A COMPERATIVE STUDY OF MAKERERE UNIVERSITY GRADUATES OF THE FACULTIES OF ARTS AND SCIENCES.

BY

M. K. MAYANJA

F. NAKAYIWA-MAYEGA

ADEBUA

M. K. KABUYE

E. KAASE-BWANGA

Planning & Devt. Dept., MAKERERE UNIVERSITY, KAMPALA, UGANDA

Research Paper

Number XXX

A COMPERATIVE STUDY OF MAKERERE UNIVERSITY GRADUATES OF THE FACULTIES OF ARTS AND SCIENCES

BACKGROUND TO THE STUDY

The economic crisis which hit Uganda in 1970s and 1980s precipitated a shock to Makerere university. The crisis translated itself at the university in: crippling under funding, low staff pay and lack of morale, centralised management of scarce funds, deteriorating building and other physical facilities, shortage of equipment, chemicals and text books, Cut throat competition for the few inelastic University places and pressure for expansion under shrinking financial resources.

As students activism could not allow cost sharing, the university's response to the shock was to privatise some places in normal regular programs, launching of private evening programs, and distance education programs. The university also decentralised some powers so that the responsibility to generate funds was shared by all members of staff. This was also an incentive for those who could work hard and generate private income to have greater control over them.

While the faculty of Arts (FoA) responded immediately, and recruited private students to improve their financial base, the Faculty of Science (FoS) is still lagging behind. According to Table 2 where as FoA has 31% private students, FoS has only 8%, FoA generates 54% of its income from private students while FoS generates 4%. The Sciences still lack equipment, and chemicals. A detailed review of the implementation of the Makerere University Strategic Plan 1996/97 –1998/99 revealed that all the laboratory based disciplines were generally lagging behind in adjustment. They could not also conduct evening programs because they still found it difficult to conduct experiments at night or to carry out field work. Although the staffing position for Sciences has improved, the faculties are not in position to pay top up salary incentive because of their limited budget from private income.

Table 1: Enrolment of Government and Private Students , Budget and Staffing Position of FoA and FoS 1997/98

	Enrolment			Budget (Ug. Shillings. Billion)			Staffing			
	Govt	Priv.	Priv. %	Govt.	Priv	Priv. %	Est.	Filled	% Filled	SSR
FoA	983	437	31	1.16	1.36	54	123	96	78	1:15
FoS	935	85	8	2.66	0.161	4	141	113	80	1:10

Source: Planning and Development Department, Makerere University

N.B. The Budget allocation to Science of U Shs. 2.6 is capturing the low SSR of 1:10 for FoS against 1:15 for FoA and also the good staffing position especially at the senior levels of Professor where salaries are high rather than the availability of equipment and other science requirements.

The humanities have successfully emerged from the 1980's shock of funding crisis and their supply side in terms of funding, curriculum renewal and students enrolment have become self sustainable. On the other hand, the Sciences are still trapped under the funding crisis with shortage of input and limited capacity for expansion of private fee paying students.

RESEARCH ISSUES

Although the supply conditions on the ground are such that the humanities are more vibrant than the sciences Government has always emphasised the need to expand and improve Science and technology education which is seen as more critical to the development of the economy.

This study attempts to compare the performance of the graduates of BA representing the humanities to those of BSc representing all the sciences. If the supply side of FoS is still trapped under the vicious circles of under-funding, is there any visible excess demand for scientist in the employment market? Do graduates of the general Science courses have a higher probability of securing employment than those of general Arts courses? Is there no employment prospect for FoA graduates so that the current expansion is halted until the curriculum is fully transformed? Do graduate of FoS earn higher income than those of FoA? Do the graduates of FoS have a higher absorption rate in the private sector and self employment? These are the nudging questions which this study seeks to answer.

METHODOLOGY

Data type and Source

The standard questionnaire developed by the Association of African Universities AAU was modified and administered to obtain primary data on the Graduates from the faculties of Sciences and that of Arts.

Sampling

Cluster sampling based on course, years and sex, was used. In terms of years, 100 graduates in each year were selected of which 40% were from FoS and 60% from FoA. In terms of sex, it was estimated that 20% of graduates in Science based courses are female compared with 40% arts based. These percentages were reflected in the sample.

The cut off period for the study was ten years (1985-1994/5) with 100 graduates selected from each year.

A representative sample was selected on the basis of the above clusters and the pattern of response was not too far different from the sample selection.

Methods of reaching the graduates

The following methods were used to update the contact address and reach the graduates to administer the questionnaire:

- The Mass Media
- Address left behind to convocation by the graduates
- Contact through major Institutions and firms which are employing graduates
- Through fellow graduates - the snow ball technique.

FINDINGS OF THE STUDY : TRANSITION FROM STUDY TO EMPLOYMENT

Key biographic information about the graduates:

424 graduates responded to the graduate survey questionnaire of which 286 held BA and 138 qualified in BSc degrees. The graduates break down by course and gender in Table 2 shows that only 26% of the respondents were female and the rest were male .

Table 2: Gender by Course of Study (percent)

	BA(Arts)	BSc(Sc)	Total
Male	69	84	74
Female	31	16	26
Total	100	100	100
Count (n)	(274)	(138)	(412)

Question: Gender

Period taken to secure jobs

The transitional period from school to work has important indicators for the competitiveness of the course and also for the situation of the labour market.

This section focuses on the period taken to secure jobs and, the number of employers contacted. In the questionnaire, the graduates were asked to indicate their employment situation after being awarded FoA or FoS degrees and they had to choose from 5 main option for every quarter of the first year and there after every two years. The options were:

- Employed
- Professional education & further academic studies
- Not employed - seeking employment
- Not employed and not seeking any
- Others.

The FoS graduates performed a little better in the transitional period than the FoA graduates. 42% of the FoS graduates were able to secure employment in the six (6) months after graduation as opposed to 33% for FoA graduates.(See Table 3) If we add to this the number of graduates who had taken up full time professional education and further academic studies, the percentage for FoS graduates improves to 64% against 41%.

The gap between the two categories narrows down is subsequent time interval. For example after one year in Table 4, 51% of FoA or have secured jobs while whereas the corresponding % age for FoS is 57.

Table 5 reveals that the average waiting period before graduates secure employment has been increasing. Prior to 1989, 34% of graduate would secure jobs within the first quarter. The percentage dropped to 22% in 1993/93.

Table 3: Career Six Months after Graduation by Course of Study (percent)

	BA(Arts)	BSc(Sc)	Total
Employed	33	42	36
Professional education & Further academic studies	9	22	13
Not employed / Seeking employment	52	35	46
No employment and not seeking any (travels, raising children	5	2	4
Other	2	0	1
Total	100	100	100
Count (n)	(261)	(130)	(391)

Question: Question : Please indicate your employment situation and your occupation after being awarded your BA or Bsc degree at Makerere University.

Table 4: Career One Year after Graduation by Year of Graduation (percent)

	BA(Arts)	BSc(Sc)	Total
Employed	51	57	53
Professional education & Further academic studies	12	23	16
Not employed / Seeking employment	33	19	28
No employment and not seeking any (travels, raising children	3	1	2
Other	0	1	0
Total	100	100	100
Count (n)	(260)	(135)	(395)

Question : Please indicate your employment situation and your occupation after being awarded your BA or Bsc degree at Makerere University.

Table 5: Career in the First Quarter after Graduation by Year of Graduation (percent)

	Year of Graduation				Total
	83-89	90-91	92-93	94-96	
Employed	34	14	22	25	25
Professional education & Further academic studies	8	12	8	12	10
Not employed/Seeking employment	56	69	64	52	59
No employment and not seeking any (travels, raising children)	2	5	4	9	5
Other	0	0	1	2	1
Total	100	100	100	100	100
Count (n)	(107)	(77)	(95)	(110)	(389)

Question : Please indicate your employment situation and your occupation after being awarded your BA or Bsc degree at Makerere University.

Number of employers contacted

FoA graduates contacted more employers than the FoS graduates. Those who contacted 1-2 employers from FoA category were only 16% whereas the corresponding percentage for the FoS category was 31%. On the other hand, those who contacted 5 to 21 and more employers from the FoA group was 51% against 35% for the FoS group. Clearly, the BA graduates frequent more employers than the FoS graduates before they finally secure employment.

Table 6: Number of Employers Contacted by Year of Graduation (percent)

	Year of Graduation				Total
	83-89	90-91	92-93	94-96	
Number of employers contacted					
1-2	36	29	18	17	26
3-4	21	13	18	21	18
5-6	21	14	11	18	16
7-8	4	6	5	4	5
9-10	7	18	22	15	15
11-20	8	13	17	15	13
21 and more	2	8	9	8	7
Total	100	100	100	100	100
Count (n)	(89)	(79)	(65)	(71)	(304)

Question 9: How many employers did you contact before you took up your first job after graduation?

The growing job scarcity is also revealed by the number of employers contacted by the different cohorts of graduates in Table 6. According to Table 6 the 1983-89 cohorts of graduates who contacted 1-2 employers were 31% while the percentage of those who contacted only 1-2 had fallen to 12% in the 1994-96 cohorts. On the other hand, the percentage of those who contacted 7-21 and more employers in the 1994-96 cohort was 32 against 19 for the older cohorts of the 1983-89. Clearly searching jobs has become more vexing and involving due to the scarcity of jobs.

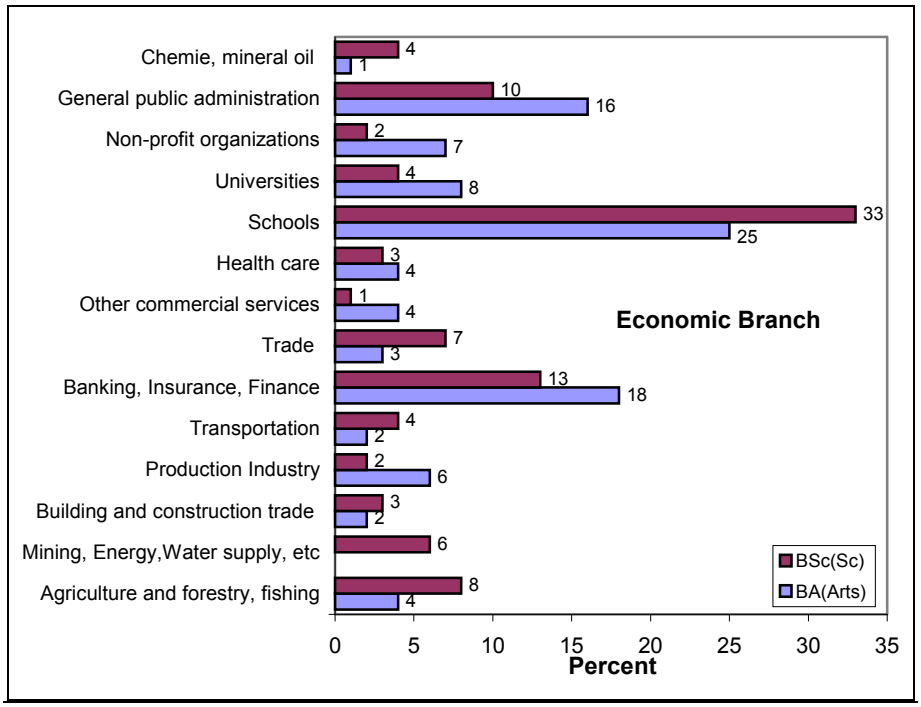
CURRENT EMPLOYMENT AND WORK

Sector of employment

The most important destination for the graduates were education and commerce. The schools and universities took in 30% of FoA and 34% of FoS output Chart 1. The third largest consumer is banking, insurance and finance which absorbed 16% of FoA graduate and 13% of FoS followed by general administration. Production industry absorbed in 3% of the graduates in 1983-1989, and 7% in 1994/96. This can be taken to be an indicator that the much taunted success story of structural adjustment in Uganda is picking up at a low pace. The manufacturing sector which is so critical to the economic recovery has not yet responded to the World Bank structural adjustment prescription. According to the Government of Uganda (1997/98), the manufacturing sector constituted 8.2% of the GDP. There are only 3 other sectors which maintained a two figure digit throughout the period. Clearly, the economic spread of the two categories of graduates is almost similar.

Both FoA and FoS graduates appeared to be widely distributed in all economic branches according to Chart 1. It should be noted however, that the majority of graduates were in the 3rd sector or the service sector. The primary sector-Agriculture & Forestry absorbed only 5% while the secondary sector - Industry, Construction and Mining and Energy altogether absorbed 8%. The rest of 86% were in the third sector. Although the current trend is the growth of the 3rd sector, the abysmally small proportion of those who enter the secondary sector indicates Uganda's low level performance of the manufacturing sector.

Chart 1: Economic Branch by Course of Study



Question : 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

A trend analysis of the graduates destination shows that the number of graduates entering the public sector is declining while those who are joining the private sector is increasing (Table 7).

Table 7: Economic Sector by Year of Graduation (percent)

	Year of Graduation				Total
	83-89	90-91	92-93	94-96	
Central government	33	38	31	25	32
Local government	9	13	13	10	11
Parastatal/public enterprise	19	16	9	14	15
NGO	6	7	18	9	10
Private Employer	26	17	27	40	27
Self employed	6	5	3	2	4
Other	0	5	0	0	1
Total	100	100	100	100	100
Count (n)	(108)	(87)	(78)	(88)	(361)

Question 18: Please state your type of employer? Please tick one item only

In 1983-89, 33% of the graduates found their way into the central government against 25% in 1994/96. While the figures for the private employers were 26% and 40% respectively. When we add together the figures for the local government and public enterprises, the public service absorption rate is set at 61 % in 1983-89 against 49% in 1994-96. The greater private sector -including NGO and self employed -absorbed 38 % in 1983-89 which went up to 51% in 1994-96. The proportion of those employed in the private sector has not only increased, but the private sector has taken over from the government as the leading employers.

Table 8: Economic Branch by Course of study BA(Arts) BSc(Sc) Total

	Economic Sector						Total
	Agri	Indu	Comm	Educ	Admi	Other	
Agriculture and forestry, fishing	100	0	0	0	0	0	5
Mining, Energy, Water supply, etc	0	20	0	0	0	0	2
Building and construction trade (building constructor)	0	17	0	0	0	0	2
Production Industry	0	39	0	0	0	0	5
Transportation	0	24	0	0	0	0	3
Banking, Insurance, Finance	0	0	68	0	0	0	16
Trade (wholesale trade and retail trade)	0	0	19	0	0	0	4
Other commercial services	0	0	14	0	0	0	3
Health care	0	0	0	0	0	30	3
Schools	0	0	0	81	0	0	27
Universities	0	0	0	19	0	0	6
Non-profit organisations	0	0	0	0	0	49	5
General public administration	0	0	0	0	100	0	14
Chemistry, Mineral Oil	0	0	0	0	0	22	2
Total	100	100	100	100	100	100	100
Count (n)	(18)	(41)	(81)	(113)	(47)	(37)	(337)

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

Apart from Mining and Energy and Water which did not absorb any FoA graduates, the rest of the branches were fairly receptive to both FoA and FoS graduates. FoA graduates are employable in Industry, Transportation, Banking and Finance, Commerce, Education and other branches just as FoS graduates are also well received in these economic branches.

Promotion and Professional Development

Who was more likely to be promoted both to middle level management and higher levels? The study included the number of subordinates and their qualification as a proxy for promotion chances of the graduates.

The interpretation of this is that, those whose were entrusted with a big number of subordinates should have been promoted.

Table 9 shows the number of subordinate staff under each graduates and also the number of graduates subordinate.

Table 9: Subordinates and their Qualifications by Course of Study (percent)

	BA(Arts)	BSc(Sc)	Total
No	33	26	31
Yes	67	74	69
Total	100	100	100
Count (n)	(229)	(114)	(343)
Number of subordinated employees			
1-5	39	55	45
6-10	22	23	22
11 and more	39	22	33
Total	100	100	100
Count (n)	(149)	(87)	(236)
Number of subordinated employees with a university degree			
1-5	77	90	81
6-10	8	5	7
11 and more	15	5	12
Total	100	100	100
Count (n)	(73)	(39)	(112)

Question 24: Do you have subordinates?

According to Table 9, 74% of Science graduates had subordinates working under them whereas the corresponding percentage from BA graduates was 67%. In general therefore, the FoS graduates had slightly more promotion opportunities than the FoA graduates.

The middle part of Table 9, shows that proportion of FoS graduates with 1-5 subordinates was 55% against 39% for FoA graduates and therefore the FoS had more chances to climb middle level management than the FoA graduates. The FoA graduates however performed better than the FoS graduates at the higher bracket of subordinate supervision. 39% of FoA graduates had 11 or more subordinate against 22% for FoS graduates. The same message is also carried in the bottom part of the Table 9 where the percentage of BA graduates with 11 or more high level man power subordinate is three times that of FoS graduates.

The conclusion which emerges from this is that whereas the FoS graduates had more chances of promotion to the middle level management, the FoA graduates performed better at the top level management.

The gender promotional pattern, according to Table 10 was similar to the BA/BSc. axis. Women had more promotional chances to the middle management but men have more chances for higher level promotion to the top management. 53% of female FoA and 69% of FoS female graduates had 1-5 subordinate staff against 43% and 26% respectively for men. At the apex of the number of subordinate which is our proxy for promotional chances, 23% of female FoA graduates and 15% of female FoS had 11 and more subordinate staff against 37% and 43% for male FoA and FoS respectively. Hence, promotion to higher level management was skewed in favour of male graduates.

Table 10: Subordinates and their Qualifications by Gender and Course of Study (percent)

	Gender and Course of Study				Total
	Male-BA	Female-BA	Male-BSc	Female-BSc	
No	34	25	32	32	31
Yes	66	75	68	68	69
Total	100	100	100	100	100
Count (n)	(157)	(95)	(66)	(19)	(337)
Number of subordinated employees					
1-5	43	53	26	69	44
6-10	20	24	30	15	23
11 and more	37	23	44	15	33
Total	100	100	100	100	100
Count (n)	(102)	(74)	(43)	(13)	(232)
Number of subordinated employees with a university degree					
1-5	76	91	81	83	82
6-10	8	6	10	0	7
11 and more	16	3	10	17	11
Total	100	100	100	100	100
Count (n)	(50)	(33)	(21)	(6)	(110)

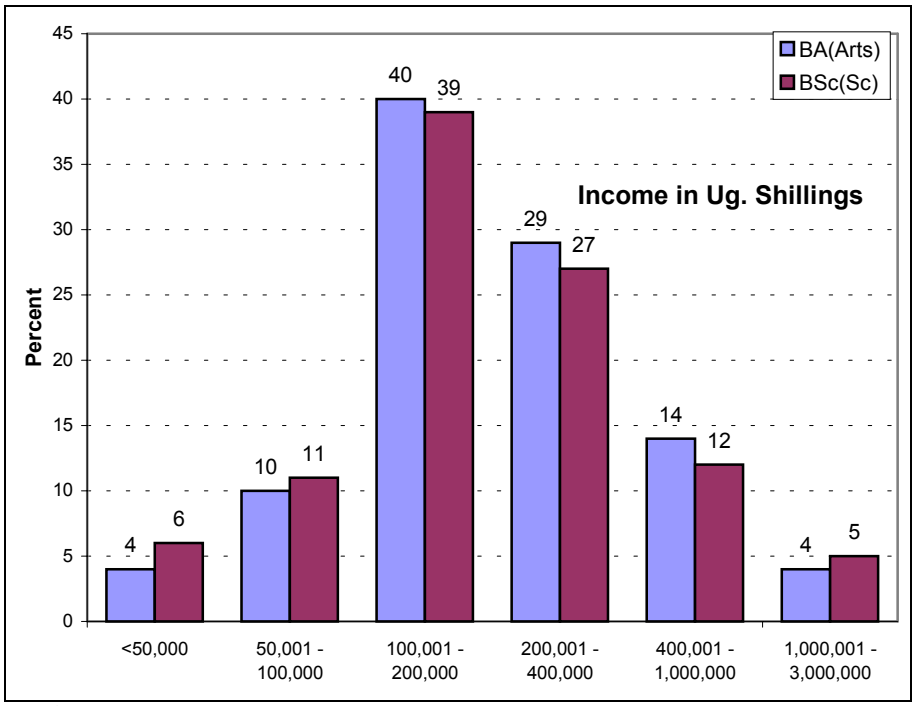
Question 24: Do you have subordinates?

Remuneration and Fringe benefits of Graduates

An examination of the primary and side income by course also revealed that, both FoA and FoS earned more less within the same range. (See Chart 2.)

According to Chart 2, 17% of the FoS earned Shs 100,000 or less per month. The corresponding percentage for FoA graduates was 13%. The majority of graduates earned within the range of Shs 100,000 and Shs 400,000. 66%, for FoS and 68% for BA. At the apex of the income structure 17% of BA graduates earned between 400,000 and 3,000,000 against 17% for FoS graduates. In general, the earning level was within the same range although the FoA graduates tended to be more concentrated in the higher income bracket. However the FoS graduates had a higher percentage of those who fell in the higher income bracket for secondary sources which edged out and possibly, surpassed the minor advantage by FoA.

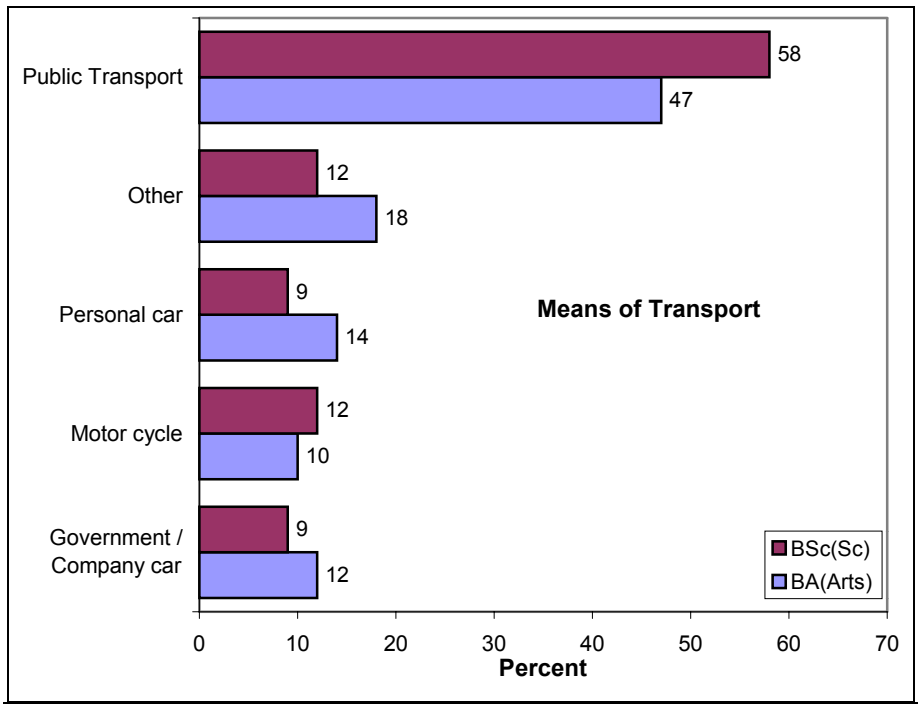
Chart 2 : Income in Ugandan Shillings by Course of study



Question : Income

A further probing in to the material conditions of the graduates, using the proxy of access to either personal car or official car, revealed that the percentage of FoA graduates with cars was more than that of FoS graduates. According to Chart 3, 25% of FoA graduates had either personal cars or official cars against 18 % for FoS graduates. This tends to reinforce the earlier finding that the percentage of BA graduates in top management positions was much higher than that of the FoS graduates.

Chart 3 : Means of Transport by Course of Study



Question : Which of the following means of transport do you use from home to office?

Similarly the gender car accessibility also tends to be skewed in favour of male graduates according to Table 11.

Table 11: Means of Transport by Gender and Course of Study (percent)

	Gender and Course of Study				Total
	Male-BA	Female-BA	Male-BSc	Female-BSc	
Personal car	12	7	19	15	12
Government/Company car	9	9	16	5	10
Motor cycle	13	13	3	10	10
Public Transport	47	57	46	65	50
Other	19	14	17	5	16
Total	100	100	100	100	100
Count (n)	(158)	(95)	(70)	(20)	(343)

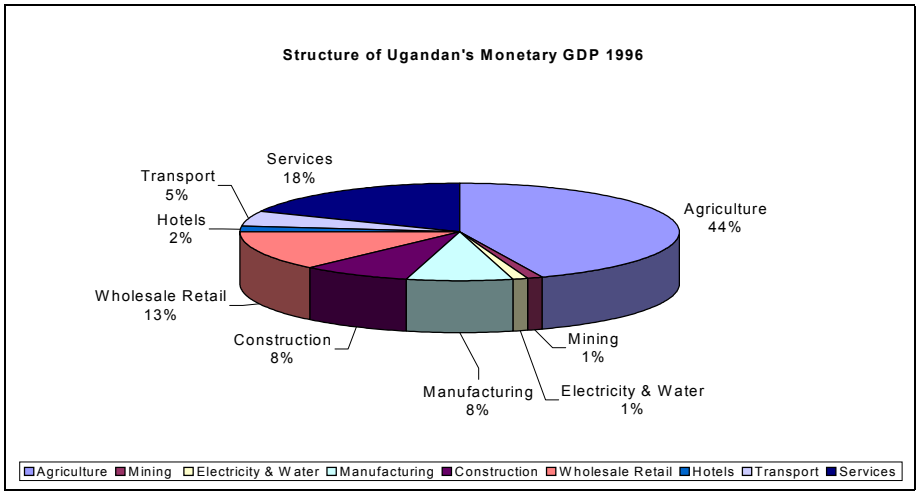
Question 27: Which of the following means of transport do you use from home to office?

According to Table 11, 21% of male BA graduates had personal or official cars against 16 % female BA graduates . A Similar pattern was also found in the Science graduates where 35% male graduates had personal or official cars against 20% female graduates. Clearly male graduates from both FoA and FoS degrees had more chances to acquire personal or official cars than their female counterparts.

JOB REQUIREMENT AND USE OF QUALIFICATION.

The match between the qualification and the job requirement is at the heart of the debate on higher education and work. The critical issue is whether the first degree training should be professionalised to impart skills or it should provide general education to prepare graduate to respond to their specific circumstances. Should graduates be trained to train them selves or they should be equipped with specific vocational skills as demanded in the labour market of the day? Are the demands of the labour market precisely known? Will the economy remain static so that the same demands of today continue tomorrow? For example in Uganda today we have a big peasantry agricultural sector which according to Chart 4 was 45% If we go by the demands of the labour market today we may gear the university education to peasantry economy! What drives the other one - the University or the economy?"

Chart 4 : Structure of Uganda's Monetary GDP 1996



Use of Professional Knowledge and Skills

The graduates were asked to state the extent to which they used knowledge acquired during the time of study at the university using a scale of 1-5 where (1) was to a very high extent and 5 not at all.

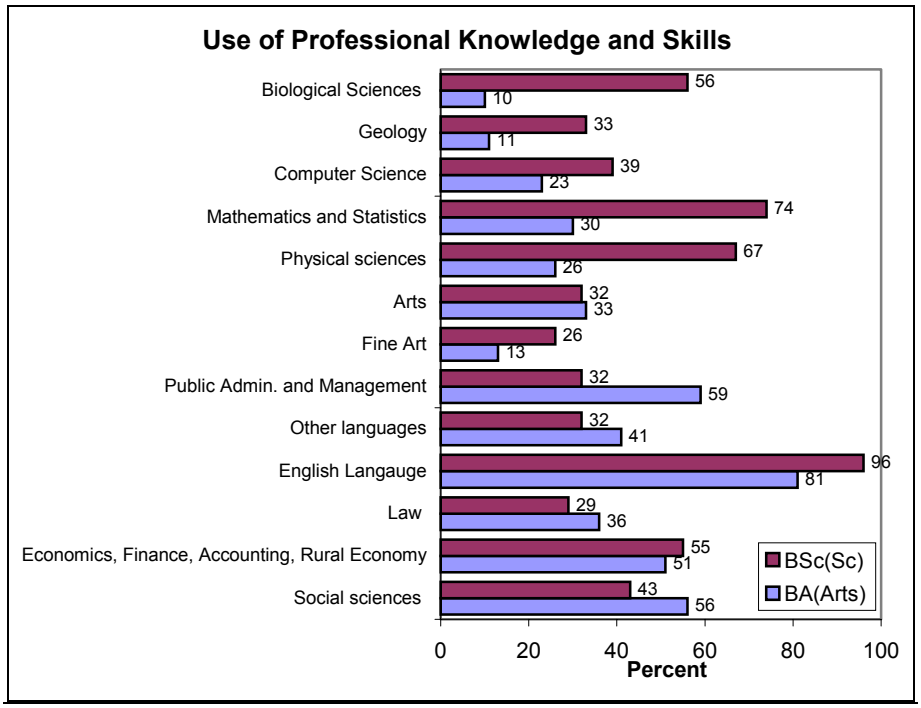
According to Chart 5 the FoA graduates ranked highly those disciplines which they took while the FoS also ranked theirs highly. Thus for BA graduates, subjects such as social Sciences, Economics, Law and Languages were given high approval while the BSc graduates exhibited a similar pattern of assessment for subjects such as Mathematics, and Biological Sciences.

There are however exceptions to generalisation; the most striking one being physical sciences and Economics, Finance and Banking. According to Chart 5 the FoA graduates' rating for Physical Science was slightly higher at 33% for response 1 and 2 as against FoS with 32%. On the other hand, the FoS graduates gave a higher approval of the applicability of Economics, Finance and Banking at 55% for the response 1 and 2 against 51% for the FoA. This could be taken to be an indication that there were a considerable number of the graduates who were placed in jobs demanding just the level of education rather than specialised disciplines, on the one hand or those who had been misplaced.

The English Language came out best in the assessment by both FoS with 96% rating of response 1 and 2 and FoA with 80%. It is however quite striking but not unexpected that the rating by FoS was more positive than that of FoA. This is because most scientific terminologies are difficult to translate in local languages and hence the English language is indispensable for FoS graduates unlike humanities disciplines which can be easily translated.

The rating for Computer Science was also quite striking with 74% for FoS and 30% for FoA. First, prior to 1995/96, computing for undergraduate was only attainable in some disciplines in the Faculty of Sciences. So, unless the FoA graduate had undertaken post graduate degrees, or went to computing institutions, they would never have got training in computing. It is therefore quite plausible that FoS graduates should give a higher approval of computing than FoA.

Chart 5 : Use of Professional Knowledge and Skills Acquired during Studies by Course of Study



Question : To what extent do you use knowledge acquired during your studies at Makerere University in the following areas (if applicable) for your present job? Scale of answers from 1 = to a very high extent to 5 = not at all.

The other possibility is that the majority of establishments where both FoS and FoA graduates worked were not using computers. Apart from large establishments, most of the organisations and enterprises are not using computers in Uganda. The schools which are the largest destination for the graduates normally have one computer in the head-teacher's office and it is not accessible by the teachers. The low computerisation rate both in the university and also in the work places may explain the low ranking of computer Science especially by FoA graduates.

A look at the trend of applying technical knowledge learnt in Table 12 reveals an outstanding improvement in the applicability with the exception of English language, and Mathematics and Statistics. The rest of fields were being more and more applied as time went by. For example the rating of the utilisation of Economics, Finance and Banking improved from 41% to 56% between 1983/89 and 1994/96 while physical science improved from 22% to 45% during the same period.

Computer Science had unique pattern according to Table 12. Its rating for response 1 and 2 started at the peak level of 63%, in 1983-89 then it plamated to 36% for the generation of 90-91 and then it started to climb up to 50% for the youngest cohorts of graduates of 1994/96. This pattern clearly reveals that the period 90/91 was the lowest ebb of academic degeneration of Makerere University. It is also feasible that the older generations in higher positions of responsibility appreciated the use of computers more than the young generation. However, in later times, the rating for use of computers improved for the new generations as well.

The improving utilisation of technical knowledge learnt can be attributed to the growing modern sector which makes use of the specialised knowledge. Much as Uganda still has a small modern sector, it is never the less expanding and hence the greater use of specialised knowledge of graduates is capturing this effect.

Table 12: Use of Professional Knowledge and Skills Acquired during Studies by Year of graduation

	Year of Graduation				Total
	83-89	90-91	92-93	94-96	
Social sciences (psychology, sociology, politics)	2.9	2.6	2.5	2.6	2.6
Economics, Finance, Accounting, Rural Economy	2.7	2.5	2.8	2.5	2.6
Law (elements relevant to subject)	3.4	3.2	2.8	2.6	3.0
Knowledge of English Language	1.6	1.8	1.8	1.6	1.7
Knowledge of other languages	3.5	3.7	2.3	3.3	3.2
Public Administration and Management	3.1	3.1	2.4	2.5	2.8
Fine Art	4.3	4.0	3.8	3.6	4.0
Arts (History, Geography, Philosophy, Literature and Journalism)	3.5	3.8	2.8	3.0	3.3
Physical sciences (Physics and Chemistry)	2.6	3.5	3.1	3.5	3.1
Mathematics and Statistics	2.4	2.9	2.7	2.7	2.6
Computer Science	3.7	3.7	3.2	3.1	3.5
Geology	4.4	4.3	3.8	3.7	4.1
Biological Sciences (Botany, Zoology)	3.5	3.9	3.0	3.9	3.6
Count (n)	(105)	(81)	(76)	(84)	(346)

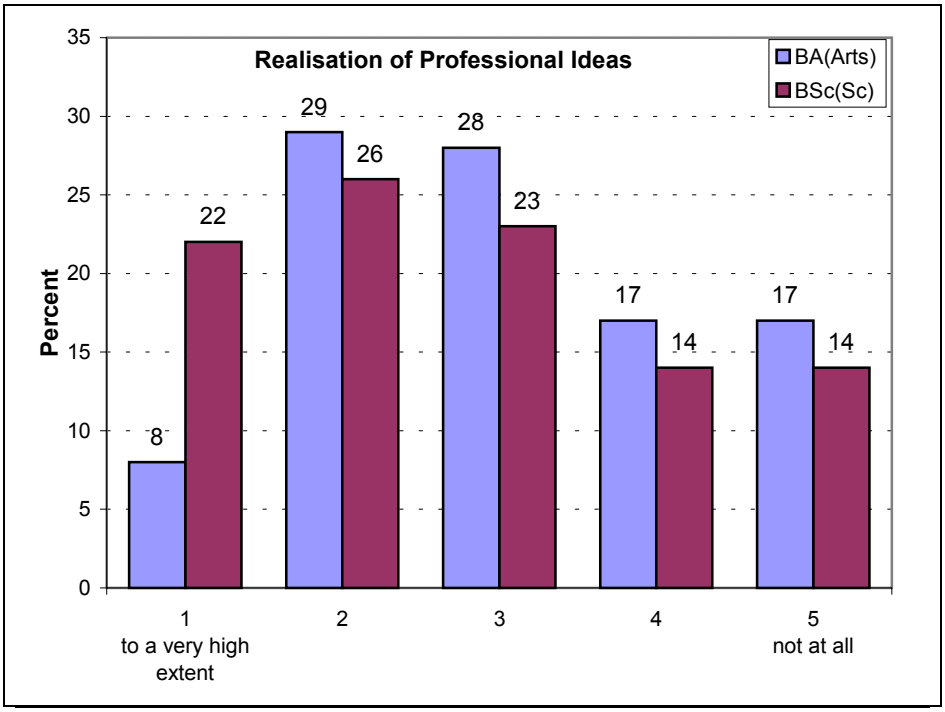
Question 33: To what extent do you use knowledge acquired during your studies at Makerere University in the following areas (if applicable) for your present job? Scale of answers from 1 = to a very high extent to 5 = not at all.

Realisation of Professional ideas

Asked to assess the extent to which they were able to realise the careers they expected at the time of graduation, the BSc with a mean score of 2.7 seem to hold a higher opinion than the BA with a mean score of 3.1. According to Chart 6 the percent score for response l and 2 for FoS was 48% while that of FoA graduates was 38%.

In Table 13 with gender break data by course for the graduates' assessment of their career expectation female with a percent score for response 1 and 2 for BA of 49% and BSc 45% were more satisfied with their expectations, than male with BA score (37%) and BSc. (37%).

Chart 6 : Realisation of the Professional Ideas by Course of Study



Question : To what extent have you been able to realise the career you expected at the time of graduation? Scale of answers from 1 = to a very high extent to 5 = not at all.

Table 13: Realisation of the Professional Ideas by Gender and Course of Study (percent; arithmetic mean)

	Gender and Course of Study				Total
	Male-BA	Female-BA	Male-BSc	Female-BSc	
Realisation of the professional ideas					
1 to a very high extent	9	22	8	20	13
2	28	27	29	25	28
3	30	23	28	20	27
4	19	15	14	10	16
5 not at all	15	12	21	25	16
Arithmetic mean	3.0	2.7	3.1	3.0	2.9
Count (n)	(162)	(98)	(72)	(20)	(352)

Question 36: To what extent have you been able to realise the career you expected at the time of graduation? Scale of answers from 1=to a very high extent to 5=not at all.

Realisation of career expectation has a set of factors behind it. First it reflects the ambition and aspiration of graduates. It seems the BA graduates are more ambitious than their FoS counterpart and this may be the reasons why they feel less satisfied with their career achievement. Other wise given that the BA graduates in some cases were doing as well as the BSc and in some respects even better, it would be difficult to find a satisfactory explanation for being less satisfied with their career achievement.

Secondly, and in addition to ambition, the group looks at itself in relation to its reference group. It would appear that the women graduate are more satisfied than men not only because they are less ambitious than them, but also because in comparison to their fellow women who are less educated, they are stars. Women are still more disadvantaged in many respects and to a certain extent oppressed by cultural attitude. Those who attain higher education leap-frog so many encumbrances-from being an oppressed group to a new height of freedom at par with men. When graduate women compare themselves with the illiterate women folks, they have a cause to be more satisfied.

Finally career satisfaction also, depend on specific work conditions of each establishment where the graduate work. This includes the type of management, the degree of freedom, the motivation system of the establishment and the general culture in the organisation. All these factors must be included in the complex equation for explaining the responses on career satisfaction in Table 14.

General Professional Satisfaction:

The general professional satisfaction and appropriate use of the qualification also takes the same pattern in Tables 14, 15 and 16 with that of Science still a head of Arts, women feeling more professionally satisfied than men.

Table 14: General professional Satisfaction by Course of Study (percent; arithmetic mean)

	BA(Arts)	BSc(Sc)	Total
General professional satisfaction			
1 to a very high extent	8	19	11
2	27	34	30
3	39	28	35
4	17	13	16
5 not at all	9	5	8
Arithmetic mean	2.9	2.5	2.8
Count (n)	(238)	(119)	(357)

Question 38: Altogether, to what extent are you satisfied with your professional situation? Please also take into account in your statement any professional sidelines. Scale of answers from 1 = to a very high extent to 5 = not at all, 9 = no answer.

Table 15: General Appropriateness of the Professional Situation by Course of Study (percent; arithmetic mean)

	BA(Arts)	BSc(Sc)	Total
General appropriateness of the professional situation			
1	18	19	19
2	36	37	36
3	23	26	24
4	15	11	14
5	7	8	7
8	0	0	0
Arithmetic mean	2.6	2.5	2.6
Count (n)	(228)	(112)	(340)

Question 39: To what extent is your position and status appropriate to your level of education? Please take into account all aspects which you think are important, for example the admission requirements for a profession, the chance of using qualifications, the professional and social position, the further professional perspectives, etc. Scale of answers from 1 = completely to 5 = not at all.

Table 16: General Professional Satisfaction by Gender and Course of Study (percent; arithmetic mean)

	Gender and Course of Study				Total
	Male-BA	Female-BA	Male-BSc	Female-BSc	
General professional satisfaction					
1 to a very high extent	9	21	4	10	11
2	26	34	29	35	29
3	38	28	42	25	36
4	19	11	12	25	16
5 not at all	8	5	12	5	8
Arithmetic mean	2.9	2.4	3.0	2.8	2.8
Count (n)	(160)	(99)	(73)	(20)	(352)

Question 38: Altogether, to what extent are you satisfied with your professional situation? Please also take into account in your statement any professional sidelines. Scale of answers from 1=to a very high extent to 5=not at all, 9 = no answer.

ASSESSMENT OF EMPLOYMENT AND WORK.

While the graduates material condition which was discussed in chapter 6 is significant, the total sum of their success and satisfaction includes several other non quantifiable characteristics. This section takes up those psychological aspects which also constitute an indispensable component of the motivation equation.

One possible approach to address this section would be to use Maslows hierarchy of needs. The assumption would be that chapter 6 took care of the physiological need by addressing the graduates material condition and this chapter would tackle the rest of the hierarchy. However, an exclusive Maslows hierarchy of needs approach may not exactly bring out the most pertinent issue related to the assessment of employment and work and we shall therefore examine it under the following broad topic:

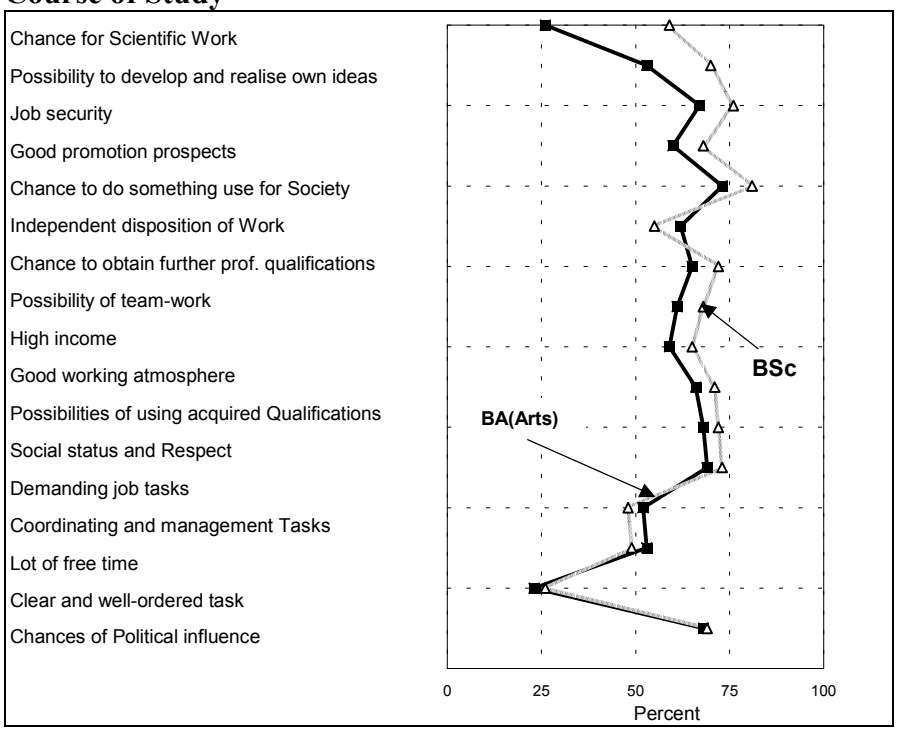
- social/security needs
- professional satisfaction
- attitude to self employment
- anticipated career changes.

Social Security Need

Under social security need, we consider job security, income, good working atmosphere and promotion. The classification again is not water tight for there are broad areas of overlapping which are also prevalent in Maslow's hierarchy.

According to Chart 7, the FoS graduates assessment came out slightly better in all the above 4 aspects. For example, on job security while the best rating of response 1 and 2 constituted 76% that of FoA was 67%. On income the FoS best score constituted 65% against 59% for FoA

Chart 7 : Importance of Characteristics of Occupation by Course of Study



Question 42: How important are the following different characteristics of an occupation for you personally? Scale of answers from 1=very important to 5=not at all important.

A further breakdown of data by sex, in Table 17 reveals a slightly similar pattern for female versus male graduates of both FoS and FoA. In all the 4 cases the female graduates gave a higher approval of the social security variables. For example on job security, the best rating of response 1 and 2 constituted 75% for female FoA graduates against 64% for male FoA graduates while that of FoS was 77% for female against 70% for male.

Table 17: Importance of Characteristics of Occupation by Gender and Course of Study (percent; responses 1 and 2)

	M. BA	F. BA	M. BSc	F. BSc	Total
Independent disposition of work	63	59	59	36	59
Chance for scientific work	32	62	12	45	39
Clear and well-ordered tasks	72	70	61	64	68
Possibilities of using acquired qualifications	65	73	76	68	70
Job security	64	75	70	77	69
Social status and respect	67	72	69	77	69
Possibility to develop and realise own ideas	53	69	54	73	59
Good working atmosphere	65	71	71	73	68
Chance to obtain further professional qualifications	61	74	75	64	68
High income	59	63	65	77	62
Chances of political influence	27	18	14	40	23
Demanding job tasks	58	47	36	56	50
Good promotion prospects	57	67	64	75	63
Lot of free time	19	29	29	14	24
Co-ordinating and management tasks	53	51	52	40	52
Possibility of team-work	58	71	70	55	64
Chance to do something useful for society	76	84	66	65	76
Count (n)	181	111	82	22	396

Question 42: How important are the following different characteristics of an occupation for you personally? Scale of answers from 1 = very important to 5 = not at all important, no answer.

Professional Satisfaction

For the purpose of this study, professional satisfaction as examined from the perspective of the characteristics in Chart 7 includes the following:

- Independent disposition of work
- Chance for scientific work
- Clear and well ordered tasks
- Use of acquired qualifications
- Realisation of own ideas
- Chance to obtain father professional qualification
- Demanding job tasks
- Co-ordinating and Management tasks.

The pattern of assessment according to Chart 7 was that apart from the following characteristics where the FoA graduates held a higher opinion than FoS graduates; FoS graduates revealed slightly better ratings:

- Co-ordinating and Management Tasks
- Demanding job tasks
- Independent disposition of work

From the fare going discussion, a pattern begins to emerge where by:
(i) FoS graduates are:

- more security in their jobs and therefore more satisfied.
- more averse to risks such as demanding job tasks and co-ordinating and Management Tasks.
- more oriented to professional growth including well ordered tasks, use of acquired qualifications and
- realisation of own ideas.

(ii) FoA graduates on the other hand are more ready for more demanding job tasks including management, are less secure in their jobs and have slightly reduced chances of professional growth and remaining in their discipline. However, the fact that the graduate of FoA had less chances to :

- realise their own ideas
- use of acquired qualification

Could be viewed as a reflection of the declining opportunities for the proportion of demanding jobs for FoA graduates due to growing number of output. This implies an increase in number of graduates in positions and tasks not necessarily requiring a degree.

A gender break of the data in Table 17 also reveals that the above pattern was being driven by a male dominance of the FoA while the female FoA graduates were more closer to the FoS graduates. The converse for female FoS being some how nearer to the male FoA is also observed in some characteristics. For example from Table 17 the FoS female graduates revealed stronger traits of ambition than their FoS male counter part in the following:

- demanding job tasks
- clear well ordered tasks

- chances for political influence
- lot of free time

Anticipated Career Changes:

Finally the graduates were asked to assess employment and work in light of anticipated changes within the next three years. According to Table 18, there were a number of respects in which both FoA and FoS graduates were in agreement and also those where they deferred. The most popular step for the two categories in the graduates careers was career advancement pinpointed by 28 Bsc. and 22 BA graduate. This is also closely related to study either part time which was reported by 30 BA or full time demanded by 17 FoS graduates. So both FoA and FoS graduates were in agreement on assigning career advancement first priority.

Table 18: Anticipation of Career Changes by Course of Study (arithmetic mean)

	BA(Arts)	BSc(Sc)	Total
no major change	17	21	18
to change my employer	28	11	22
to change my area of work assignment	21	11	18
to start a full-time course of studies	19	17	18
to study part-time	30	13	24
to increase sideline activities	25	23	24
to reduce sideline activities or to limit them	2	2	2
to start my own business	17	22	19
not to be self-employed any longer	6	3	5
to get employed	6	7	7
to discontinue employment	1	1	1
to achieve a career advancement	22	28	24
to achieve a more secure occupation	3	8	5
to achieve better use of my qualifications	9	12	10
to obtain higher income	12	15	13
to start a less strenuous job	1	0	1
to obtain a better chance of pursuing continuos learning	5	12	7
to take over a job more closely linked to my study and expe	1	8	3
other	1	1	1
Total	229	215	224
Count (n)	(247)	(130)	(377)

Question 44: What kind of Career changes do you anticipate within the next three years? Multiple reply possible.

The second major anticipated change by both FoA and FoS graduates was to increase sideline activities which is also closely related to starting their own business activities. This rhymes with the job insecurity which they expressed earlier on.

The third most important anticipated change was different in each degree program. The FoA graduates looked up to changing from their current areas of work while the FoS graduates were for "no change" .The FoS graduates seemed to be more satisfied with their present condition while the FoA category was on the look out for better alternatives which could be due to their ambition.

According to Table 19, while the male FoA , graduates did not differ very much from the group, the female FoA graduate's response pattern was more less similar to the FoS aggregate response. The female FoA graduates third most popular step was to achieve career advancement in the same position.

Table 19: Anticipation of Career Changes by Gender and Course of Study (arithmetic mean)

	Gender and Course of Study				Total
	Male-BA	Female-BA	Male-BSc	Female-BSc	
no major change	18	23	16	9	18
to change my employer	31	7	21	27	22
to change my area of work assignment	21	8	25	23	18
to start a full-time course of studies	19	17	18	18	18
to study part-time	32	13	29	14	25
to increase sideline activities	25	24	25	18	24
to reduce sideline activities or to limit them	2	1	1	5	2
to start my own business	15	21	22	27	19
not to be self-employed any longer	0	3	19	5	5
to get employed	5	5	9	18	7
to discontinue employment	1	1	1	0	1
to achieve a career advancement	19	31	30	18	24
to achieve a more secure occupation	4	9	3	5	5
to achieve better use of my qualifications	12	12	5	14	10
to obtain higher income	10	16	17	9	13
to start a less strenuous job	1	0	0	0	1
to obtain a better chance of pursuing continuos learning	4	14	6	5	8
to take over a job more closely linked to my study and expe	1	8	1	5	3
other	1	1	0	0	1
Total	221	214	248	218	224
Count (n)	(165)	(108)	(77)	(22)	(372)

Question 44: What kind of Career changes do you anticipate within the next three years? Multiple reply possible

This again confirms the earlier line of argument that the women BA graduate were more conservative or less ambitious than their male counterparts. However, the female FoS graduate depicted a different attitude altogether, from the BA women and the general FoS attitude .To the FoS women graduates their most important anticipated steps in order of preference were:

- To start my own business 27.

- To change my employer 27.
- To change my area of work assignment 23.

The FoS women graduate, did not attach much importance to the continuity of their present status. These could also be said to be either ambitious or dissatisfied with their career. How could it be that the same FoS programme moulded women differently from men ? The absolute number for women is perhaps too small to be the basis for such a radical conclusion . However this findings deserves further study.

Attitude towards self employment

The respondents were asked to give their opinion on self employment using a scale of 1-5 where 1 was the highest approval and the results are shown in Table 20.

Table 20: Rating of Self Employment by Course of Study
(percent; responses 1 and 2)

	BA(Arts)	BSc(Sc)	Total
Persons having their own business/being self-employed achieve a relatively high income	46	49	47
Persons having their own business/being self-employed have long working hours	64	58	62
Graduates establish their own business/are self-employed mainly because they have not found any other employment	53	45	50
Higher education does not really prepare graduates sufficiently for own business/to be self-employed	62	42	55
Favourable long-term job prospects exist for persons having their own business/being self-employed	40	46	42
Count (n)	(224)	(116)	(340)

Question 43: How far do you agree with the following statements concerning work in one's own business/being self-employed? Scale of answers from 1 = completely applicable to 5 = not at all applicable.

Generally the FoS graduates gave a slightly higher approval of self employment than FoA graduates. According to Table 20 the proportion which felt that self employed graduates earned higher income was 49% from FoS graduate against 47% from FoA. Similarly FoS graduates were less threatened with the need for long working hours by self employment while their disagreement with the statement that Higher education does not prepare graduates for work was less pronounced at 42% against 62% .

However, the margin of favourable rating was very small which indicates that both FoA and FoS graduates did not highly rate self employment.

Another tracer study on Makerere graduates found out that the self employed graduates were earning less than those employed in both public and private sector.(Mayanja, 1997). The self employed graduates in newly established enterprises by young graduates faced a number of odds which made them unable to be as lucrative as employment in the public or private enterprises.

Their problems included:

- shortage of cash and therefore low working capital
- effect of inertia
- operating below economies of scale due to size
- lack of experience
- inability to use full potentialities.

One of the critical elements in self employment is initiative and creativity which we earlier identified to be part of the general BA and Bsc. programs. Also self employment requires versatility in knowledge. It is one thing to be fully equipped with these skills and also another thing to venture into it. Venturing into self employment must be related to the graduates attitude which is less easily traceable in the graduates training.

Self employment is more demanding and therefore calls for hard work. At the same time, it is not likely to be lucrative in the short run due to the factors enumerated earlier. It requires a lot of patience and sacrifice because its benefits are long-term and this is why most graduates opt for the line of least resistance through employment in the service of others at least as a prerequisite to capital mobilisation.

In conclusion therefore, both FoA and FoS graduate have more less the same attitude towards self employment and they were all averse to the risk it entails. This undermines the augment that the FoA graduates are more ambitious than the FoS. If they were really ambitious they ought to be better disposed to self employment.

Impact of FoA and FoS on the economy

By way of summing up, we examine the graduates impact on the economy. Our simplified method of measuring impact is to relate the absorption rate of FoA and FoS to the share of the different sectors in the total GDP.

Table 21 which analyses the graduates absorption in different sectors of the economy, reveals that the university graduates still by-pass the main productive sectors where the majority of Ugandans are engaged. Agriculture which constitutes 44% of the monetary sector and 60% of the total GDP which includes the subsistence sector absorbed in 8% of FoS and 4% of FoA, giving an average of 6%. The FoS graduates absorption rate of 6% in mining was the only outstanding exception which could not be matched by FoA. Manufacturing, which constitutes 8% of the monetary GDP absorbed in 2% of FoA and 3% of FoS graduates.

On the other hand, public service which includes education, health, public administration altogether constituting 18% of monetary GDP and 14% of total GDP absorbed in 45% of both FoA and FoS. The banks and insurances with an estimated proportion of monetary GDP of 3% absorbed a disproportionately larger share of the graduates at 18% for FoA and 20% for FoS.

Table 21: Absorption rate of FoA and FoS Graduates by Economic Sector - Monetary and Non-monetary GDP 1996/97

Sector	Agric.	Manufc.	Mining	Constr.	Transp.	Trade	Banks Insur.	Service Govt., Educ.
Share in Monetary GDP	44	8	1	8	5	10	3	18
Share in Total GDP	60	6	1	6	4	8	2	14
Absorption of FoA	4	2	-	2	2	-	18	45
Absorption of FoS	8	3	6	3	4	-	20	45
Total absorption rate	6	2.5	3	2.5	3		19	45

Question : Own calculations

No figures are available for breakdown of GDP into the formal and informal sectors and neither the graduates survey probed this aspect. But if the GDP could be dissagregated into the formal and informal sectors and the absorption rate of FoA and FoS into these sectors qualified, it would take the same pattern as that of agriculture. Hence, very few graduates are impacting the informal sector and the rural agricultural sectors. Regrettably, therefore, the university's contribution to agriculture, industry, and construction which takes up 73% of total GDP of the economy is extremely limited. The FoS graduates performed slightly better but on the whole the University is not impacting the majority of Ugandans in the agriculture and the informal sector.

Although it is tempting to a portion the blame on the University on the basis that it is duty bound to serve society or the market, we are more inclined to believe that the problem has more to do with the structure of the economies in Africa. There may not be too much to be done to orient the University to the subsistence and informal sectors. Our view is that it is the subsistence and informal sectors that need to be re-organised in such a way as to be impacted by the University in terms of absorption of graduates and new technology adoption. It is beyond the scope of this study however to delve into the economy and how it should be structured to be impacted by the University.

CONCLUSIONS

This study was sparked off by the general feeling that the field of humanities which had expanded admission had become saturated with graduates and any further expansion in output would produce serious consequences. The Government and leading educationist had made repeated calls to discourage students from taking up humanities and instead opt for natural sciences and professional studies.

Science education however has failed to respond instantly to the higher education liberalisation drive and it is still locked up under the funding trap. The limited supply of science graduates would even make them more competitive in the job market.

On the other hand, humanities which were feared to be over saturated have responded positively to the higher education liberalisation in Uganda. The number of graduates in humanities which are feared to be in excess is even projected to increase further and double by the year 1999 from its pre-liberalisation level of 1996.

The general finding is that not with standing some differences here and there, the FoA graduates succeeded to get jobs as much as FoS graduate. The major differences noted were between graduates of various generations but not course. Thus FoS graduates had slightly better chances for securing jobs immediately after graduation but the FoA graduates had better chances for career growth and promotion to top management.

The main conclusion of the study therefore was that the graduates of the FoA were as competitive in the world of work as those of FoS. We must however put in some measure of caution and admit that the full impact of the graduates expansion in FoA is yet to be felt as the rate of expansion of intake has reached its maximum capacity by 1999. Its full effect three years later when they complete and invade the world of employment.

RECOMMENDATIONS

In light of the foregoing discussion, there is no proper grounds for fearing the on going expansion in the humanities. First the country cannot go wrong with a high quota of well educated persons, capable of spreading and absorbing of new knowledge. Education has not only quantifiable benefits but also externalities such as adaptability to changes, family planning and other values etc. After all, due to globalisation brain drain is no longer seen in a negative sense and we should not only think of the closed labour market of Uganda but the entire global labour market.

Secondly, the study reveals that the FoA graduates despite their number were as competitive as those of science. A study of the German economy shows that over 85% of the graduates are absorbed into the third or service sector in a developed economy.

The current curriculum response in the Faculty of Arts is a step in the right direction. Both depth i.e. 3.1.1 and breadth i.e. 3.2.2 of knowledge should continue to be pursued. There should however be greater flexibility and mobility from one course to another. Students should be given all kinds of options, within and outside the faculty. A combination of broad course that offers general knowledge and competency with one professional/vocational course that develops specialist knowledge and skills under the 3.2.2 degree structure would be an ideal mix. For example, those who want to take geography and tourism should do so while those who want to take tourism alone should also be given that option. Those who want to combine one subject in Arts such as economics and another subject in science such as statistics should also be facilitated. To this end, the on-going transfer from the term to the semester system with course unit and credit examination is also another step in the right direction. The semester system is more flexible and can accommodate all kinds of course combination including mobility from one faculty to another.

It is also recommended, that more post graduate training opportunities at both Masters degree and Diploma levels should be created. In the process, training at post graduate level should be largely professional oriented. The University should also intensify on short term training courses. However, the short term courses will make more sense if they are accommodated into the credit accumulation system to build up to an academic award for a Masters or a Diploma. They would be pursued for their intrinsic skill imparting value as well as for the purpose of upgrading the academic and professional level of the recipient.

FoS should revisit its curriculum and re-organise it to handle more than one cohort of students. Instead of having one group to study during day, the two groups could rotate to enable both groups to take theory as well as laboratory and field work so that it can create room for more private students.

It is possible however that even if science became more creative, the realistic costs of running laboratory/practical courses might be prohibitive. Considering the supply and demand of FoS graduates, characterised by slow adjustment process of the science education to the privatisation drive and the lack of any clear demand for science graduate in the employment world, there is need for more creativity and local orientation in designing science curriculum as well as affirmative action.

We are of the view that the lack of any clear advantage for scientist in the economy is not an indication of the deficiency of the science course but rather a symptom of a fundamental problem in the economy. There is therefore no question of abandoning the emphasis on investment in science education. The way forward is to build up a cadre of scientists of various specialities. It is the economy which must be re-examined right from the structural adjustment to the ongoing globalisation. While the structural adjustment programme had achieved Macro stabilisation, its impact on the production sector is highly doubtable. In the post World Bank initiated structural adjustment period, there may be need for another indigenous effort at structural reform to create a more production oriented economy which will absorb more scientists.

Government must commit itself to building on the demand side mechanisms and incentives to effectively utilise the science potentials of Makerere University. The market must be induced to send positive signals to the students that science education is paying so that the students can be enticed to sponsor themselves and meet the high cost of science education.

The education system or for that matter, science education and the economy can be compared to the egg and chicken. To stir the economy into vibrancy one can either intervene through human resource development or through the economy itself.

While there is wide consensus about the need for affirmative action to science, many people especially the politician who make the critical decision don't seem to know what type of affirmative action is feasible. The affirmative action to science education has got to come via the budgetary process. The most rational approach is to abandon the rigid line budget and adopt the unit cost based budget. The unit cost budget would make it possible to target science education. A realistic unit cost for FoS would take into account the chemical, equipment, industrial training and staff incentive would be worked out so that the government pays a generous package for sciences and also increases the number of students it sponsors at all levels. This would include sponsorship for post graduate levels where many programmes are running below capacity due to lack of students who can sponsor themselves.

Affirmative action to the manufacturing sector and to science and technology education is the way forward for graduates of FoS to tick in the employment world.

On this basis therefore intervention is advocated in science education as a starting point for the economy to leapfrog its present under development trap.

Finally, in order to improve on the fit between knowledge and skills of the graduates and the labour market demands, there is need for continuos research to the prevailing Socio-Economic conditions through surveys of the graduates and their employers. It may well be that the usefulness of periodic manpower surveys has been largely undermined by the privatisation drive and the best barometer for the labour market and the education systems output of graduates are the graduate/employer surveys. Universities in Africa must regularly conduct different graduates surveys to monitor the requirement on the ground in the labour market.

BIBLIOGRAPHY

Keysall P.K, Poole A., and Kuhu A. (1970) Six years After Sheffield UK Higher Education , Research Units ,Sheffield University U.K.

Kwesiga J.C.M (1992) Access of Women to Higher Education, An analysis of Inequalities , Barriers and Determinants PhD. D Thesis University of London.

Makerere University (1995/96) Recurrent Budge, Makerere University.

Makerere University (1996) Strategic Plan 1996/97-1998/99. Kampala

Makerere University (1997) Minutes of the special Council Meeting held on 11th June 1997. Kampala.

Makerere University Faculty of Arts (1997) Report of the Faculty workshop on strategic Management Planning. Kampala Uganda.

Makerere University (1997) Minutes of the 71st Meeting of the finance committee held on 27/06/97. Kampala.

Makerere University Faculty of Arts (1997) Revised day and Evening programs for the degree of B.A(Arts) Feb 1997. Kampala.

Makerere University (1997) Minutes of the 77th University Council Meeting. Kampala

Makerere University (1997) Review of the Implementation of Makerere University Strategic Plan 1996/97-19998/99. Kampala

Mayanja, M. (1992), Makererian in Rural in Development. Dissertation for Master's Degree in Economics Policy & Planning Makerere University.Kampala

Mayanja, M.K. (1997), `The social background of Makerere University students and the potential for cost sharing' Journal of Higher Education.

Ministry of Public Service, (1994), Outline Plan for the Reconstruction of Makerere University. Kampala

Opio F. and Obwoma M. (1996) Employment and Poverty Reduction in Uganda. EPRC Seminar Workshops and Conference Proceedings. Kampala.

Passi F.O., (1994) `Implementing Change to improve the Financial Management of Makerere University, Uganda No.82, IIEP/UNESCO, Paris

Plicht, H., Schdber, K. and Schveyer, F.(1994) Zur Ausbildungsadäquanz der Beschafligung von Hochschulabsolventinnen und -absolventen' Mitteilungen aus der Arbeitsmarkt-und berufsforschung, 27 pp 197-198

Schultz, T. (1988), `Education investment and returns' in Chenery H and Srinivasan TN (eds)" Handbook of Development Economics North Holla.

Selvin, H.C. and Hagstrom, W.O.: Determinants of support for civil liberties; British journal of sociology. Vol II, 1960

Tilaq, J.G.B. (1993), "Financing higher education in India: principles, practice and policy issues", in Higher Education, 26:43-67.

World Bank, (1993), Strengthening Uganda's Policy Environment for Investing in University Development.

World Bank, (1993), Higher Education: The Lessons of Experience.