival incomes. However, among the self-employed, their mean earnings were only 30–42 per cent of survival income. A similar pattern for Form VI leavers emerges, although mean earnings of those in wage employment, in most cases, covered or exceeded target income.

**Table 8.4: Monthly target income and total income as a proportion of target income**

	1990			1995		
	Male	Female	Total	Male	Female	Total
<b>Form IV leavers</b>						
Wage employment	200,794	211,563	206,220	213,368	189,712	198,356
%	92	81	87	75	68	71
Self-employment	283,478	266,761	277,906	238,814	252,609	242,683
%	37	42	39	38	30	36
<b>Form VI leavers</b>						
Wage employment	258,217	232,384	246,531	461,273	178,889	286,000
%	104	93	99	54	126	98
Self-employment	248,276	279,818	256,950	230,455	143,000	203,125
%	37	32	35	19	45	27

## 8.2 THE UNIVERSITY SAMPLE

### 8.2.1 Income by type of activity

Total current income of university graduates from all employment activities (both primary and secondary activities) is presented in Table 8.5. Overall, graduates in wage employment from the 1980 cohort had the highest total income. Total average income for the 1980 graduates was almost double total earnings for the 1999 cohort. This is perhaps not surprising given the positive correlation between experience and earnings. Male university graduates in wage employment tended to earn more than women. For the sample as a whole, men earned approximately 30 per cent more than women, although there is some variation across the cohorts. The gender gap appears to be widest for the 1980 cohort and smallest for the 1999 cohort.

Since there were so few self-employed graduates, the reported self-employment incomes presented in Table 8.5 should be treated cautiously. However, it appears that labour market experience had no specific pay-off in self-employment. Total mean incomes for those in self-employment tends to be around TSh 150,000, substantially less than graduates in wage employment.

Table A8.2 reports average total incomes for university graduates by discipline. For those in wage employment, engineering and commerce graduates had the highest incomes of around TSh 350,000 per month and education graduates had the lowest incomes (TSh 225,000).

**Table 8.5: Total monthly income by employment activity for university graduates (TSh)**

		1980	1987	1994	1999	Total
<b>Wage employment</b>						
	Male	398,321	336,257	310,417	194,167	307,503
	n	67	57	72	70	266
	Female	244,097	331,360	234,635	171,920	240,552
	n	13	19	32	23	87
	Total	374,895	335,033	287,099	188,665	291,146
	n	80	76	104	93	353
<b>Self-employment</b>						
	Male	144,048	164,167	110,417	144,167	142,460
	n	7	5	4	5	21
	Female	170,833	-	250,000	-	223,611
	n	1	-	2	-	3
	Total	147,396	164,167	156,944	144,167	152,604
	n	8	5	6	5	24

### 8.2.2 Graduate performance and earnings

There is a negative relationship between total income and class of degree (see Table A8.3). In other words, graduates with only pass degrees had higher average incomes than graduates with first and second class degrees, regardless of the year they left university. This may be because employers do not take much interest in the academic performance of graduates during the recruitment process for the simple reason that better than average academic performance is not itself strongly linked to superior performance in the workplace. Employers look for many other attributes other than just intellectual achievement, in particular commitment, sound judgement, willingness to learn on the job, demeanour, inter-personal relationships, etc.

### 8.2.3 Secondary income

Approximately one-quarter of graduates' total income was from part-time jobs of one sort or another. Secondary income as a percentage of total income is higher among more recent graduates. This may be reflecting that early on in a graduate's career it is more necessary to supplement their wage income with secondary sources, but as they gain experience this is increasingly unnecessary. Generally, secondary income is relatively more important among female graduates. On average, around one-third of their total income came from these activities.

**Table 8.6: Secondary income as a percentage of total income for university graduates in wage and self-employment**

	1980	1987	1994	1999	Total
Male	19	24	22	26	23
n	74	62	76	75	287
Female	12	30	38	36	32
n	14	19	34	23	90
Total	19	25	26	28	24
n	88	81	110	98	377

The importance of secondary income varied slightly between faculties. It is most important for agriculture graduates (33 per cent of total income) compared to only 19 per cent of total income among education graduates (see Table A8.4). However, 50 per cent of the total income of female education graduates is from secondary activities.

#### 8.2.4 Public/private sector incomes

Private sector incomes averaged TSh 307,558 in the private sector compared to TSh 246,904 in the public sector. The size of this differential is largest among the most recent graduates. There is surprisingly little difference between the mean incomes of 1980 and 1994 graduates employed in the private sector, even though the former group graduated fifteen years earlier.

**Table 8.7: Monthly wage income by public and private sector for university graduates<sup>10</sup>**

	1980	1987	1994	1999	Total
Public	344,091	275,000	208,051	157,843	246,904
n	55	53	59	51	218
Private	355,952	379,348	340,909	206,707	307,558
n	21	23	44	41	129
Total	347,468	306,579	262,981	178,495	269,034
n	76	76	103	92	347

#### 8.2.5 Target incomes

The mean target survival income was estimated by graduates themselves to be around TSh 500,000 per month. This means that even 1980 graduates employed in the public sector only earned around two-thirds of their survival income.

Female graduates tend to cover less of their target income with their current employment activities than men. Approximately two-thirds of females' target income is covered by current income compared to 88 per cent for men. There does not appear to be much variation across cohorts apart from the 1980 cohort.

<sup>10</sup> Six graduates in wage employment did not answer this question and therefore the total mean income figures do not match those shown in Table 8.5.

**Table 8.8: Monthly target income and total income as a proportion of target income for graduate wage employees**

	1980	1987	1994	1999	Total
Male	626,780	497,736	511,479	369,130	499,634
%	106	81	82	83	88
Female	293,077	746,176	573,226	396,818	518,012
%	94	68	58	61	66
Total	571,162	558,071	530,245	375,824	504,108
%	104	78	75	78	83

### **8.3 SECONDARY SCHOOL LEAVERS AND UNIVERSITY GRADUATES COMPARED**

University graduates earned, on average, three times as much as secondary school leavers in wage employment. Secondary income is more important to secondary school leavers than university graduates, constituting 20 to 40 per cent of the total income of secondary school leavers, as compared to 24 per cent of that of university graduates.

## CHAPTER NINE

# CONCLUSION AND POLICY IMPLICATIONS

This final chapter presents the opinions of the secondary school and university leavers concerning the strengths and weaknesses of their education. In addition to the detailed information that has been obtained on employment and other outcomes, this provides the basis for a set of policy recommendations about what should be done to improve the cost-effectiveness, quality and relevance of both secondary and university education in Tanzania.

### 9.1 THE SECONDARY SCHOOL SAMPLE

#### 9.1.1 Perceived strengths and weaknesses

Secondary school leavers were asked what they thought were the three main strengths and weaknesses of their secondary education. Table 9.1 lists the five most common responses and also gives an indication of the many other responses that were given by secondary school leavers. With regard to strengths, the overall ranking was as follows: teacher competence (32 per cent of all responses), sound administration (17 per cent), and the provision of food at school (7 per cent). Interestingly, there does not appear to be many differences across the cohorts of leavers in their perceptions of the strengths of their secondary schooling.

**Table 9.1: Strengths and weaknesses of secondary school leavers' secondary schooling**

	1990						1995					
	Male		Female		Total		Male		Female		Total	
	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%
<b>STRENGTHS</b>												
Competent teachers	139	29	134	35	273	31	137	31	153	36	290	33
Good administration	86	18	76	20	162	19	81	18	59	14	140	16
Provision of food	34	7	41	11	75	9	30	7	18	4	48	6
Good environment	23	5	10	3	33	4	17	4	18	4	35	4
Student cooperation	22	5	21	5	43	5	32	7	21	5	53	6
Others	178	37	105	27	283	33	145	33	158	37	303	35
Total	482	100	387	100	869	100	442	100	427	100	869	100
<b>WEAKNESSES</b>												
Incompetent teachers	74	20	38	12	112	17	58	17	47	14	105	15
Lack of textbooks and other inputs	65	18	71	23	136	20	79	23	53	16	132	19
Poor or lack of school facilities	38	10	23	7	61	9	46	13	31	9	77	11
Lack of teachers	19	5	14	5	33	5	17	5	11	3	28	4
Too much punishment	13	4	23	7	36	5	14	4	15	4	29	4
Others	153	42	138	45	291	43	137	39	178	53	315	46
Total	362	100	307	100	669	100	351	100	335	100	686	100

The five most frequently mentioned weaknesses were as follows: lack of textbooks and other materials (20 per cent of responses), teacher incompetence (16 per cent), poor facilities (10 per cent), teacher shortages (5 per cent), and too much punishment (5 per cent). It should be noted, however, that there were many other responses to these questions.

### 9.1.2 Satisfaction ratings

The Form IV graduates were given eleven statements against which they had to rate their level of satisfaction with the theoretical, practical, verbal, written and other skills imparted to them, as well as with the curriculum, including issues on information technology, teacher competence, adequacy and commitment. Table A9.1 reports the detailed responses to these statements. The overall level of satisfaction was relatively high. Over 80 per cent of 1990 leavers and 70 per cent of 1995 leavers agreed or strongly agreed with the statement that their secondary education had been a good preparation for their working life.

### 9.1.3 Recommendations

Using multiple responses, the Form IV graduates gave 28 different recommendations for how secondary education could be improved. The six most frequently mentioned recommendations are given in Table 9.2. These include: greater emphasis on practical learning (13 per cent); improvements in information technology (10 per cent); an increase in teacher and student initiatives (9 per cent); and syllabus review (7 per cent). Less frequently mentioned recommendations included improving the competence and remuneration of teachers.

**Table 9.2: Secondary school leaver recommendations for improving secondary education**

	1990						1995					
	Male		Female		Total		Male		Female		Total	
	no.	%										
Emphasis on practical work	60	13	43	11	103	12	61	14	53	12	114	13
Increase teacher-student initiatives	49	11	31	8	80	10	31	7	38	9	69	8
Review syllabus	45	10	23	6	68	8	34	8	27	6	61	7
Improve remuneration of teachers	43	9	39	10	82	10	35	8	37	9	72	8
Provide information technology courses	36	8	45	12	81	10	46	11	48	11	94	11
Increase number of competent teachers	44	10	38	10	82	10	46	11	48	11	94	11
Other	177	39	162	43	339	41	177	41	174	41	351	41
<b>Total</b>	<b>454</b>	<b>100</b>	<b>381</b>	<b>100</b>	<b>835</b>	<b>100</b>	<b>430</b>	<b>100</b>	<b>425</b>	<b>100</b>	<b>855</b>	<b>100</b>

## 9.2 THE UNIVERSITY SAMPLE

### 9.2.1 Perceived strengths and weaknesses

Table 9.3 shows the five most frequently cited strengths of university education. Top of the list was committed lecturers. Good facilities for practicals was a common response among all graduates.

With regard to weaknesses, inadequate facilities were the most frequently mentioned problems followed by incompetent and uncommitted lecturers, lack of textbooks, and poor subsistence allowances. Poor facilities were cited more frequently among the 1990s graduates.

**Table 9.3: Strengths and weaknesses of university education**

	1980		1987		1994		1999		Total	
	no.	%	no.	%	no.	%	no.	%	no.	%
<b>STRENGTHS</b>										
Committed lecturers	52	28	32	21	43	23	38	22	165	24
Sufficient materials	22	12	13	9	11	6	6	4	52	8
Student cooperation	8	4	3	2	12	6	5	3	28	4
Good facilities for practicals	7	4	15	10	20	11	16	9	58	8
Developed various skills	4	2	8	5	10	5	21	12	43	6
Other	96	51	78	52	89	48	84	49	347	50
Total	189	100	149	100	185	100	170	100	693	100
<b>WEAKNESSES</b>										
Poor or lack of facilities	13	11	14	13	21	13	51	31	99	18
Incompetent teachers	10	8	11	10	16	10	12	7	49	9
Lack of information technology courses	7	6	5	5	9	6	8	5	29	5
Lack of textbooks and other inputs	1	1	9	8	8	5	14	9	32	6
Subsistence allowance not enough	3	2	3	3	6	4	11	7	23	4
Other	88	72	64	60	101	63	68	41	321	58
Total	122	100	106	100	161	100	164	100	553	100

### 9.2.2 Satisfaction ratings

Table A9.2 summarises the satisfaction ratings of university graduates with respect to the 11 statements. They generally displayed a higher level of satisfaction than the Form IV school leavers. The vast majority of graduates said they were satisfied with their university education overall. However, for certain items like provision of information technology and managerial skills, satisfaction levels were much lower.

### 9.2.3 Recommendations

Table 9.4 summarises the most common responses of graduates about what they think should be done to improve university education. Increased funding and improving the quality and quantity of secondary education top the list. Increasing practical work at the expense of theory was also seen to be important as well as improving both the quantity and quality of lecturers.

**Table 9.4: Graduates' recommendations for improving university education**

	1980		1987		1994		1999		Total	
	no.	%	no.	%	no.	%	no.	%	no.	%
Increase university budget	27	15	13	8	15	8	24	12	79	11
More and better secondary school education	15	8	14	9	21	11	19	10	69	9
Emphasise practical work	20	11	13	8	25	13	9	5	67	9
Increase competent lecturers	13	7	17	11	16	8	14	7	60	8
Increase lecturers	10	5	11	7	17	9	10	5	48	6
Review syllabus	12	6	9	6	10	5	12	6	43	6
Other	89	48	80	51	94	47	112	56	375	51
Total	186	100	157	100	198	100	200	100	741	100

## 9.3 KEY POLICY ISSUES

The tracer surveys have shown that wage employment rates for the more recent cohorts of Tanzanian graduates are lower than those for graduates who left university in the 1980s. Far fewer Form IV leavers had found wage employment and a sizeable proportion were self-employed, but they do so very much

as a last resort. Whereas about 10–15 per cent of the school leavers were unemployed, hardly any of the graduates were out of work.

Employment conditions and life in general for the school output have worsened over time, to the detriment of the younger school/college generation. Similarly, among the four university cohorts, those who have suffered from inefficiency of the policy regime and education system tend to be the more recent cohorts, from 1994 and 1999.

The disadvantaged secondary school groups usually under-perform and, because of that, a greater proportion do not go on to Form V. The Form IV school leavers tend to have slightly poorer outcomes than Form VI leavers but only slightly.

The remaining sections of this chapter deal with specific recommendations for different stakeholders.

### **9.3.1 *The Ministries of Education***

#### **Enhancement of intra-sectoral relationship**

The respondents pointed out that their school curriculum lacked critical inputs. These ranged from analytical and problem-solving skills, entrepreneurship education, information and technology-related competencies, to foreign languages. Such skills merit special consideration in the curriculum process. They are particularly important in so far as they would facilitate self-employment on the part of the school output. Entrepreneurship education, for example, would enable graduates to plan and apply what they have studied in school. Oral and written English would enable graduates to communicate more widely, and effectively extend their business circles internationally.

The Ministry of Education and Culture, in collaboration with various institutions, especially the Institute of Education and The Vocational Education and Training Authority (VETA), needs to plan for drastic curricular change and the anticipated implementation process. The current Sectoral Programme approach, which tends to bring together the two Ministries of Education, should minimise duplication in education investments. The issue should also be to see how the education sector initiatives can intra-sectorally boost each other. For example, secondary school expansion should be related to the demand for university graduate teachers, whose competence can in turn enhance the quality of future university entrants. This will call for rigorous consultation between the university and teacher training college authorities and school authorities to agree on the expectations for each party.

#### **Resourcing the education sector**

School and university graduates alike emphasise laboratory equipment and practical work, and university graduates complained of too much theory. The implication of this suggestion is increased financial resources. The issue here should not be the traditional dependency on Central Government resources. The idea of establishing an education tax, for example, needs to be streamlined, especially in terms of implementation, so that the revenues reach the targeted beneficiaries. But in order that the education tax system becomes effective, schools will have to be precise in what they seek to do annually so that resource wastage is minimised.

## **Career guidance and the grooming of students for self-employment**

Students at secondary school level, in particular, need to be guided in terms of the employment opportunities available to them. More importantly, they need to be constantly educated on the kind of subjects they have to study in order to qualify for a specific line of work. This should help them prepare themselves accordingly for the labour market. Career teachers therefore need to go beyond confining their attention to the “finalists” who usually get advised on appropriate further education combinations. The guiding role should start with Form I secondary school entrants who should be educated from the outset on how to maximise their future chances for further education, training and employment. Career tutors should maintain data on the various employment opportunities available within and beyond the country, and the required qualifications. They should thus act as co-ordinators between employing agencies and schools.

In addition, career guidance specialists at both levels should clarify to students from time to time the prevailing macro and sectoral policies on employment. For example, the thrust on self-employment as part of a government policy needs to be well understood and appreciated by all students. As we have seen, graduates venture into self-employment as their last resort since, while at school, they expect to secure wage employment in the public sector. They have therefore to understand that self-employment is probably the best alternative for earning a living and so they need to think how they can best prepare themselves for it.

### **School-based tracer studies**

Currently the University of Dar es Salaam is due to embark on a faculty-wide tracing of their graduates – a long overdue move. For public secondary schools, tracing their graduates would be a novelty although some private schools have been attempting this. What is required now is for all schools and faculties to keep track of their graduates in terms of knowing where they are, what they are doing and how they can be helped. Career guidance specialists will have to regard tracing their alumni as one of their essential duties. After all, such studies should help schools get feedback on the usability of skills and knowledge imparted to their students and in the process, identify gaps and areas for change and reform.

### ***9.3.2 The role of the Ministry of Community Development, Gender and Children’s Affairs***

It has been seen almost throughout this report that females are under-represented in terms of enrolment, particularly at the university level. In institutions of higher learning this disadvantaged group hardly constitutes one-quarter of social science students and less than one-eighth of hard sciences and mathematics enrolment. Furthermore, when compared with males, females under-perform in school and this may have implications for further education and training opportunities as well as employment.

The Ministry in charge of Gender and Community Development, in collaboration with the Education Ministries, will have to be more creative, aggressive and resourceful, ensuring that progression of the rural poor and females across the education system is comparable with that of male and urban youth. Indeed the girls' best secondary schools situated in rural areas – recently giving an academic challenge to boys in Tanzania – might be consulted in the process of rectifying this gender imbalance.

### ***9.3.3 The role of the Ministry of Labour, Sports and Youth Development***

The Ministry of Labour and Employment needs not only to implement a National Employment Policy but also needs to ensure that this policy is adequately delivered to its beneficiaries, including both secondary school leavers and university graduates. In fact even its formulation and/or review process could sometimes involve student representatives in order to make it more transparent to the social group it is intended to serve.

There is also the issue of enhancing equitable deployment and utilisation of school output in the labour market on the basis of gender. This is because, as has been seen, females dominate wage employment while males abound in self-employment despite males being most vulnerable to unemployment. In either case there is an element of deployment inequity on the basis of gender. In ensuring that both genders, but particularly females, have equal access to employment opportunities, the policy on empowerment through training has to be implemented. This proposal is in line with the composite development goal for the Tanzania Development Vision 2025 (page 60) which stresses the training of females for enhanced management skills, negotiation techniques, entrepreneurship, etc.

It is also now high time that the Ministry responsible for Labour and Employment promotion demonstrated how it translates the macro-policy aspects of “creating an enabling environment” into the development of self-employment and private sector employment, particularly for school leavers. The Ministry also, in collaboration with the two Ministries of Education, Commerce and Trade and the Planning Commission, needs to resolve the problem of the narrowness of the labour market by studying current community demand and formulating strategies for meeting it.

## APPENDIX

**Table A1.1: Labour market trends (000's), 1991–2000**

	Male		Female		Total	
	1991	2000	1991	2000	1991	2000
Employed	5,455	9,020	5,434	9,166	10,889	18,187
Unemployed	165	388	241	524	406	913
Unemployed but not looking for work	1,978	2,084	2,327	2,473	4,305	4,557
<b>Total</b>	<b>7,598</b>	<b>11,492</b>	<b>8,002</b>	<b>12,164</b>	<b>15,600</b>	<b>23,657</b>

Source: Labour Force Survey 1990/91; Labour Force Survey Draft 2000

**Table A1.2: Employment by main sector**

Main sectors	1991		2000	
	no.	%	no.	%
Government	319,455	2.9	344,839	1.8
Parastatals	180,767	1.6	78,270	0.4
Traditional agriculture	9,115,92	83.7	14,598,212	80.2
Informal sector	955,647	8.7	2,571,205	14.1
Other private sector	317,404	2.9	594,092	3.2
<b>Total</b>	<b>10,889,205</b>	<b>100</b>	<b>18,186,618</b>	<b>100</b>

Source: Labour Force Survey 1991; Labour Force Survey Draft 2000.

**Table A1.3: Employment by status**

Main sectors	1991		2000	
	no.	%	no.	%
Wage	933,358	8.5	1,161,391	6.3
Self-employed	807,338	7.4	1,414,296	7.7
Working at home	57,259	0.5	1,012,719	5.5
Agriculture	9,091,250	83.4	4,598,212	80.2
<b>Total</b>	<b>10,889,205</b>	<b>100</b>	<b>8,186,618</b>	<b>100</b>

Source: Labour Force Survey 1991; Labour Force Survey Draft 2000

Occupation	Male	Female	Total
Admin/Managers	6 030	5 810	7 660
Professional	10 040	9 720	12 800
Assoc. Prof.	6 580	6 860	5 900
Clerks	5 050	5 060	5 050
Service/shops	3 780	4 130	3 360
Agriculture-skilled	5 350	5 530	3 400
Craft etc. Works	5 500	5 590	3 950
Opers-PI/March	5 420	5 530	3 820
Sales/Labours	3 360	3 520	2 710
<b>Average</b>	<b>4 950</b>	<b>5 150</b>	<b>4 300</b>

**Table A1.4: Average monthly income of paid employees by occupation and sex, 1991 (Tanzanian Shillings)**

Source: Labour Force Survey 1991: Table 9.2.1

Year	Division I	Division II	Division III	Division IV	Failed	Total
1991	4	7.3	17.2	49.2	22.3	100
1992	3.4	5.5	18.7	53.4	18.9	100
1993	2.3	4.2	14.4	59.3	19.8	100
1994	2.9	3.7	13.8	57.2	22.4	100
1995	3.5	5.3	15.8	55.3	20.1	100
Average	3.2	5.4	15.9	54.9	20.8	100

**Table A1.5: Form IV performance, 1991–1995 (per cent)**

Source: BEST 1991–1995

	1990						1995					
	Rural		Urban		Total		Rural		Urban		Total	
	no.	%										
<b>Form IV leavers</b>												
Wage salary	87	58	48	48	135	54	64	38	46	35	110	37
Self-employed	40	26	32	32	72	29	51	30	36	27	87	29
Looking for work	7	5	6	6	13	5	23	14	19	14	42	14
In full-time education & training	5	3	6	6	11	4	11	7	25	19	36	12
Working at home (housewife)	9	6	8	8	17	7	15	9	7	5	22	7
Cannot work due to illness	3	2	0	0	3	1	4	2	0	0	4	1
Total	151	100	100	100	251	100	168	100	133	100	301	100
<b>Senior secondary leavers</b>												
Wage salary	33	53	61	65	94	60	12	20	19	19	31	19
Self-employed	22	35	20	21	42	27	5	8	11	11	16	10
Looking for work	1	2	3	3	4	3	7	12	11	11	18	11
In full-time education & training	6	10	10	11	16	10	35	58	60	59	95	59
Working at home (housewife)	0	0		0	0	0	1	2	1	1	2	1
Total	62	100	94	100	156	100	60	100	102	100	162	100

**Table A3.1: Activity profiles for 1990 and 1995 secondary school leavers by school location**

	1990						1995					
	Male		Female		Total		Male		Female		Total	
	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%
<b>Form IV leaver</b>												
Never went to school/incomplete primary	16	13	17	14	33	13	16	11	6	4	22	7
Primary/ incomplete secondary	61	48	52	42	113	45	64	44	53	34	117	39
Form IV	27	21	26	21	53	21	35	24	42	27	77	26
Form VI	6	5	10	8	16	6	6	4	15	10	21	7
University and other higher	8	6	15	12	23	9	20	14	35	22	55	18
Other	9	7	4	3	13	5	3	2	6	4	9	3
Total	127	100	124	100	251	100	144	100	157	100	301	100
<b>Senior secondary leaver</b>												
Never went to school/incomplete primary	9	10	2	3	11	7	8	9	2	3	10	6
Primary/ incomplete secondary	41	45	19	29	60	38	30	33	14	20	44	27
Form IV	13	14	14	22	27	17	12	13	17	24	29	18
Form VI	8	9	5	8	13	8	11	12	12	17	23	14
University and other higher	14	15	23	35	37	24	25	27	23	32	48	30
Other	6	7	2	3	8	5	5	5	3	4	8	5
Total	91	100	65	100	156	100	91	100	71	100	162	100

**Table A3.2: Father's education for 1990 and 1995 secondary school leavers**

	1990				1995				Total	
	Male		Female		Male		Female			
	no.	%	no.	%	no.	%	no.	%	no.	%
Professional	40	16	48	22	42	17	39	17	169	18
Teacher	23	9	17	8	12	5	16	7	68	7
Skilled non-manual	14	6	26	12	25	10	18	8	83	9
Semi- & unskilled	99	39	74	34	84	35	80	35	337	36
Skilled manual	71	28	48	22	78	32	72	31	269	29
No answer	5	2	5	2	0	0	4	2	14	1
Total	252	100	218	100	241	100	229	100	940	100

**Table A3.3: Occupation of fathers of secondary school leavers**

	1990			1995		
	Male	Female	Total	Male	Female	Total
<b>Form IV leaver</b>						
Mean number of children		1.1	1.4	1.3	0.2	0.4
Proportion married (%)		54	61	57	14	26
<b>Senior secondary leaver</b>						
Mean number of children		0.8	0.9	0.8	0.0	0.1
Proportion married (%)		48	58	53	4	7

**Table A3.4: Marital status and family size of secondary school leavers**

	Male	Female	Total
Total Mortality			
1990	3	8	11
1995	7	3	10
Total	10	11	21
Total Traced Sample			
1990	265	219	484
1995	244	237	481
Total	509	456	965
Total mortality as a percentage of total traced sample (%)			
1990	1	4	2
1995	3	1	2
Total	2	2	2
Annualised mortality (%)			
1990	0.27	0.73	1.00
1995	1.17	0.50	1.67

**Table A3.5: Secondary school-leaver mortality**

	Agriculture		Commerce		Education		Engineering		Medicine	
	no.	%	no.	%	no.	%	no.	%	no.	%
<b>Male</b>										
Wage employment	56	89	49	82	54	86	52	84	55	95
Self-employment	2	3	8	13	3	5	5	8	3	5
Unemployed/looking for work	2	3	2	3	1	2	1	2	0	0
Full-time student	3	5	1	2	5	8	4	6	0	0
Total	63	100	60	100	63	100	62	100	58	100
<b>Female</b>										
Wage employment	23	100	20	95	17	94	7	88	20	100
Self-employment	0	0	1	5	1	6	1	13	0	0
Unemployed/looking for work	0	0	0	0	0	0	0	0	0	0
Full-time student	0	0	0	0	0	0	0	0	0	0
Total	23	100	21	100	18	100	8	100	20	100
<b>Total</b>										
Wage employment	79	92	69	85	71	88	59	84	75	96
Self-employment	2	2	9	11	4	5	6	9	3	4
Unemployed/looking for work	2	2	2	2	1	1	1	1	0	0
Full-time student	3	3	1	1	5	6	4	6	0	0
Total	86	100	81	100	81	100	70	100	78	100

**Table A3.6: Activity profiles for university graduates by discipline**

	1980		1987		1994		1999		Total	
	no.	%	no.	%	no.	%	no.	%	no.	%
<b>Male</b>										
Never went to school/incomplete primary	37	49	27	44	24	31	16	17	104	34
Primary/ incomplete secondary	23	31	23	37	31	40	31	34	108	35
Form IV	8	11	2	3	5	6	16	17	31	10
Form VI	0	0	1	2	1	1	4	4	6	2
University and other higher	4	5	5	8	9	12	22	24	40	13
Other	3	4	4	6	7	9	3	3	17	6
Total	75	100	62	100	77	100	92	100	306	100
<b>Female</b>										
Never went to school/incomplete primary	6	43	3	16	9	26	2	9	20	22
Primary/ incomplete secondary	7	50	6	32	8	24	11	48	32	36
Form IV	0	0	4	21	3	9	3	13	10	11
Form VI	1	7	3	16	1	3	0	0	5	6
University and other higher	0	0	2	11	11	32	7	30	20	22
Other	0	0	1	5	2	6	0	0	3	3
Total	14	100	19	100	34	100	23	100	90	100
<b>Total</b>										
Never went to school/incomplete primary	43	48	30	37	33	30	18	16	124	31
Primary/ incomplete secondary	30	34	29	36	39	35	42	37	140	35
Form IV	8	9	6	7	8	7	19	17	41	10
Form VI	1	1	4	5	2	2	4	3	11	3
University and other higher	4	4	7	9	20	18	29	25	60	15
Other	3	3	5	6	9	8	3	3	20	5
Total	89	100	81	100	111	100	115	100	396	100

**Table A3.7: Graduates' fathers' education**

Father's Occupation	1980		1987		1994		1999		Total	
	no.	%	no.	%	no.	%	no.	%	no.	%
Professional	1	1	7	9	7	6	17	15	32	8
Teacher	11	12	8	10	13	12	15	13	47	12
Skilled non-manual	10	11	11	14	23	21	24	21	68	17
Skilled manual	0	0	0	0	0	0	1	1	1	0
Semi+unskilled	67	75	51	63	66	59	56	49	240	61
No answer	0	0	4	5	2	2	2	2	8	2
Total	89	100	81	100	111	100	115	100	396	100

	1980			1987			1994			1999			Total		
	male	female	total	male	female	total									
Mean number of children	4.3	3.4	4.2	3.3	3.2	3.2	1.8	2.1	1.9	0.5	0.8	0.6	2.3	2.2	2.4
Proportion married (%)	93.3	64.3	88.8	90.3	100	91.4	76.6	70.6	74.8	30.4	47.8	33.9	69.6	68.9	69.4

**Table A3.8: University graduates' fathers' occupation by cohort**

**Table A3.9: Marital status and number of children of university graduates**

		Male	Female	Total
Total Mortality	1980	9	2	11
	1987	7	3	10
	1994	1	0	1
	1999	2	0	2
	Total	19	5	24
Total Traced Sample	1980	87	17	104
	1987	82	25	107
	1994	81	35	116
	1999	98	23	121
	Total	348	100	448
Total mortality as a percentage of total traced sample (%)				
Annualised mortality (%)	1980	10	12	11
	1987	9	12	9
	1994	1	0	1
	1999	2	0	2
	Total	5	5	5
Annualised mortality (%)	1980	0.4	0.1	0.5
	1987	0.5	0.2	0.7
	1994	0.1	0.0	0.1
	1999	1.0	0.0	1.0
	Total			

**Table A3.10: Mortality rates among university graduates by gender and cohort**

		Male	Female	Total
Graduates currently abroad	1980	3	1	4
	1987	13	3	16
	1994	3	1	4
	1999	4	0	4
	Total	23	5	28
Total Traced Sample	1980	87	17	104
	1987	82	25	107
	1994	81	35	116
	1999	98	23	121
	Total	348	100	448
Migration as a percentage of total traced sample (%)				
Migration as a percentage of total traced sample (%)	1980	3	6	4
	1987	16	12	15
	1994	4	3	3
	1999	4	0	3
	Total	7	5	6

	1990			1995		
	Male	Female	Total	Male	Female	Total
<b>Form IV leavers</b>						
Agriculture	2	0	1	0	3	2
Manufacturing	6	0	3	3	2	2
Electricity, gas and water	3	1	2	0	0	0
Construction	6	1	4	6	2	3
Trader	3	4	4	14	12	13
Hotels and restaurant	3	4	4	3	11	8
Transport	13	3	8	11	3	6
Finance	3	7	5	3	2	2
Public administration	2	10	6	3	8	6
Education	18	31	25	14	15	15
Health and social work	6	19	13	11	14	13
NGOs	3	0	2	3	3	3
Tourism	6	1	4	0	0	0
Other	24	16	20	31	26	28
Total	100	100	100	100	100	100
<b>Senior secondary leavers</b>						
Agriculture	0	2	1	8	0	3
Manufacturing	7	0	3	0	0	0
Electricity, gas and water	2	0	1	0	5	3
Construction	2	2	2	0	5	3
Trader	11	7	9	23	10	15
Hotels and restaurant	2	0	1	8	10	9
Transport	7	2	5	8	0	3
Finance	15	26	20	0	10	6
Public administration	0	0	0	8	0	3
Education	17	14	16	8	24	18
Health and social work	11	24	17	8	10	9
NGOs	2	0	1	0	0	0
Tourism	2	2	2	0	5	3
Other	22	19	20	31	24	26
Total	100	100	100	100	100	100

**Table A3.11: International migration among university graduates by cohort and gender**

**Table A5.1: Wage employment by economic sector (per cent)**

	1990						1995					
	Male		Female		Total		Male		Female		Total	
	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%
<b>Wage Employees</b>												
Division 1	3	5	0	0	3	2	0	0	0	0	0	0
Division 2	7	11	3	4	10	8	2	5	2	3	4	4
Division 3	22	34	20	29	42	32	9	24	11	16	20	19
Division 4	24	38	39	57	63	47	24	63	48	70	72	67
Division 0	8	13	7	10	15	11	3	8	8	12	11	10
Total	64	100	69	100	133	100	38	100	69	100	107	100
<b>All Form IV leavers</b>												
Division 1	6	5	0	0	6	2	2	1	0	0	2	1
Division 2	10	8	5	4	15	6	7	5	4	3	11	4
Division 3	40	32	30	24	70	28	35	24	16	10	51	17
Division 4	55	44	71	58	126	51	78	55	111	72	189	64
Division 0	15	12	17	14	32	13	21	15	23	15	44	15
Total	126	100	123	100	249	100	143	100	154	100	297	100

	1980			1987			1994			1999			Total		
	male	female	total	male	female	total									
Agriculture	19		16	14	32	18	18	22	19	6	9	6	14	17	15
Manufacturing	1		1				1		1	4	4	4	2	1	2
Electricity	3		3	4		3	1	9	4	1		1	2	3	3
Construction	10	8	10	11		8	10	13	11	10	4	9	10	7	9
Trader	4		4	2		1			3	1		1	2	1	2
Hotels		8	1											1	0
Transport	1		1	2		1	4	3	4	3	4	3	3	2	3
Finance	6	8	6	9	21	12	8	9	9	14	9	13	9	11	10
Administration	1		1		5	1	3	3	3		9	2	1	5	2
Education	19	23	20	32	21	29	24	6	18	29	13	25	26	14	23
Health	19	15	19	21	16	20	25	25	25	24	39	28	23	25	23
NGOs							1		1	4	9	5	2	2	2
Tourism		8	1		5	1								2	1
Other	13	31	16	7		5	4	6	5	3		2	7	7	7
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

**Table A5.2: Examination performance of Form IV leavers in wage employment**

**Table A5.3: Graduates in wage employment by economic sector and year of graduation (per cent)**

	Agriculture			Commerce			Education			Engineering			Medicine			Total		
	male	female	total	male	female	total	male	female	total	male	female	total	male	female	total	male	female	total
Agriculture	57	61	58	4	5	4				6		5	2		1	14	17	15
Manufacturing	2		1	4	5	4	2		1	2		2				2	1	2
Electricity					5	1		6	1	12	14	12				2	3	3
Construction										52	86	56				10	7	9
Trader				8	5	7				2		2			2	1	2	2
Hotels					5	1											1	0
Transport				2	10	4				12		10				3	2	3
Finance	7	9	8	41	35	39		6	1	2		2			9	11	10	
Administration	2	4	3	2	5	3		12	3				2		1	1	5	2
Education	20	4	15	8	5	7	91	59	83	4		3	4		3	26	14	23
Health	4		3	10	5	9	2	6	3	2		2	93	100	95	23	25	23
NGOs	4	9	5	4		3										2	2	2
Tourism								12	3								2	1
Other	5	13	8	16	15	16	6		4	8		7				7	7	7
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

**Table A5.4: University graduates' wage employment by economic sector and discipline (per cent)**

	Agriculture	Commerce	Education	Engineering	Medicine
Central Government		49	20	46	18
Local Government		4	4	4	7
Parastatal		24	25	14	33
Private		23	51	36	42
Total		100	100	100	100

**Table A5.5: University graduates' employers by discipline (per cent)**

	Male		Female		Total	
	no.	%	no.	%	no.	%
Urban	133	74	48	82	181	76
Rural	48	26	10	18	58	24
Total	180	100	58	100	238	100

**Table A5.6: Location of university graduates**

	1990						1995					
	Male		Female		Total		Male		Female		Total	
	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%
<b>Self-Employed</b>												
Division 1	2	4	0	0	2	3	2	3	0	0	2	2
Division 2	3	6	0	0	3	4	4	6	2	8	6	7
Division 3	15	31	6	26	21	29	18	29	1	4	19	22
Division 4	24	49	12	52	36	50	29	47	20	80	49	56
Division 0	5	10	5	22	10	14	9	15	2	8	11	13
Total	49	100	23	100	72	100	62	100	25	100	87	100
<b>All Form IV leavers</b>												
Division 1	6	5	0	0	6	2	2	1	0	0	2	1
Division 2	10	8	5	4	15	6	7	5	4	3	11	4
Division 3	40	32	30	24	70	28	35	24	16	10	51	17
Division 4	55	44	71	58	126	51	78	55	111	72	189	64
Division 0	15	12	17	14	32	13	21	15	23	15	44	15
Total	126	100	123	100	249	100	143	100	154	100	297	100

**Table A6.1: Examination performance of Form IV leavers in self-employment**

	1990						1995					
	Male		Female		Total		Male		Female		Total	
	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%
<b>Unemployed and looking for work</b>												
Division 1	2	33	7	100	9	69	14	58	14	82	28	68
Division 2	1	17	0	0	1	8	0	0	0	0	0	0
Division 3	0	0	0	0	0	0	1	4	0	0	1	2
Division 4	2	33	0	0	2	15	6	25	1	6	7	17
Division 0	1	17	0	0	1	8	3	13	2	12	5	12
Total	6	100	7	100	13	100	24	100	17	100	41	100
<b>Unemployed and not looking for work (excluding full-time training)</b>												
Division 1												
Division 2	0	0	1	6	1	5	0	0	0	0	0	0
Division 3	1	25	2	13	3	15	1	17	1	5	2	8
Division 4	2	50	10	63	12	60	4	67	12	60	16	62
Division 0	1	25	3	19	4	20	1	17	7	35	8	31
Total	4	100	16	100	20	100	6	100	20	100	26	100
<b>All Form IV leavers</b>												
Division 1	6	5	0	0	6	2	2	1	0	0	2	1
Division 2	10	8	5	4	15	6	7	5	4	3	11	4
Division 3	40	32	30	24	70	28	35	24	16	10	51	17
Division 4	55	44	71	58	126	51	78	55	111	72	189	64
Division 0	15	12	17	14	32	13	21	15	23	15	44	15
Total	126	100	123	100	249	100	143	100	154	100	297	100

	1990			1995		
	Male	Female	Total	Male	Female	Total
<b>Wage employment</b>						
Division 1	94,444	-	94,444	-	-	-
Division 2	99,405	94,444	97,917	60,417	75,000	65,278
Division 3	129,356	86,250	108,829	113,889	121,970	118,333
Division 4	107,465	105,769	106,415	91,477	92,795	92,381
Division 0	150,000	200,000	173,333	25,000	51,042	43,939
Total	118,815	109,179	113,816	89,815	92,341	91,466
<b>Self-employment</b>						
Division 1	35,417	-	35,417	27,083	-	27,083
Division 2	76,389	-	76,389	22,222	50,000	33,333
Division 3	63,393	97,222	73,542	45,833	8,333	43,860
Division 4	87,862	43,750	72,738	47,024	59,583	52,257
Division 0	77,500	45,833	61,667	39,583	29,167	37,500
Total	76,507	58,152	70,476	43,715	54,333	46,875

**Table A7.1: Examination performance of unemployed Form IV leavers**

**Table A8.1: Total income by examination performance of Form IV leavers**

	Agriculture	Commerce	Education	Engineering	Medicine
<b>Wage employment</b>	260,601	344,384	225,179	355,014	285,667
n	79	69	71	59	75
<b>Self-employment</b>	150,000	128,241	187,500	168,056	150,000
n	2	9	4	6	3

**Table A8.2: Total monthly income by employment activity and degree discipline for**

	1980	1987	1994	1999	Total
<b>Wage employment</b>					
First class	275,000	-	425,000	-	350,000
Upper second	334,259	331,410	269,028	233,073	288,442
Lower second	384,470	290,686	273,822	175,781	281,322
Pass	456,667	454,167	485,000	301,667	416,927
Qualified	411,218	433,889	288,258	123,090	285,811
Total	374,895	335,033	287,099	188,665	291,146
	80	76	104	93	353

**university graduates (TSh)**

	Agriculture	Commerce	Education	Engineering	Medicine
Male	32	22	17	24	19
Female	35	8	50	36	29
Total	33	20	19	26	20

**Table A8.3: Total income by examination performance of Form IV leavers**

	1990							1995						
	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	N.A.	n	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	N.A.	n
Acquired knowledge for chosen profession	16	49	10	11	3	10	472	10	48	15	17	3	7	468
Satisfied with English verbal skills	20	52	8	11	1	7	472	18	55	7	13	2	5	468
Satisfied with English written skills	23	51	8	10	1	8	472	21	52	9	9	1	7	468
Satisfied with IT skills	2	2	5	19	7	67	436	1	7	11	16	4	60	433
Satisfied with analytical/problem solving skills	6	45	25	12	9	3	438	6	41	32	15	5	2	443
Satisfied with managerial/entrepreneurship skills	4	39	19	16	9	14	436	3	35	20	18	7	17	441
Good preparation for working life	33	51	8	6	1	1	439	21	50	12	12	2	3	443
Committed teachers during secondary school	27	55	10	6	1	0	438	5	20	55	8	11	1	468
Competent teachers during secondary school	29	51	14	6	0	0	438	19	57	13	9	1	0	442
Relevant and up-to-date curriculum	4	43	37	14	1	1	439	5	4	34	38	16	3	468
Secondary schooling worthwhile investment	25	52	13	7	2	2	431	25	46	16	9	2	0	432

**Table A8.4: Secondary income as a percentage of total income for university graduates by discipline in wage and self-employment**

	1980							1987						
	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	N.A.	n	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	N.A.	n
Acquired required skills for profession	58	40	0	1	1	0	88	54	42	3	1	0	0	79
Satisfied with verbal communication skills	45	52	0	2	0	0	88	38	52	5	5	0	0	79
Satisfied with written communication skills	43	55	0	2	0	0	88	46	52	3	0	0	0	79
Satisfied with information technology skills	0	7	7	17	5	64	86	1	13	10	26	13	36	77
Satisfied with analytical skills	23	59	11	6	1	0	88	26	56	15	3	0	0	78
Satisfied with managerial skills	22	52	14	9	2	1	88	21	53	18	6	3	0	78
Good preparation for working life	61	36	1	1	0	0	88	63	33	0	3	1	0	79
Lecturers at university committed to work	57	35	5	2	1	0	88	47	37	15	0	1	0	79
Lecturers at university were competent	50	44	5	0	1	0	88	48	41	9	3	0	0	79
Relevant and up to date curriculum	30	57	9	3	1	0	88	27	52	16	5	0	0	79
Job expectations have been fulfilled	34	46	3	7	1	8	87	34	30	6	15	8	6	79

	1994							1999						
	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	N.A.	n	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	N.A.	n
Acquired required skills for profession	48	48	0	4	0	0	110	37	58	3	1	2	0	114
Satisfied with verbal communication skills	35	57	4	4	0	0	110	30	59	4	8	0	0	114
Satisfied with written communication skills	37	57	5	2	0	0	111	38	59	3	1	0	0	114
Satisfied with information technology skills	1	14	18	36	13	18	111	4	29	22	32	8	4	113
Satisfied with analytical skills	22	64	5	8	0	1	111	27	58	11	4	1	0	113
Satisfied with managerial skills	17	55	14	7	4	4	111	17	47	15	14	6	1	113
Good preparation for working life	57	36	4	4	0	0	111	37	46	7	7	2	1	114
Lecturers at university committed to work	35	44	9	11	1	0	111	25	49	15	9	3	0	113
Lecturers at university were competent	37	50	4	8	1	0	111	33	54	10	3	0	0	114
Relevant and up-to-date curriculum	17	60	14	8	0	0	111	13	55	17	13	2	0	114
Job expectations have been fulfilled	30	28	10	18	6	8	111	11	31	15	15	18	11	114

**Table A9.1: Response to attitudinal questions for secondary school leavers (per cent)**

Notes: Respondents were asked to indicate their level of agreement with the statements at the beginning of the row. The percentages show the proportion of the sample in each category for each statement.

**Table A9.2: Response to attitudinal questions for university graduates (per cent)**

Notes: Respondents were asked to indicate their level of agreement with the statements at the beginning of the row. The percentages show the proportion of the sample in each category for each statement.

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