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Employment and Work of African Graduates: An Empirical Analysis in Six Countries

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After graduates have left their respective higher education institutions to join the job market, there is a need to know how useful for their work the graduates find the skills they acquired from higher education. It is equally important to know what kinds of tasks they are performing at their respective places of work and what kind of training they are required to undergo. Also required is their employers' feedback about the economic sectors graduates have integrated into, the incomes and benefits they are earning, their levels of occupational mobility or job turnover, and – overall – how satisfied the graduates are with their employment. Such information and knowledge is quite useful for decision-makers, planners as well as for the academia.

1. Methodological Issues

The studies being compared were carried out in different environments. They considered different types of graduates, and some of the questions were not standardised. Interpretation of the results therefore requires to be done with caution taking into consideration issues that were raised earlier in this volume. The methodological issues which are relevant for this chapter are mainly how we defined “employed graduates” and “unemployed graduates” and the potential bias against unemployed graduates, which is inherent in the used data.

For comparative analysis of graduates surveyed under the studies in question, we have classified graduates as either being “employed” or “unemployed”. It is important to note that the individual surveys had more classifications of the graduates' employment status. All classifications have been re-categorized into two categories. We have, for example, re-categorized those graduates still continuing

with studies – professional or academic – as being not employed. This is because such graduates have not been employed yet and can therefore give no views with respect to employment and work.

It is equally important to note that almost all the surveys under comparison were biased against the unemployed graduates. The surveys targeted more employed graduates than unemployed graduates. Findings of the studies may therefore overestimate the proportion of employed graduates and may not reflect a true picture of the unemployed graduates. For example, a study that targeted teacher graduates would hardly capture unemployed teachers. Unless there is an incentive for responding to a questionnaire, unemployed graduates are less likely to cooperate because they are not happy or proud of their employment situation.

In Africa, tracing a person who is unemployed may be a horrendous task. There aren't many places in Africa where people have traceable domicile addresses. In fact, many people use work addresses for purposes of correspondence and communication. Having a private postal address is a phenomenon exclusive to a few financially able people. It is thus difficult to track a person who is unemployed, even for surveys that had intended to capture views of the unemployed graduates.

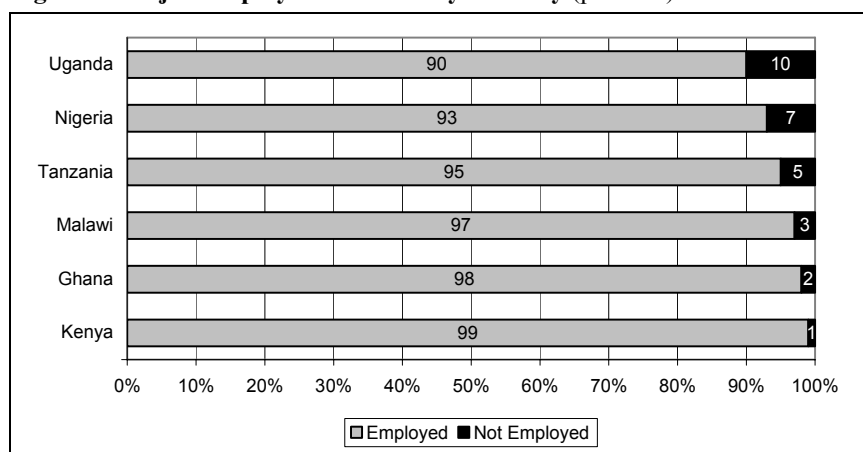
Apart from the bias against unemployed graduates, even employed graduates are likely not to have been proportionately represented by responding graduates. For example, there are types of graduates like teachers, who are, by the nature of their job, more likely to cooperate in surveys than other types of graduates like bankers who are always busy having no time to spare for researchers.

2. Employment Status

2.1 Employment and Additional Activities

Overall, only 5 per cent of the respondents reported not to be employed. The proportion is highest in Uganda, where each tenth respondent is not employed. In Nigeria and Tanzania, 7 per cent and 5 per cent respectively are not employed. In the other countries in which the surveys took place the rate of those not employed among the respondents is lower than 3 per cent (see Figure 1).

Figure 1: Major Employment Status by Country (per cent)



Question 12: What is your current employment status? Major activity.

Additionally, graduates were requested to state if – beside the employment – they had any additional activities. Their answers show, that 7 per cent of them are in advanced studies, 11 per cent in an advanced professional training, and 83 per cent have no additional activities parallel to their job. In Nigeria, 11 per cent of the respondents are pursuing advanced studies, while in other countries the proportion varies between 3 per cent and 4 per cent. In Malawi 15 per cent and in Nigeria 12 per cent report advanced professional training as a second activity respectively. 11 per cent of Ghanaian graduates undergo an advanced professional training as well. In the remaining countries, between 6 per cent and 9 per cent, parallel to their major job, do also advanced professional training.

Table 1: Additional Employment Status by Country (per cent; multiple responses)

	Nigeria	Ghana	Uganda	Tanzania	Kenya	Malawi	Total
Advanced studies	11	4	4	3	3	3	7
Advanced professional training	12	11	8	9	6	15	11
No additional activities	79	86	88	89	91	83	83
Total	102	101	101	102	100	101	101
Count (n)	(2871)	(957)	(427)	(331)	(1013)	(487)	(6086)

Question 12b: What is your current employment status? Additional activities.

2.2 Full-time Employment

Graduates were requested to indicate whether they were employed full-time or not, or whether they were self-employed. Of the responding graduates, 95 per cent state that they are employed full-time while 2 per cent are not employed on full-time basis, and the remaining 3 per cent are self-employed. Graduates in Social Sciences and in Education have the highest number of “employed full-time”, followed by graduates in Natural Sciences and in Business Studies and Law. Graduates in Health Sciences have a significantly lower proportion of graduates “employed full-time”. On the other hand, the proportion of “self-employed” graduates is highest amongst graduates in Health Sciences, followed by graduates in Agricultural fields (see Table 2).

Table 2: Full-Time Employment by Field of Study (per cent)

	Bus	Soc	Eng	Edu	Hum	Agri	Nat	Health	Total
Yes	94	97	93	98	91	92	95	77	95
No	3	1	2	1	5	2	3	12	2
Not applicable, I have my own business/I am self-employed	3	1	5	1	5	6	2	11	3
Total	100	100	100	100	100	100	100	100	100
Count (n)	(432)	(758)	(205)	(1516)	(528)	(322)	(527)	(75)	(4363)

Question 22: Are you employed full-time?

It is unquestionable that graduates in Education have the highest rate of “full-time employment” because for most, if not for all African countries, provision of education carries very high priority within their development strategies. Most of the Education graduates, therefore, are absorbed immediately into state or private schools. It was to be expected that a high ratio of graduates from health sciences were employed permanently despite the fact that findings of these studies suggest otherwise. There is no immediate explanation as to why, in the surveys addressed in this report, graduates in health-related studies have the lowest rate of being employed full-time. Thus, graduates in these fields have taken advantage of the opening-up of most of the African economies to privatisation by starting their own private clinics, dispensaries, hospitals, or other health-related business. Graduates in agriculture-related studies have also taken advantage of the situation by starting their own business.

Comparing the proportion of part-time employment between male and female graduates, we see that both groups have the same proportion of 2 per cent who are not full-time employed.

Looking at the part-time employment across the graduation cohorts it emerges that although there are earlier graduates who are employed permanently than later graduates, the difference is small. 97 per cent of the graduates of up to 1985 were permanently employed, as compared to 95 per cent of the graduates of between 1995 and 1998. There was no gender bias with respect to permanent employment.

2.3 Job Turnover and Duration of Work

On average, the employed graduates have been in the present institution about four and a half years (53,1 months). They held the present position for about three years (32 months). Not surprisingly, the respondents who graduated in the earlier cohorts have been longer employed and in the present position than graduates of the late cohorts (see Table 3).

Table 3: Duration of Work (in Months) in Present Employment by Year of Graduation (means)

	Year of graduation (bachelor)				Total
	Up to 1984	1985-1989	1990-1992	1993-1996	
Duration of work in present employment					
Mean	96,5	69,2	48,2	29,3	52,4
Median	91,0	60,0	40,0	22,0	36,0
Count (n)	(364)	(1199)	(1404)	(1311)	(4278)
Duration of work in the present position					
Mean	47,8	37,4	30,9	21,1	32,0
Median	39,0	32,5	24,0	15,0	24,0
Count (n)	(339)	(1086)	(1140)	(909)	(3474)

Question 14: How long have you been working?

Only 30 per cent of the respondents have ever changed the employment up to the time of the surveys. About each seventh (14 %) has changed the employment only once and one tenth twice. 4 per cent of the respondents report three changes of employment, and 1 per cent has changed the employment four times or more often.

Table 4: Change of Employment by Field of Study (per cent)

	Bus	Soc	Eng	Edu	Hum	Agri	Nat	Health	Total
Change of Employment									
Yes	45	44	43	12	30	37	35	49	31
No	55	56	57	88	70	63	65	51	69
Total	100	100	100	100	100	100	100	100	100
Count (n)	(824)	(824)	(328)	(1588)	(614)	(368)	(575)	(81)	(5202)
Number of changes of employment									
One change	19	23	20	5	11	19	14	16	14
Two changes	15	13	15	3	12	10	12	10	10
Tree changes	7	5	7	1	5	6	5	14	4
Four and more changes	3	1	2	0	2	1	2	10	2

Question 11: How many times did you change the employer/employment since your graduation?

As shown in Table 4, the graduates in Education and the Humanities report fewer employment changes than the respondents from other fields of study. Graduates in Health Sciences have a higher job turnover. About half (49 %) report at least one job change.

2.4 Position

To enlighten the hierarchical position of the employed graduates, they were asked if they have subordinates. The proportion of those having subordinates and those who report to have none is nearly equal (49 % and 51 % respectively). Keeping in mind that the respondents in the earlier cohorts are – on the average – longer in the present employment and in the present position, and considering the responses in Table 5, it emerges – interestingly – that there is no relationship between the “seniority” in the job and the hierarchical position.

48 per cent of the respondents from the graduation years up to 1984 have subordinates and so have 51 per cent from those who graduated between 1985 and 1989. This is about the same proportion as in the last two graduation cohorts. 48 per cent and 47 per cent of those who graduated between 1990-92 and 1993-96 respectively have subordinates.

Table 5: Subordinates by Year of Graduation (per cent)

	Year of graduation (bachelor)				Total
	Up to 1984	1985-1989	1990-1992	1993-1996	
Yes	48	51	48	47	49
No	52	49	52	53	51
Total	100	100	100	100	100
Count (n)	(413)	(1421)	(1700)	(1515)	(5049)

Question 23a: Do you have subordinates?

3. Kind of Employer

For the purpose of the comparative analysis, employers have been classified into three categories. The first category called “public employer” includes state or government ministries and agencies. In countries like Tanzania, most of the business companies were owned by the state (parastatals). These are included in this first category. The second category, i.e. “private employer”, includes all employers who are not related to the state. The third category is that of “self employed” graduates. It was important to observe whether the studies captured self-employed graduates. The phenomenon of self-employment is quite new amongst African graduates, because the traditional type of education was very much oriented towards preparing graduates for being employed in white colour jobs. Apparently, the proportion of graduates who are self-employed is highest among those graduating between 1986 and 1995, i.e. at a time when most of the African economies were undergoing reforms and cutting down public sector employment. Enterprising graduates took the opportunity to start their own business.

69 per cent of the graduates surveyed were employed by public employers and 25 per cent by the private sector. Only 5 per cent were self-employed. This pattern reflects the set up of African economies, which were, and some are still dominated by state-run enterprises.

As expected, within each economic sector, public sector employers were most predominant and more particularly within universities and schools. This is because the majority of African universities and schools are state owned. The economic sectors that had the least proportions of graduates employed in the public sector were commerce and industry. This is because in most economies, commerce as well as industrial activities is carried out more by the private sector. Table 6 gives a summary of findings showing the kind of employer by economic sector.

Table 6: Kind of Employer by Economic Sector (per cent)

	Agriculture	Industry	Commerce	School	University	Other	Total
Public employer	60	49	48	92	96	70	74
Private employer	30	46	45	7	1	21	22
Self employed	10	4	7	1	0	6	3
Other	1	1	0	1	2	3	1
Total	100	100	100	100	100	100	100
Count (n)	(235)	(733)	(776)	(2154)	(266)	(753)	(4917)

Question 17: Please state the kind of your employer. Please tick one item only.

Given the gradual shift in the economic set-ups in Africa towards a free market, one would have expected a declining trend in the proportions of graduates being employed by the public sector over time. Findings summarised in Table 7 shows a different picture. Proportionately, more graduates of the 1990s were employed by the public sector as compared to the proportion of graduates of the 1980s or better. These findings suggest that employment of graduates by the public sector has been increasing. However, we cannot exclude that these data are influenced by biases in the response rate of graduates.

Table 7: Kind of Employer by Cohort (per cent)

	Year of graduation (bachelor)				Total
	up to 1984	1985-89	1990-92	1993-96	
Public employer	77	71	72	74	73
Private employer	19	23	23	21	22
Self employed	3	5	4	4	4
Other	2	1	1	1	1
Total	100	100	100	100	100
Count (n)	(418)	(1377)	(1676)	(1407)	(4878)

Question 17: Please state the kind of your employer. Please tick one item only.

4. Economic Sectors of Employment

Economic sectors, in which the surveyed graduates were employed, are very much related to the graduates' field of study. The analysis of data presented in Table 8 indicates that 65 per cent of the surveyed Business and Law graduates are employed in industry and in commerce related sectors. 20 per cent are in the public sector and the remaining spread across the other economic sectors. Likewise,

58 per cent of Social Sciences graduates are employed in industry and in commerce-related sectors, 19 per cent are in the public sector and 13 per cent in schools. 76 per cent of Engineering graduates are employed in the industrial sector and the remaining are almost evenly spread across all other sectors. 85 per cent of Education graduates were employed as teachers in schools or in universities. 8 per cent were in public sector. Among graduates in Humanities and Arts, 39 per cent were employed in schools, 19 per cent in the public sector, 16 per cent in commerce, and 12 per cent in industry. Graduates of these fields of study were more widely spread across economic sectors than graduates of any other field of study.

Table 8: Economic Sector by Field of Study (per cent)

	Bus	Soc	Eng	Edu	Hum	Agri	Nat	Health	Total
Agriculture	7	7	4	2	8	39	7	0	7
Industry	35	25	76	1	12	9	17	5	19
Commerce	30	33	6	2	16	16	14	4	16
School	5	13	4	84	39	23	35	5	39
University	3	4	4	5	6	3	9	5	5
Other (NGO, public adm., other)	20	19	6	6	19	12	20	80	15
Total	100	100	100	100	100	100	100	100	100
Count (n)	(772)	(799)	(308)	(1518)	(509)	(302)	(533)	(74)	(4815)

Question 19: In which economic sector are you currently employed or otherwise professionally active? Please tick one item only. The answer should only concern your main occupation.

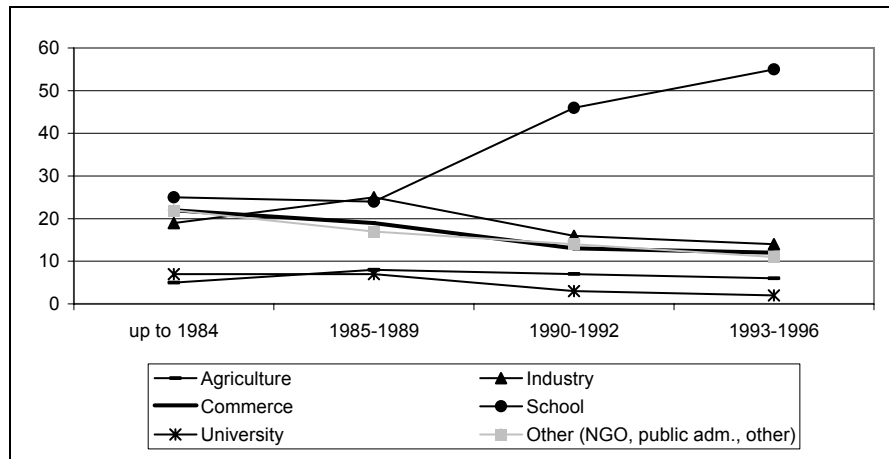
39 per cent of graduates from Agriculture related fields were employed in the agricultural sector and 26 per cent were teachers in schools or universities. 16 per cent were in commerce and 12 per cent were in the public sector. Like graduates in Humanities and Arts, graduates from agriculture-related fields were scattered across various economic sectors. 44 per cent of graduates from Natural Sciences were teachers in schools and in universities, and 20 per cent were in public sector. Most probably, the 20 per cent employed in the public sector are working for state owned research and/or scientific institutions. 17 per cent and 14 per cent of the surveyed graduates from Natural Sciences were respectively employed in the industrial and in the commerce sectors. Finally, it is not unexpected that 80 per cent of the surveyed graduates in health-related fields are employed in the public sector, because most health institutions and hospitals in Africa are owned by the state.

The significance of economic sectors in terms of employing graduates has changed over time. The major changes are seen in the industrial sector which, up to 1985, absorbed 21 per cent of the graduates, but only absorbed 11 per cent of

the graduates of 1995-1998. Even the significance of the commercial sector as an employer of graduates has declined over time from employing 21 per cent of the graduates of up to 1985 to only 7 per cent of the graduates of 1995-1998.

The story is different with school teachers, whose employment has almost tripled, from 26 per cent of the graduates during the period up to 1985 to 68 per cent of the 1995-1998 graduates. Surprisingly, employment of graduates by universities has declined from 8 per cent to 2 per cent between the periods considered by the studies. One would have expected an opposite trend given that the number of universities has increased in Africa. Figure 2 shows the change of importance of economic sectors employing graduates over time.

Figure 2: Economic Sector by Cohort (per cent)



Question 19: In which economic sector are you currently employed or otherwise professionally active? Please tick one item only. The answer should only concern your main occupation.

Although schools have generally attracted the majority of the surveyed graduates than any other economic sector, female graduates have been most attracted as evidenced by Table 9. Females are almost evenly distributed between industry, commerce, and public sector. Economic sectors that have attracted females least are the university and the agricultural sector. For male graduates, industry comes next to schools in importance as an employing sector, followed by commerce and then by the public sector. Like in the case of women, universities and the agricultural sector are the least employing economic sectors for men.

Table 9: Economic Sector by Gender (per cent)

	Male	Female	Total
Agriculture	7	5	7
Industry	20	14	18
Commerce	16	13	15
School	38	51	41
University	5	4	5
Other (NGO, public adm., other)	15	13	14
Total	100	100	100
Count (n)	(3,837)	(1,381)	(5,218)

Question 19: In which economic sector are you currently employed or otherwise professionally active? Please tick one item only. The answer should only concern your main occupation.

5. Areas of Work Assignment

Graduates were asked to list areas of their major current work assignment. Assignments have been summarised and categorised into five major areas, i.e. “engineering”, “business and management”, “research and development”, “teaching”, and “consulting and advisory”. Other assignments that could not be fitted into the above five categories have been subsumed under the category “others”.

Table 10: Major Area of Work Assignment by Field of Study (per cent)

	Bus	Soc	Eng	Edu	Hum	Agri	Nat	Health	Total
Engineering	24	16	68	6	19	21	26	25	20
Business and management	55	55	15	5	32	32	20	14	30
Research and development	4	5	4	1	3	8	4	7	3
Training and teaching	7	15	8	88	40	29	40	38	41
Advisory and consulting	7	5	5	1	5	9	7	16	5
Others	3	3	0	0	2	1	1	0	1
Total	100	100	100	100	100	100	100	100	100
Count (n)	(748)	(691)	(274)	(1164)	(348)	(282)	(357)	(56)	(3920)

Question 20a: What is your current major area of work assignment?

The majority of graduates had work assignments that were quite relevant to their fields of study. For example, 67 per cent of Engineering graduates had their major work tasks in the field of engineering, 60 per cent of Education graduates were teaching, and 55 per cent of Business and Law graduates were in business and management related assignments. Also, 51 per cent of Social Sciences graduates were in business and management related functions. Graduates in Humanities and Arts have no concentration within a specific work assignment.

In terms of gender, there are major differences only in two areas between the assignments performed by female graduates and those performed by male graduates. Proportionately, more female than male graduates are active in training and teaching. Also a higher proportion of male than female graduates is in business and management related work assignments.

6. Importance of Occupational Characteristics

Graduates were requested to indicate the level of importance they attach to several occupational characteristics. Overall, the first four characteristics rated highly are, in their order of importance, "Possibilities of using acquired knowledge", "Job security", "Chance of doing something useful for society", and "Opportunity of pursuing continuous learning". The two characteristics ranked as being least important are "Lot of free time" and "Chances of political influence". Table 11 gives a summary of responses by field of study.

Table 11: Work Orientation by Field of Study (arithmetic mean)

	Bus	Soc	Eng	Edu	Hum	Agri	Nat	Health	Total
Largely independent disposition of work	2.1	2.5	2.5	2.6	2.5	2.6	2.5	2.2	2.5
Opportunity of undertaking scientific work	2.8	3.2	2.3	3.3	3.5	2.5	2.5	1.9	3.0
Clear and well-ordered tasks	2.1	2.2	2.2	2.3	2.3	2.3	2.3	1.8	2.2
Possibilities of using acquired knowledge	1.8	1.9	1.8	1.9	2.0	1.9	1.9	1.5	1.9
Job security	1.9	1.8	2.0	1.9	2.1	2.2	2.1	1.9	1.9
Social status and respect	2.0	2.0	2.2	2.4	2.3	2.4	2.3	1.8	2.3
Opportunity of pursuing own ideas	2.1	2.2	2.2	2.4	2.3	2.3	2.3	2.0	2.3
Good working atmosphere	2.0	2.0	2.1	2.3	2.3	2.5	2.2	1.7	2.2
Opportunity of pursuing continuous learning	2.1	1.9	2.2	2.2	2.2	2.2	2.0	1.8	2.1
High income	2.1	2.3	2.3	2.7	2.6	2.9	2.6	2.3	2.5
Chances of political influence	3.7	3.7	3.5	3.8	3.5	3.9	3.9	3.6	3.7
Demanding job tasks	2.3	2.3	2.3	2.7	2.6	2.6	2.6	2.3	2.5
Good career prospects	2.1	2.0	2.4	2.4	2.3	2.4	2.3	1.8	2.3
Lot of free time	3.6	3.6	3.3	3.3	3.3	3.5	3.5	3.7	3.4
Coordinating and management tasks	2.3	2.3	2.1	2.5	2.5	2.4	2.6	2.3	2.4

to be continued

Table 12 continued

	Bus	Soc	Eng	Edu	Hum	Agri	Nat	Health	Total
Possibility of working in a team	2.4	2.2	2.7	2.3	2.4	2.3	2.3	2.2	2.3
Chance of doing something useful for society	2.1	1.9	2.0	1.9	1.9	2.0	2.0	1.6	2.0
Count (n)	(684)	(698)	(320)	(1526)	(502)	(339)	(473)	(78)	(4620)

Question 36: How important are the different characteristics of an occupation for you personally? Scale from 1 = very important to 5 = not important at all.

There are significant differences in the importance attributed to the characteristics of an occupation according to field of study. Graduates from all fields of study ranked “Possibility of using acquired knowledge” first or second, “Job security” was also highly ranked by graduates of all fields of study. “Good working atmosphere” was deemed very important more by graduates in health related fields, graduates in business and law as well as by graduates in engineering.

With the exception of Business and Law graduates, all other graduates put strong emphasis on being able to do something useful for society. The chance of political influence, in contrast, was of least importance to all graduates regardless of field of study. Likewise, most graduates ranked “Lot of free time” second to last.

7. Other Gainful Activities

One fourth of the employed graduates report a second (gainful) activity parallel to his major employment. 21 per cent have side jobs paid with honorarium or are involved in sporadic economic activities like sales etc. 4 per cent have a regular second occupation.

Table 13: Other Gainful Activities by Country (per cent)

	Nigeria	Ghana	Uganda	Tanzania	Kenya	Malawi	Total
Second occupation	6	3	4	2	3	3	4
Side jobs, honorarium, sales, etc.	24	15	31	38	13	15	21
No	62	79	60	58	81	81	70
Not applicable, I have my own business/ I am self-employed	7	3	5	2	3	1	5
Total	100	100	100	100	100	100	100
Count (n)	(2358)	(848)	(360)	(302)	(921)	(452)	(5241)

Question 24: Do you have any other gainful activity?

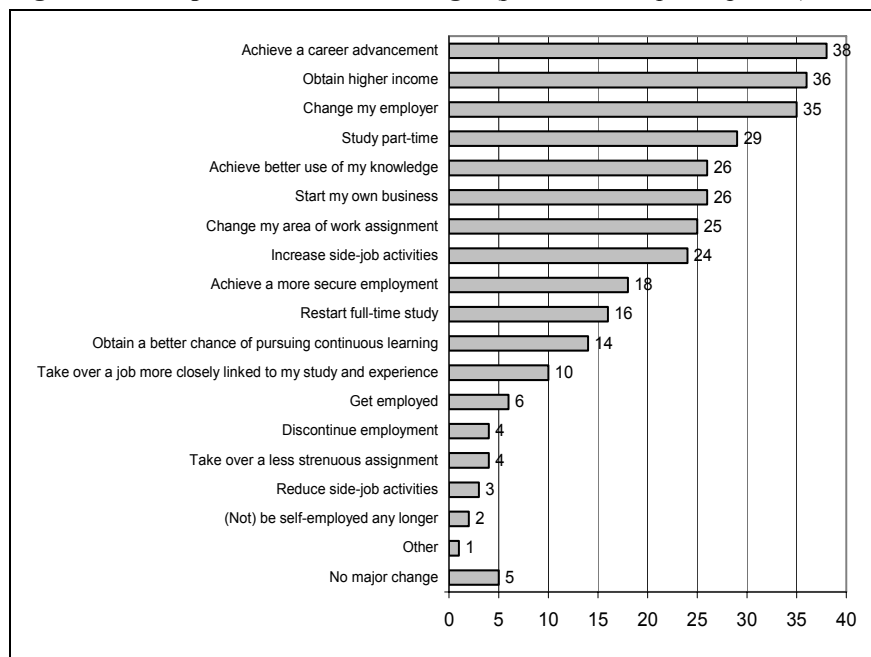
In Tanzania 38 per cent of the respondents have side jobs, in Uganda 31 per cent, and in Nigeria 24 per cent. In Kenya, Malawi, and Ghana about one seventh of the respondents report a side job.

In Nigeria 6 per cent of the employed graduates have a second occupation. In other countries surveyed, the rate of second occupations accounts between 2 per cent and 4 per cent (see Table 13).

8. Anticipation of Career Changes

The Graduates were asked which changes they are expecting or anticipating in the next three years. The vast majority of the respondents anticipate one major change or another. Only 5 per cent say that, in the next three years, no major change is to be expected in their career.

Figure 3: Anticipation of Career Changes (per cent; multiple responses)



Question 38: What kind of career changes do you anticipate within the next three years? Multiple reply possible.

As Figure 3 shows, 38 per cent of the graduates anticipate career advancement, 36 per cent of the respondents hope to obtain a higher income, and 35 per cent expect to change the employer in the next three years.

29 per cent plan to study part-time. Other changes in the career advancement or professional reorientation are anticipated by about one quarter of the graduates: to achieve a better use of the knowledge in the job (26 %), to start an own business (26 %), to change the area of working assignment (25 %) and to increase side-job activities (24 %). Interestingly, 3 per cent of the respondents, on the other hand, plan to reduce side-job activities.

Overall, most graduates expect changes associated with further learning. 16 per cent plan a full-time study and 14 per cent expect to obtain better chances of pursuing continuous learning.