This work is licensed under a
Creative Commons Attribution-NonCommercial-
NoDerivs 3.0 Licence.

To view a copy of the licence please see:
http://creativecommons.Org/licenses/by-nc-nd/3.0/

SOME EQUITY AND EFFICIENCY IMPLICATIONS OF THE EXPANSION OF HIGHER EDUCATION IN KENYA

The Results of a Tracer Study of
University of Nairobi Graduates

by
Rees Hughes

DISCUSSION PAPER NO. 288

INSTITUTE FOR DEVELOPMENT STUDIES
UNIVERSITY OF NAIROBI
P. O. BOX 30197
NAIROBI.

December, 1988

Views expressed in this paper are those of the author. They should not be interpreted as reflecting views of the Institute for Development Studies or of the University of Nairobi.

This paper is not for quotation without permission of the authors, as specified in the Copyright Act, cap.130, Laws of Kenya.

SOME EQUITY AND EFFICIENCY IMPLICATIONS OF THE EXPANSION OF HIGHER EDUCATION IN KENYA:

The Results of a Tracer Study of University of Nairobi Graduates.

ABSTRACT

This paper synthesizes the results of a study of a sample of 464 1970, 1975, 1979, and 1983 sociology, chemistry, maths, and commerce graduates from the University of Nairobi. Once traced, participants either completed a written survey or were interviewed concerning their post-graduation work and educational histories and their family backgrounds. Based upon the data generated, it was evident that the labor market for these graduates had become increasingly saturated by 1983. Permanent employment had become more difficult to secure and graduates found their education less necessary to perform the work required of them. When examined by field of study, it was apparent that commerce and chemistry graduates were somewhat insulated from these trends. Academic performance, which had provided virtually no advantage in the first three cohorts, did also appear to mitigate the effects of the competitive job market faced by the 1983 cohort. Similarly, until the 1983 cohort entered the labor force, family background had played an insignificant role. Only under competitive employment conditions was there a hint that family background was a valuable benefit. When examined on the basis of co-sex, graduates have comparable work experiences with comparable compensation (although there appears to be a functional limit as to how high a woman will be promoted and how much she will be compensated).

The findings of this study found little to suggest that the students attending the University of Nairobi were becoming less representative of the Kenyan population as a whole. When comparisons were made with earlier data higher education in Kenya appeared to be a very open system. This, in fact, may be a positive outcome of educational expansion.

The paper concludes with a discussion of the equity and efficiency implications of continued university-level expansion. Can expanded numbers of university graduates be absorbed efficiently into the Kenyan economy? Will the continued expansion of university spaces improve or maintain equity?

If there is one constant that has characterized education in sub-Saharan Africa since independence, it is the prolific growth of the availability of educational opportunity at all levels. In the period from 1970 to 1982, the number of secondary students in sub-Saharan Africa more than quadrupled, and the tertiary enrollments more than tripled (UNESCO, 1984, pp. 11-13). However, African economic growth and employment generation in the past decade can be more precisely described as "inconsistent". In the 1970s, fifteen countries in sub-Saharan Africa recorded negative per capita income growth rates. Although the gross domestic product (GDP) of the countries of sub-Saharn Africa grew at a very admirable 5.5 percent rate annually from 1970-1975, the next five years saw that rate drop to 3 percent and, in the first half of the 1980s, decline at a rate of 1.4 percent annually (World Bank, 1986, p. 57). As a result, the rapidly rising supply of highly educated manpower has exceeded the demand for university graduates generated by most African economies. The labor market facing graduates is highly competitive. Graduates are neither as fortunate nor as few as were their counterparts of the mid-1960s.

This paper examines the implications of educational expansion for the postgraduation employment experiences of university graduates in Kenya. In many ways, Kenya typifies the African experience. For the past 2 decades, the University of Nairobi has grown in excess of 15 percent annually. With the double intakes of the past two years, the increases are virtually exponential. Concurrently, private-sector employment has grown at 2.5 percent annually (Vandemoortele, 1984). These trends, which are more elaborately detailed in Figure I, suggest a growing saturation of the labor market. How has this saturation affected the efficient absorption of University of Nairobi graduates into the economy? To what extent has family background begun to

---

The fieldwork reported in this paper would not have been possible without the initial support of the Institute for Development Studies the University of Washington, and the US. Department of Education. The opportunity to distil the results of this research and produce an IDS Occasional Paper a has occurred because of the generous and flexible support of the Spencer Foundation and Humboldt State University.

influence postgraduation experiences? Has continued expansion of university opportunity mitigated the tendency for higher education to become an institution for society's privileged?

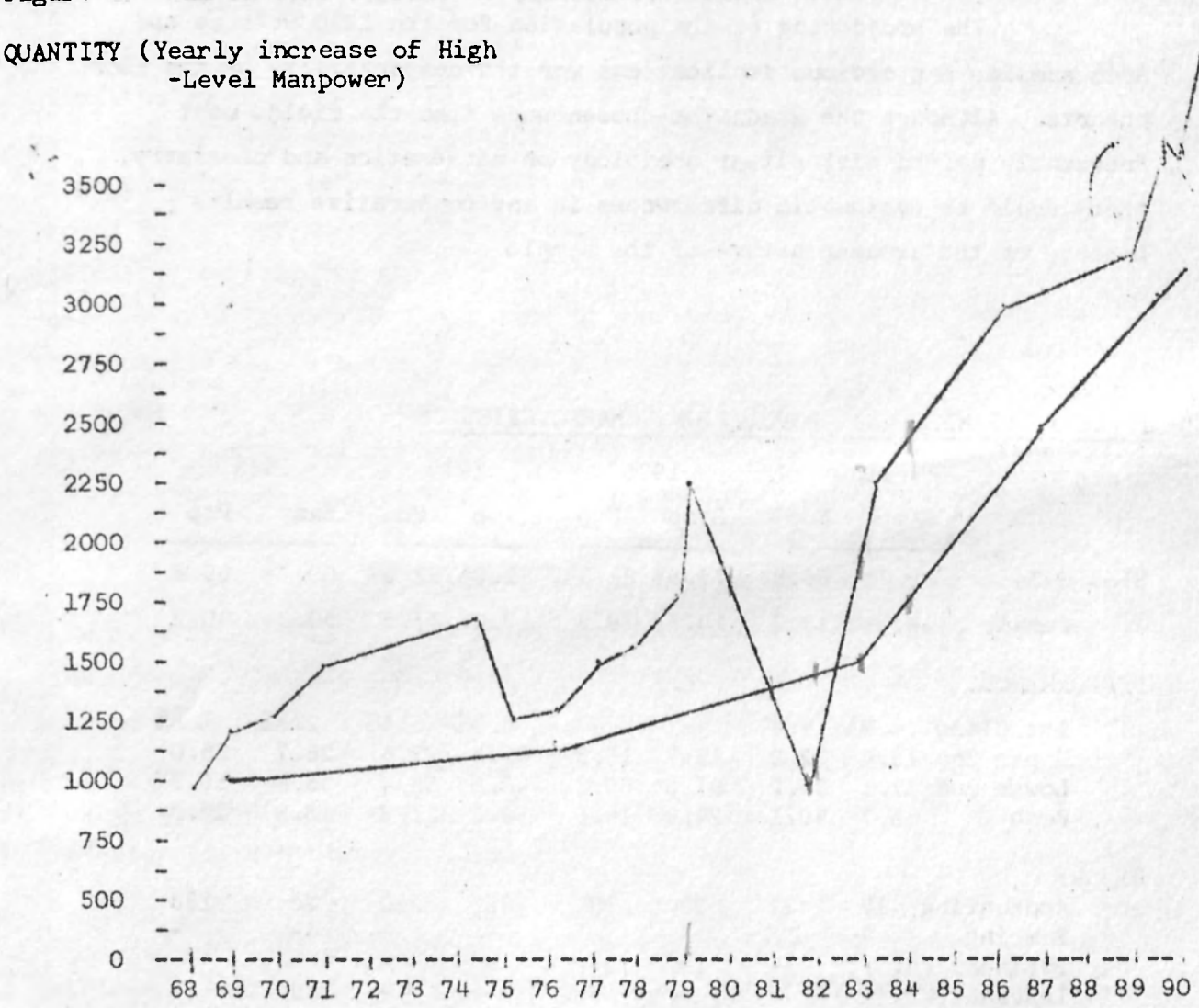
This paper synthesizes the results of fieldwork that is fully reported in Hughes (1986). In addition, extensive use is made of related writing on this topic (Hughes and Wahome, 1985; Hughes, 1985; Hughes, 1987, Hughes and Mwiria, 1988). In addition, the work of Rastad (1972), Bennell (D 81), and Njenga (1986), each of whom examined University of Nairobi graduates, will be used to supplement the data available through this study.

METHODOLOGY

In order to examine these questions a sample of 464 University of Nairobi graduates were selected from the years 1970, 1975, 1979 and 1983. Kenyan graduates were randomly drawn from the fields of sociology, maths, chemistry, and commerce. If graduates from other faculties such as medicine or agriculture had been chosen, it is quite possible that the results would have differed considerably.

Graduates were selected from only three faculties (Arts, Science, and Commerce) to facilitate the tracing process. These faculties present the three central instructional foci of the University, that is, education in the arts, sciences , and the professions. From the Faculty of Arts, the 1975, 1979, and 1983 cohorts were selected entirely from graduates who completed either a 3-1-1 or 3-2-2 program in sociology. The 1970 Arts sample was, by necessity, more broadly drawn because of the insufficient numbers of graduates completing a degree in sociology. The 1970 sample, therefore, included graduates in sociology, government, and economics. From the Faculty of Science, the 1975, 1979, and 1983 cohorts were drawn exclusively from 3-1-1 or 3-2-2 mathematics and chemistry majors. The 1970 Science sample, again because of the limited numbers of graduates, included the population of mathematics, chemistry, physics, and geography graduates. All four Faculty of Commerce cohorts were randomly drawn from the entire commerce graduating class. Table 1 details the characteristics of the sample.

Figure 1. THE GROWING SURPLUS OF UNIVERSITY-TRAINED GRADUATES IN KENYA



NB: The drop in supply of high-level manpower for 1982 reflects the fact that there were no graduates from the University of Nairobi in this year. The institution was closed for 14 months following the attempted coup in August, 1982. The dramatic increase in the supply of graduates in 1990 marks the first of several years when the graduates from the large intakes of 1987 and 1988 will begin to flood the labor market.

Demand for Univ. Grads:	1969	1971	1972	1976	1980	1983	1987	1990
Increase in high-level manpower	926	...	1,012	1,139	1,282	1,401	2,150	2,425
Retirement	140	...	195	268	366	428	538	630
TOTAL	1,066	...	1,207	1,407	1,648	1,829	2,688	3,055
Supply of Univ. Grads:								
Local graduates	309	556	...	946	1,044	1,463	1,728	5,500
Overseas graduates	901	912	...	498	765	850	1,200	1,200
TOTAL	1,210	1,468	...	1,444	1,809	2,313	2,928	6,700

*See (1) for sources and derivations of the above figures.

The broadening of the population for the 1970 Science and Arts samples has obvious implications for the comparability of the four cohorts. Although the graduates chosen were from the fields most frequently paired with either sociology or mathematics and chemistry, there could be systematic differences in any comparative results because of the broader nature of the sample.

TABLE I: SAMPLE AND POPULATION CHARACTERISTICS

	1970		1975		1979		1983	
	Samp	Pop	Samp	Pop	Samp	Pop	Samp	Pop
SEX: Male	85.7%	86.8%	75.5%	81.8%	81.0%	82.5%	69.7%	69.8
Female	14.3%	13.2	24.5	18.2	19.0	17.5	30.3	30.2
PERFORMANCE:								
1st Class	4.8%	4.4%	-	-	5.1%	5.6%	2.5%	1.5%
Upper 2nd	12.4	12.3	13.7	15.6	36.8	27.8	26.7	26.0
Lower 2nd	37.1	34.2	61.5	69.8	49.6	55.4	55.8	59.7
Pass	45.7	49.1	24.8	14.6	8.5	11.2	15.0	12.8
MAJOR:								
Accounting	17	22	26	72	35	220	25	133
Banking	7	11	-	-	-	-	-	-
Business Ad.	-	-	14	27	-	-	-	-
Insurance	-	-	-	-	-	-	8	38
Marketing	8	8	-	-	5	40	5	25
Personnel	1	1	-	-	-	-	-	-
3-1-1 Soc	-	-	2	6	7	16	3	14
3-2-2 Soc	13	13	37	62	31	62	36	200
Other Arts	26	26	-	-	-	-	-	-
Maths	9	9	12	12	20	36	27	72
Chemistry	17	17	19	19	19	61	16	57
Other Sci	4	4		-	-	-	-	-

The data collection essentially involved three over-lapping phases: tracing or locating the graduates, sending the instrument and the associated follow-up materials, and selected interviews with graduates, faculty, and government officials. The tracing methodology in particular warrants elaboration. It is a labor-intensive but invaluable research strategy.

The tracing process was a multi-pronged effort. University records provided the permanent address that 1979 and 1983 graduates had submitted in order to receive their final grades. Also available were permanent mailing addresses graduates used when applying to the University for their initial admittance. Although this information proved to be very helpful in locating the 1983 cohort, its usefulness diminished rapidly for the 1979 cohort. For those few 1975 graduates for whom this information was used, it generated virtually no response. This outcome is, to a large degree, a reflection of the nature of the addresses many Kenyans utilize. Many Kenyans receive mail through their employer's postal box or, when applying for admission to the University, through the postal box of their secondary school. Moreover, tracing is further complicated in the case of University applicants because students- often attend secondary school outside of their home district. Others, particularly the addresses used by graduates waiting for their final grades, receive their mail in care of relatives or friends who are working in Nairobi. This mail will generally go to the employer of that friend or ralative. To trace people based upon these addresses required that an elaborate chain of people still be in place. For the earlier graduates, it was highly unlikely.

For the 1970 and 1975 graduates the Kenya telephone directory provided a number of leads. These graduates were more likely to have established permanent addresses and acquired home telephones (although it is still not that common). Undoubtedly more could have been located in this fashion if it was traditional in Kenya to adopt a family name. Therefore, the surname denoted at the time of graduation was often an arbitrary designation and was frequently dropped, rearranged, or changed as one established a professional identity. For example, Billy Cash Wandera became Wandera Ogana in order to "provide his family with an acceptable surname" that would not be changed each subsequent generation (Ogana, 1985). It is a practical necessity in a society increasingly impacted by Western ways.

The most useful tracing strategy was what Keisall, Poole, and Kuhn (1970) labelled the 'snowball" technique. Once graduates were successfully located, they were mailed a letter requesting their assistance in locating the other graduates from their faculty and year who had also

been selected as a part of the sample. Each letter included an appropriate list of the forty graduates with space for home addresses, employer, and phone numbers:

1. Wandera, Billy Cash _____ (Home Address) _____ (Home Phone)

_____ (Employer) _____ (Work Phone)

From the 145 responses received from this mailing, a vast number of leads were generated.

In addition, faculty and staff from each relevant academic area were also asked to provide any information they had regarding these graduates. With the exception of the administrative assistants, this effort produced few leads. Contact was also made with personnel administrators in the Teachers Service Commission (TSC), the Ministry of Culture and Social Services, the Office of the President (oversees the assignment of district officers), and the Public Service Commission (PSC). (2) These efforts also proved to - of limited value.

Locating .. Kenyans of Asian ancestry, a sizeable subgroup within the sample, was particularly challenging because of the proportion that have subsequently left Kenya, the high-level of suspicion that seems to characterize their relationships with organizations related to the government, and the closed nature of the Asian-Kenyan community in Nairobi. Ultimately, with the help of the Aga Khan Educational Foundation and several Asian faculty members at the University, information was obtained on many of the Asian-Kenyan graduates.

Overall, in excess of 88 percent of the graduates from this sample were traced. Of those traced, 76.7 percent provided post-graduation employment and educational histories in addition to family background information. The tracer questionnaire itself was developed specifically for this study. It has been included as Appendix 1.
In addition, 28 graduates were interviewed using a series of questions that probed the career decision-making process, their career expectations,

self employment barriers, and factors influencing their educational success.

Non-respondents and non-traced sample members were more likely to be from the earlier cohorts with 1970 having the highest proportion of both. Non-respondents and non-traced individuals tended to have done less well academically and tended to be disproportionately from the Faculty of Arts. In addition, Asian-Kenyans proved to be more difficult to locate (information was gathered on 73.7 percent) and had a substantially poorer response rate (62.5 percent response rate) than did the overall sample. Based upon the interviews, non-respondents did not have more complex work or educational histories; generally the reason given for non-response was, as mentioned previously, insufficient time, not resistance to the intents and purposes of the study. More detailed information concerning respondents, non-respondents, and sample members who were not traced is reported in Appendix II.

EFFICIENT ABSORPTION: THE RELATION OF YEAR OF GRADUATION AND EXPERIENCE IN THE LABOR MARKET

Much of the initial impetus for the growth of higher education in Kenya came from an almost universal acceptance of the work of human capital theorists and the need to indigenize the work force in the years following independence. Higher education was the "source of the high-level manpower to sustain (new nations') newly-won independence" (Yesufu, 1973, p. 82). Trained personnel were perceived as the critical constraint without which "Africa's peoples would be unable to enter the modern technological world. Each phase of economic planning demands not only capital, but skilled manpower, which can only be drawn from the reservoir of the educated population" (Cowan, et al., 1965, p.v). This perspective pervades the policy statements guiding the development of Kenyan higher education. (3).

For the most part, the data produced by this study affirmed the role that the University of Nairobi plays in the provision of the human capital necessary for the operation of both the public and the private sectors. There was no evidence of unemployment, and, for the most

part, graduates occupied positions of responsibility within the labour market. However, data seemed to suggest that this may be changing. The employment experiences of the 1983 cohort of graduates differed significantly from those of the 1970, 1975, and 1979 cohorts in terms of ability to find work, likelihood of accepting temporary employment, and willingness to accept employment with less responsibility and with less relevance to their undergraduate training. Moreover, the government has had to accept an increasing role in the employment of graduates. The apparent saturation of the labor market for the highly trained, concurrent with continued expansion of educational opportunity at the highest levels, is a mismatch that brings the efficiency of further educational expansion into question.

Perhaps no findings better illustrates the saturation of the labor market than the difficulty 1983 graduates had in finding jobs. This is shown in Table II. Although Psacharopoulos and Sanyal (1981) contend that what may appear to be an unemployment problem is largely a "job search process," the marked contrast with the experiences of the earlier cohorts would suggest that a more fundamental change in conditions has occurred. Furthermore, when compared with the experience of the 1979 graduates in the sample, the proportion of 1983 graduates accepting temporary employment after graduation had doubled to 29.2 percent. Therefore, if only first permanent employment is considered, just 12.2 percent of the 1983 cohort was employed in the first 2 months after graduation, 38.9 percent was employed in the following 4 months, another 32.2 percent found permanent work within the first year, and a final 16.7 percent either remained in temporary jobs or found placements after the first year.

Table II
LENGTH OF TIME BETWEEN GRADUATION AND FIRST JOB

	Time before First Job			
Year of Graduation	0-2 Months	3-6 Months	7-12 Months	1-3 Years
1983	22.7	34.0	34.0	9.3
1979	91.0	6.4	1.3	1.3
1975	84.3	10.0	1.4	4.3
1970	95.5	2.3	2.3	0

Note: N=294. Numbers are percentages of graduates in sample.

The greatest number of these 1983 graduates who accepted temporary positions were employed as untrained graduate teachers. (4) Of the graduates from the Department of Sociology and Maths, 37 percent were employed in this capacity at some point following graduation. This contrasts with a comparable figure of 2.6 percent for the 1979 cohort. None of those 1983 graduates specializing in chemistry or commerce worked as untrained graduates teachers. The comments of one 1983 sociology graduate (in a letter to the author of June 21, 1985) serve to summarize this situation:

> Since I left the university in April 1983, finding a job was a problem especially due to my B.A. degree, although I am now teaching in .... Harambee Technical Secondary School through the courtesy of the Teachers Service Commission. I finally landed this teaching post after unemployment of one year five months; totally different area of employment to field of undergraduate study. It is extremely taxing for a non-trained teacher to prepare himself psychologically for a job which he never envisaged getting into. Unless I were to get a diplomma in education, I don't see much hope of staying in this job for long (but again to what job?).

Not only are graduates encountering more difficulty finding jobs, but, even once they secure employment, the job they find is more likely to underutilize their training. The contrast with the earlier cohorts, as seen in Table III supports the presence of a real drop in the relation of work responsibilities to academic preparation or in the skill level required to perform work responsibilities. Even when only the first permanent job is considered, the 1983 cohort still appears to be accepting positions that underutilize their skills and training relative to the earlier graduates. Utilization of knowledge in the first permanent job improves only slightly to 75.3 percent in the 0-50 percent category and to 24.7 percent in the 50-100 percent category. (5)

TABLE III

UTILIZATION OF KNOWLEDGE ACQUIRED AT THE UNIVERSITY OF NAIROBI IN THE FIRST JOB

Year of Graduation	Knowledge Used in First Job 0-50%	50-100%
1983	80.4	19.6
1979	57.7	42.3
1975	59.2	40.8
1970	64.4	35.6

Note: N=294. Numbers are percentages of graduates in Sample.

Table IV, which examines the issue of utilization from the perspective of the first job held by the 1979 and 1983 cohorts, contrasts the educational qualifications required by the employer with those perceived by the graduate as actually necessary to do the job. It also illustrates a decrease in the utilization of university training, for graduates are offered positions requiring a university degree but that actually need less education to perform the tasks involved. This trend is also supported by data collected on the decline in the level of responsibility and expertise required to perform the first job held by the 1983 cohort. Positions were generally ranked on the basis of the criteria established for the Kenyan Civil Service, ranging from a low of one to a high of 11. Four (job Group 'H' equivalent) is the characteristic ranking of a normal entry-level position for university graduates. The mean level of first job after graduation dropped significantly from 4.442 in 1979 to 3.887 in 1983. (6).

The differences between the 1983 cohort and the three earlier cohorts should have been minimized by the 14-month closing of the University of Nairobi, which began prior to what would have been the third and final year of coursework for the 1983 graduates. The 1983 graduates, as a result, benefited from being preceded by a year in which no University of Nairobi graduates were unleashed on the job market (7) However, it can also be posited that this graduating class, as one 1983 graduate put it, had been tainted by the association of the university with the attempted coup in August 1982. However, only one 1983 respondent cited this as an issue affecting her employment.

TABLE IV

RELATION BETWEEN REQUIRED AND NECESSARY EDUCATIONAL QUALIFICATIONS IN THE FIRST JOB: 1979 AND 1983 COHORTS

Cohort	Educational Qualifications (Required/Necessary) "O"Level	'A' Level	Bachelors	Masters
1983	1/4	4/34	95/58	0/4
1979	1/8	3/10	93/74	3/8

On the other hand, the extent of the disequilibrium between supply and demand may have long been masked by the government domination of the labor market for the highly educated. Table V shows the growth of parastatals and the central government as employers for commerce and science graduates. By 1979, the public sector accounted for 85 percent of the employment of the science sample. Throughout the 1970-83 period, sociology graduates were almost totally dependent on the public sector for work. Of the 1983 sociology sample, 96 percent were employed within the public sector. Njenga (1986) found that over 90 percent

TABLE V

SECTOR OF EMPLOYMENT BY FACULTY AND YEAR: FIRST JOB

Commerce:	Private	Local Government	Parastatal	Central Government	All Other
1983	31.3%	-	28.1%	37.5%	3.1%
1979	33.3	4.8%	4.8	57.1	-
1975	45.8	4.2	12.5	37.5	-
1970	62.5	-	31.3	6.3	-
Arts:					
1983	4.0	-	36.0*	60.0	-
1979	4.5	-	9.1	77.3	9.1
1975	5.6	-	11.1	77.8	5.6
1970	7.7	7.7	30.8	53.8	-
Science:					
1983	14.3	7.1	32.1*	39.3	7.1
1979	11.1	3.7	14.8	66.7	3.7
1975	29.4	-	29.4	41.2	-
1970	54.5	-	18.2	27.3	-

*If those employed by the Teachers Service Commission (TSC) are not included in these figures, there is a decrease to 10 percent for arts and 18 percent for science.

of the University of Nairobi graduates in agriculture and veterinary

were either employed by the central government or the University of Nairobi. As a high-level administrator for the Public Service Commission (PSC) observed, the government "can absorb (all graduates) but the work is not there." Graduates applying for work with the PSC are assigned positions formerly performed by "O" and "A" level graduates (8) they are redirected to the Teachers Service Commission (TSC), and/or they are placed outside their areas of expertise and interest.

THE ROLE OF FIELD OF STUDY AND ACADEMIC PERFORMANCE

Although a number of other factors (e.g., last secondary school attended, ethnic origin, field of study, academic performance, and sex) were examined for their influence on post-graduation experience, only field of study and academic performance warrant inclusion in this discussion concerning the efficiency of absorption into the labor market. Sex, and to some extent ethnic origin, will be incorporated into the equity analysis. Field of study was found to greatly influence the nature of the work history of University of Nairobi graduates. Academic performance was generally not found to be a source of differentiation.

TABLE VI.
LENGTH OF TIME REQUIRED TO FIND A PERMANENT JOB - 1983 GRADUATES

Field of Study	0-2 Months	3-6 Months	7-12 Months	1-3 Years
Commerce	32.4%	32.4%	32.4%	2.9%
Arts	3.4	41.4	6.9	48.3
Science*	13.3	26.7	30.0	30.0

Note: N=93 Chi Square = 26.766 p= .00016

*As mentioned earlier, within the 1983 science sample, those graduates with a specialization in mathematics had a very different experience from those with a specialization in chemistry. Nearly 40 percent of the math graduates were first employed as untrained graduate teachers. None of the chemistry graduates worked in that capacity.

Although this saturation of the labor market influenced the experiences of all graduates sampled, the sociology and maths graduates were most dramatically affected. This can be seen to some extent in the varying lengths of time 1983 graduates from the Faculties of Commerce, Science, and Arts required to locate a permanent position (Table VI).

Even the mobility exercised once permanently employed may reflect the greater marketability of commerce students. Of the 250 job changes that were made after accepting a first permanent position, over one half were made by commerce graduates. Substantially fewer changes were made by their arts and science counterparts. This is detailed in Table VII

TABLE VII

PROPORTION OF TOTAL JOB CHANGES BY MAJOR FIELD OF STUDY WHEN COMPARED TO THE EXPECTED PROPORTION

	Field of Study		
	Commerce	Arts	Science
Proportion of Total Job Changes (Observed)	.51	.27	.22
Proportion of the Total Sample (Expected)	.36	.31	.33
Ratio of observed/Expected Proportion	1.42	.87	.67

Additional support for the deterioration of the employment market for both the arts and science (particularly the maths graduates) samples is also seen in a comparison of the percentages of knowledge acquired at the University actually used in the first permanent jobs held by the 1983 and 1979 cohorts. Although graduates from all faculties were less likely to utilize their knowledge as fully in 1983, science and arts leavers have experienced a more dramatic deterioration. This is shown in Table VIII.

TABLE VIII

UTILIZATION OF KNOWLEDGE BY FACULTY FOR 1979 - 1983 IN THE FIRST PERMANENT POSITION

		Utilization of Knowledge	
		0 - 50%	50 - 100%
COMMERCE:	1983	63.6%	36.3%
	1979	58.3	41.6
ARTS:	1983	81.4	18.5
	1979	65.2	34.8
SCIENCE:	1983	80.0	20.0
	Maths	90.0	10.0
	Chem	60.0	40.0
	1979	50.0	50.0

A contributing factor in the deterioration of demand for the science graduates included in the sample could be that the Faculty of Science tends to accept a lower quality student than some other faculties which generally compete for the same students. Since 1975, the minimum points for admission into the Faculty of Science has ranged between 7 and 9 points (the more points the better the 'A' level performance), while the Faculty of Engineering has required minimums of between 8 and 14 points and the faculty of Medicine has required minimums of between 8 and 12 points for admission (9). This explanation however, is somewhat undermined by the inconsistent deterioration in the demand for science graduates, i.e., chemistry graduates seem to command more interest in the labor market than do maths graduates.

Field of study also seemed to significantly impact salary level and the propensity to pursue further training. This is discussed in greater detail in Hughes (1985), Hughes (1986), and Njenga (1986). In conclusion, it was found that the important role played by choice of major field of study far overshadowed the less significant influence of ethnic background and last secondary school attended. Higher beginning

salary, more rapid salary growth, greater job mobility, and, in the tightened labor market faced by the 1983 cohort, a moderated impact, are all benefits associated with a degree from the Faculty of Commerce. It is reasonable to assume that other areas of study (not covered by this research) may yield a similarly diverse set of experiences in a tightened job market. Some, like Commerce, may show resistance to the trends affecting Sociology and Maths graduates.

Academic Performance

The most distinctive outcome of the analysis of the effect of academic performance on post-graduation experience as reported in the full study, is the lack of distinctive outcomes. (10) This phenomenon has been supported in other studies of secondary school leavers in Kenya (Harman, 1988; Lauglo, 1988). Based on the importance given to meritocratic advancement within the educational system and the seemingly obvious advantage of hiring those who have proven themselves most capable within the educational system, the labor market has not appeared to differentiate until the recent increase in competition for employment.

As it relates to this discussion of efficiency of absorption of graduates into the labor market, two noteworthy trends emerged. First, the difference between the mean academic performance of the entire 1983 arts and science sample and the mean academic performance of all 1983 sample members whose first job was as an untrained teacher (only science and arts graduates) is significant, as shown in Table IX. Untrained teachers were more likely to have lower marks than the typical arts or science graduate. This may indicate that academic performance will become increasingly important in the employment selection process as the labor market continues to tighten.

TABLE IX

A COMPARISON OF MEAN ACADEMIC PERFORMANCE OF THE ENTIRE ARTS AND SCIENCE SAMPLE WITH THOSE WHOSE FIRST JOB WAS AS AN UNTRAINED TEACHER -1983

	1st Class	Upper 2nd	Lower 2nd	Pass	N
Entire Arts/Science 1983 Sample	1	17	34	9	61
Untrained Teachers	-	1	10	7	18

T = -2.7752 STD. Error of Difference = .1792 DF = 77 p = .003

Second, the length of time 1983 graduates (with various levels of academic performance) required to secure permanent employment. Of the 14 graduates receiving a Pass, 10 required more than one year to secure permanent employment.

In sum, the post-graduation experiences of University of Nairobi leavers appears to be significantly influenced by both year of graduation and field of study. Until recently, contrary to popular belief, better students appeared to have enjoyed few benefits that their less academically adept counterparts did not also enjoy. The histories of 1983 graduates definitely reflected a greater saturation of the labor market. All graduates tended to find it more difficult to locate permanent employment at a level comparable to their predecessors. However, sociology and maths graduates appear to be more severely impacted by the increased competition for jobs. As the Financial Review (1987) recently posed, "After University, What Next?" There can be little dispute that recent years have seen the growth of a disequilibrium between the supply and the demand of the highly-trained in Kenya.

WHY HAS THIS DISEQUILIBRIUM OCCURRED?

It can quite reasonably be argued that the culprit responsible for this disequilibrium is dependent economic growth in Kenya. As Irizarry (1980) anticipated, the private sector has relatively little demand for the highly trained, an extremely high proportion of the graduates work in the services sector, and salaries have an inter-

national impetus.

The private sector currently employs just 17 percent of the 1983 cohort, 16.1 percent of the 1979 cohort, 34.1 percent of the 1975 cohort, and 33.3 percent of the 1970 cohort. In 1985, the total of wage-employed people in Kenya was 1,174,400; of these, 599,800 were employed in the private sector, a proportion far greater than the meager percentage of people in the highly educated sample who found private - sector employment (Republic of Kenya, 1988, p. 37). (11)

In addition, employment of this study's sample is, indeed, dominated by the services sector. Conservative calculations indicate that at least 83.0 percent of the 1983 cohort, 93.1 percent of the 1979 cohort, and 71.7 percent of the 1975 cohort are employed in the services sector in Kenya. This is certainly supported by the findings of Bennell, who found little demand in Kenya's manufacturing sector for the highly technical skills possessed by university graduates in engineering (Bennell, 1981, pp. 12-15). Industry tends to rely on direct importation of foreign technology that can be maintained by small numbers of trained engineers. Similarly, in his examination of the machine tool industry in Kenya, Matthews (1985) encountered virtually no utilization of university-trained manpower. This phenomenon nas undoubtedly affected the maths and chemistry graduates included in this study.

Bwisa (1988) posits that adequate numbers of scientists have already been produced given the nature of Kenya's economic development. Absorption of more scientists would add to the already top-heavy pyramid of scientists, technicians, and artisans. The National Council of Science and Technology has recommended that the ideal mix of the technical competence these three groups provide is one scientist to five technicians to thirty artisans (1:5:30). In a survey (Bwisa, 1988, p. 44) conducted in the early 1980s, the following actual ratios were established:

	Scientists	Technicians	Artisans
Agriculture	1	0.7	0.5
Industrial	1	3.0	2.0
Medical	1	2,0	2.0
Natural and Physical	1	1.0	0.1
TOTAL	1	1.7	1.5

This would suggest that the growth in the numbers of science graduates has been without regard for the needs of the Kenyan economy. Foster's (1965) comments, although based upon his observations of the Ghanaian educational system over twenty years ago, may continue to have applicability today:

> .....one of the characteristics of an underdeveloped economy is that the market demand for technical skills is small. This conflicts with the conception that there is an insatiable need for technically trained people in underdeveloped areas. (p. 294)

Also symptomatic of a dependent economy is the tendency to have internal wages for the highly trained set by international labor markets. Wages for the highly trained are set by the local private sector, which, in turn, looks to international labor markets to justify salaries. These artificially high wages encourage employers to substitute less skilled employees for highly priced University of Nairobi graduates. Moreover, this international connection deters market-clearing downward wage movements for the highly educated. (see Oyugi, 1984).

It can also be argued that no economy could reasonably be expected to generate employment at the furious pace required by the growth of the University of Nairobi. Its 8.5 percent annual growth over the past 15 years is more than triple the expansion of private-sector employment in Kenya for the same period. Although upgrading of the stock of human capital is both possible and desirable, the expectation that the generation of employment alone could absorb ...

the available graduates does not appear to be realistic. While graduates from selected fields of study may continue to be in sufficient demand to justify enrollment expansion, the experiences of the 1983 sample in this study question that rationale for sociology, mathematics, and, to a lesser extent, chemistry and commerce graduates.

EQUITABLE ABSORPTION: THE RELATION OF FAMILY BACKGROUND, SEX, AND POSTGRADUATION EMPLOYMENT EXPERIENCE

The expansion of the education system has also been motivated by the assumption that expanded access to education would have a powerful equity effect. As was stated in the Development Plan 1966 - 1970 (Republic of Kenya, 1966, p. 305), education "should be regarded as the principal means for .... eqalizing economic opportunities among all citizens." Equity has been defined, in this context, as the equalization of opportunities to compete for the most privileged positions in society. The criterion for the competition has been academic achievement, a value accepted across the diverse ethnic and socioeconomic groups in Kenya.

According to Prewitt (1974), the meritocratic system of education can be undermined in three ways: inequitable access to the school system, and inequality in the movement from the school to the job. Educational expansion has intended to address some of the disparities of access and to broaden the number of opportunities for movement upward through the educational system. Although there has been considerable criticism of access and retention equity (Prewitt, 1974; Olson, 1972; Kinyanjui, 1974; Makau, 1985), the data generated by this study tend to suggest that a basically open system exists for Kenyans from different socioeconomic backgrounds. For men and women with a few caveats, once they reach higher education their post-graduation experiences are generally comparable.

Family Background

When compared with the backgrounds of the graduates sampled by Goldthorpe and by van den Berghe, expansion has apparently improved the equity of access to higher education (Goldthorpe, 1965; van den Berghe, 1968). This is shown in Table X. Explanations of the data included in Table X may be related to sampling bias. It is certainly possible that van den Berghe's nonrandom selection or the relatively poor response rate (54 percent) experienced in the Goldthorpe study could have introduced a bias toward students from more educated backgrounds (Goldthorpe, 1965, p. 94). It is equally likely that the change can be attributed to the rapid expansion of the number of available slots in higher education in the early 1970s. These figures do not reflect the variation in the education level of the populations of Uganda and Kenya, which, according to census data, are roughly comparable (Ministry of Economic Planning and Development, 1966). Both the van den Berghe and Goldthorpe samples included significant numbers of Ugandan students.

TABLE X

PARENTAL EDUCATION LEVELS OF STUDENTS ATTENDING THE UNIVERSITY OF EAST AFRICA IN 1958 AND 1968 AND THE UNIVERSITY OF NAIROBI IN 1975 AND 1983, WITH EDUCATION LEVELS OF THE OLDER ADULT KENYAN POPULATION

Amount of Education	Father	Mother	Male	Female
Goldthorpe's (1958) sample:				
No education	36.7%	58.7%	65%	89%
Primary	38.6	36.1	34	11
Secondary	22.6	5.1	1	-
Postsecondary	1.9	0.0	-	-
N	150	158		
Van den Berghe's (1968) sample:				
No education	27.3%	50.0%	54%	83%
Primay	44.6	37.5	39	15
Secondary	21.7	12.5	6	1
Postsecondary	6.4	0.0	1	-
N	110	112		
1975 sample:				
No education	39.1%	58.8%	51%	83%
Primary	43.5	36.8	42	16
Secondary	13.0	2.9	6	1
Postsecondary	4.3	1.5	1	-
N	69	68		
1983 sample:				
No education	30.5%	48.4%	35%	72%
Primary	46.3	43.0	50	25
Secondary	13.7	8.6	12	2
Postsecondary	9.5	0.0	2	1
N	95	93		

*Figures represent the highest levels of educational attainment among the Kenyan population who were old enough to be parents of university students. The education profile of a 35-39 year-old cohort, taken from the 1962 census, was used to compare with the parents in Goldthorpe's sample. The 35-39 year-old cohort would have been 31-35 years old in 1958. (Kenya Population Census 1962, vol. 3 (Republic of Kenya, Kenya, 1966, p. 45)). The 30-39 year-old cohort, calculated from the 1969 census was used to compare with van den Berghe's sample. (Kenya Population Cenusus 1969, vol 3 (Republic of Kenya, 1971, p. 1)). Similar approximations were made from the 1979 census for the 1975 and 1983 cohorts of this study. (1979 Population Census, vol. 2 (Republic of Kenya, 1983)).

The same trend, although less well defined, appears when the occupations of students' fathers are examined. When compared to the van den Berghe sample, the proportion of fathers of graduates included in the 1975 and 1983 cohorts of this study who are peasants, unskilled or skilled laborers or cash-crop farmers has remained stable. (12). Although the probability that the son or the daughter of a subsistence farmer would graduate from the University of Nairobi is not nearly as high as the probability of those with more educated parents or those whose parents hold prestigious jobs, the educated elite in Kenya are still drawn from a very broad background.

Few data exist, however, with regard to the relation between the educational system and the labor market. To what extent has social reproduction been furthered at this level? It was a concern that, under conditions of competition in the labor market, family background would begin to play a significant role in the postgraduation experiences of University of Nairobi graduates. Faced with a competitive labor market, the individual decision maker can adopt any of a number of action strategies (see Figure 11). Graduates from advantaged backgrounds have the resources to provide the necessary support to extend the job search process, to continue schooling, or to finance emigration to countries with greater opportunity. But, perhaps most significantly, socioeconomically privileged graduates are more likely to have families with contacts best able to provide the graduate with access to highlevel employment. Paterson found that one of the "most crucial aspects in the actual search for a job is the size and quality of one's social network and how well one is able to utilize those social linkages" (Paterson, 1980, p. 13). Furthermore, Prewitt observed that,

FIGURE II: MICROLEVEL VIEW FROM THE PERSPECTIVE OF AN INDIVIDUAL DECISION MAKER IN TIMES OF SCARCE HIGH-LEVEL EMPLOYMENT

Awareness ——→	Expectation ------→	Action Strategies ----→	Outcomes
Graduate realizes that there is greater competition for employment.	Longer periods of unemployment with a lower probability of getting a good job. Effective job search is likely to require more intense allocation of effort.	If unemployed or underemployed may choose to further skills to enhance employability; return to school. The longer unemployed the less selective one will be. One is more likely to use ethnic, personal, or tribal connections to gain employment. Leaving the country may have a greater and greater expected return.	Unequal opportunity in times of limited employment. A distinct advantage will accrue to graduates from wealthy or privileged families. These families will have the resources to provide the necessary support to extend the job search process, to continue schooling, and to finance emigration. These families will also have the contacts best able to provide the graduates with access to high-level employment.

although university graduates have access to top management and political positions, there are more candidates than openings. As a result, "non-merit considerations are invoked to select the fortunate few into the more desirable positions (Prewitt, 1974, p. 213)". As the competition stiffens, it would be expected that the quality network and the nonmerit considerations would operate to the advantage of those graduates with socioeconomically privileged backgrounds. As Cohen has suggested on the basis of his work on the Creoles of Sierra Leone, the privileged zealously uphold the principle of equality of opportunity while utilizing sponsored recruitment to ensure the perpetuation of their own class (Cohen, 1981). Therefore, it would seem reasonable to expect that, during periods of increasing job scarcity, those from less advantaged origins would be more likely to experience longer initial periods of unemployment or settle for lower-level positions.

This study compared the entry job level and salary and the current job level and salary of students from less and more advantaged backgrounds for each of the four cohorts. Family background is not an absolute but a relative measure of socioeconomic background that is based on a combination of factors: parents' educational levels, parents' occupations, and parents' income levels. Graduates whose parents had a maximum primary education and who were unemployed, farmers, or unskilled laborers with an income of less than 1,000 Kenya shillings (KSh) monthly were classified as having lower socioeconomic origins. Graduates whose parents had education beyond "A" level or who were employed as professionals or as upper-level managers, or whose parents' income was above 10,000 KShs. monthly, were considered to have higher socioeconomic origins. Those from backgrounds that fit neither of the above were considered to come from a middle category. Because of the limited number of graduates that fit into the higherccategory, graduates from the middle and higher categories were generally combined.

Only three significant results were encountered in the comparison of postgraduation experiences of University of Nairobi graduates from more and less advantaged family backgrounds. The first finding was that graduates in the 1975 cohort who came from advantaged background tended to have higher current salaries than graduates from less advantaged backgrounds. The other two significant results concerned first and current job salary differences from graduates in the 1983 cohort who came from different family backgrounds.

The lack of significance in the examination of job levels warrants brief comment. No significant differences were encountered in the beginning or current job levels on the basis of socioeconomic background for any of the four cohorts. This may be partially attributed to the domination of the labor market by the public sector. This domination ranged from a low of 57.9 percent for the 1970 cohort (current employer) to a high of 81.8 percent for the 1983 cohort (current employer). The rigid classification scheme utilized by the public service limits the variation of job level. Although not all those working in the public sector are under the Public Service Commission

(PSC), the influence of the PSC extends to all reaches of the public sector.

The differences in the current salaries of members of the 1975 cohort from less and more advantaged family backgrounds are the only results that suggest that the University of Nairobi may serve as a mechanism for social reproduction even when the labor market for the highly trained is not constricted (13). That this finding is so isolated limits its generalizability.

When the 1983 cohort is examined further, some insight is gained into the first and current salary differences that were encountered. In addition, some other differences in the basic postgraduation experience of students from more and less advantaged socioeconomic backgrounds come to light. A disproportionate number of 1983 graduates from higher socioeconomic levels held first and current positions in the private sector. Of graduates from higher-level backgrounds, 33 percent held first positions in the private sector as compared to 15.4 percent for those from lower socio-economic levels. The private sector has characteristically paid higher basic salaries than either the central government or the parastatals. (14) It is speculative, but certainly possible, that this trend may reflect the use of family networks to secure employment.

Of additional interest is the length of time that 1983 graduates from diverse family backgrounds spend securing permanent employment. This is shown in Table XI. As indicated, graduates from the most advantaged backgrounds tended to require significantly less time following graduation to find permanent employment than did their less advantaged counterparts. Moreover, the middle and lower socioeconomic groups tended to rely more heavily on temporary employment following graduation than did those classified in the highgroup.

TABLE XI.

SOCIOECONOMIC LEVEL BYLENGTH OF TIME BETWEEN GRADUATION AND FIRST PERMANENT JOB: 1983 GRADUATES

A. LENGTH OF TIME BETWEEN GRADUATION AND FIRST PERMANENT JOB

Socioeconomic Status	0-2 Months	3-6 Months	7-12 Months	1-3 Years
Low (N=49)	8 (16%)	13 (27%)	17 (35%)	11 (22%)
Middle (N=29)	4 (14%)	13 (45%)	3 (10%)	9 (31%)
High (N=13)	5 (38%)	5 (38%)	3 (23%)	0

B. ANOVA TABLE

Source	Sum of Squares	df	Mean Squares	F-Ratio	P
Between	6.633	2	3.316	3.239	.0439
Within	90.115	88	1.024		
Total	96.747	90			

Note - Socioeconomic level (means): low = 2.633; middle = 2.586; high =1.846; grand mean = 2.505.

Hidden by combining graduates from all faculties is the influence that socioeconomic level has on those 1983 sociology and science graduates who spend time working as untrained graduate teachers. As previously described, serving as an untrained graduate teacher is a readily available, low-status, temporary employment- alternative frequently used by the 1983 University of Nairobi graduates. It is an option that has been disproportionately exercised by by graduates from lower socioeconomic levels, as can be seen in Table XII.

These findings tend to support the notion that under conditions of increased competition the importance of family background may become more and more influential. For graduates of general arts and sciences, in which competition appears to be most intense, the effect on the experiences of graduates from less advantaged backgrounds is also most dramatic. Otherwise, with the exception of the current salary experiences of the 1975 cohort, there is no evidence to suggest that socioeconomic background is playing a significant role in the work experience of University of Nairobi graduates.

This conclusion runs counter to much of the literature on education and social equality in Africa, which generally predicts a much more rapid deterioration in the openness of the education system (Blakemore and Cooksey, 1981). The prognositication that "the enormous educational advantages which accrue to the children of university-educated parents will lead to sharply entrenched class divisions very rapidly" has been only mildly affirmed by this research (Dore, 1976, p. 79).

TABLE XII.

A COMPARISON OF THE SOCIOECONOMIC LEVEL OF THE ENTIRE ARTS AND SCIENCES SAMPLE; WITH THOSE WHO WERE EMPLOYED AS UNTRAINED GRADUATE TEACHERS: 1983 COHORT.

		Socioeconomic Level		
		Middle	Higher	N
Arts and sciences sample	35	15	7	57
Untrained teachers	13	4	0	17

Note: T= 1.9292, SE = .2735; df = 72, P = .003

Why is Evidence Suggesting Social Reproduction so Limited?

It is certainly within the realm of possibility that other factors are confounding the influence of socioeconomic level. For example, as has been discussed, the women who attend the university of Nairobi are disproportionately from advantaged backgrounds. It would be reasonable to assume that the male-dominated formal sector in Kenya could serve to inhibit the salary and position level of female graduates, which would, in turn, underrepresent the influence of socioeconomic level, However, when only the experiences of males are examined, no new differences come to light. The current salary-level differences of males from advantaged socioeconomic backgrounds in the 1975 and 1983 cohorts remained significant. Other results revealed no significant differences.

Another plausible interpretation of the lack of evidence supporting the development of a class system in Kenya is that a system of sponsorship or of patron-client networks operate that cut across class lines. Ethnicity could provide the foundation for such a system. In an embryonic class system, such as still exists in Kenya (and whose nascent existence is weakly affirmed by this study), every elite has poor relatives. Goldthorpe's observations of an earlier generation of students from the University of East Africa continue to hold true. "Makerere students, "he wrote, "are drawn more than proportionately from the more highly educated minority of the population, and include among their relatives many people whose occupations carry social prestige. On the other /hand/, however, we have stressed how closely linked they are by kinship to the world of illiterate peasants and unskilled manual workers, and how virtually all of them have at least some relatives who can neither read nor write." (Goldthorpe, 1965, p. 46)

Therefore, if advantaged relatives choose or are obligated to assist their poorer relatives, class relationships would not be in evidence. That is, the employment experiences of graduates from the University of Nairobi cannot be described as the wealthy assisting the wealthy. For that reason, differences based on class will be minimized; differences based on ethnicity may be significant.

However, data analysis reveals no significant insights that are based on ethnic or regional differences. This may suggest that the proper unit of analysis lies several layers below the level of ethnic group. It may be far more revealing to examine the experiences of University of Nairobi graduates at the level of the extended family or village. The presence of economies of affection has been documented extensively by Hyden (Hyden, 1980). His research in Tanzania suggests that the basic social organization embraces a network of households whose concern lies with the welfare of the unit as a whole rather than the success of the individual. This strategy, which places a premium on group survival, has obvious implications for any member who should gain access to good wages or to the power to make personnel decisions. Kinship obligations require the remittance of income and the use of

influence to assist others within the family unit. These familial clientilist relationships undermine class solidarity, which would help to explain the slow pace of class formation found in these data. /15/

Women and Equity

Women constitute a sub-group of special interest with regard to equity (Hughes and Mwiria, 1988). Although women have suffered significantly in terms of participation and persistence at the primary and secondary levels, those that reach the University of Nairobi /16/ have become productive members of the labour force in jobs and at salaries not significantly different from their male counterparts. Overall, the advancement of the male and female cohorts seems to be similar. However, there appears to be a functional limit as to how high a woman will be promoted and how much she will be compensated.

The high level of involvement these University-trained women have in the Kenyan labour market is consistent with the curvilinear relationship other studies have found to characterize the relationship between schooling and female market-activity rates (Ram, 1982). Initially an increase in schooling lowers the female market-activity rate, but at higher schooling levels the effect is positive. Even in societies with restrictive sex-role norms, Smock (1981) concludes that "secondary or university level education provides access to the technical and professional occupations considered suitable for high status women" (p. 218).

The analysis of the data in this study is complicated by the fact that the males in the sample tended to have a disproportionate share of the 1st Class, Upper 2nd, and Pass marks, while the females had a higher proportion of the Lower 2nd final results:

	1st Class	Upper 2nd	Lower 2nd	Pass
Males	2.7%	30.4%	50.0%	16.8%
Females	1.8	19.3	70.2	8.8. /17/

The importance of this factor is unclear. As was illustrated earlier in this paper, the advantages associated with higher academic performances in the labour market are minimal. Its greatest impact may relate to opportunities for post-graduate study. Any influence on the ability to secure employment may well be mitigated by the overrepresentation of

women among those with advantaged family backgrounds. The figures regarding the socio-economic backgrounds of graduates in the sample are as follows:

	Socio-economic Level		
	Lower	Middle	Upper
Males	62.3%	30.0%	7.7%
Females	36.8	35.1	28.1.

This finding is consistent with those emanating from van den Berghe's (1968) study. Forty percent of the women in that sample had fathers who had completed secondary education, compared to only 7.9 percent of the male students. The level of father's occupation was in the same direction, although not significantly different. "Women students come predominantly from more westernized and higher status families," van den Berghe concluded (1968, p. 65). Similarly, Njenga (1986) concluded from her study of 406 University of Nairobi graduates (in Agriculture, Veterinary Science, and Engineering) that the parents of women students tended to be more educated and had higher incomes than did the parents of male students.

Two factors are of interest that relate to the issue of mobility. One is the length of time it required males versus famales in the 1983 cohort to obtain their first permanent position. This was shown to be a discriminating indicator in previous analyses. The second is upward career mobility over time.

No significant differences were found in the length of time males and females required to find their first permanent position. When faced with increased competition, as has impacted the 1983 cohort, it would not have been surprising to encounter a differential effect on the basis of sex. However, this was not the case. In fact, women tended to find permanent jobs earlier than did their male classmates, which may be a result of the higher socio-economic level of female graduates.

Even when upward career mobility was considered, no significant statistical differences were found between the level of positions attained by men and women over time. It should be noted that there are

no women to accompany the few men that have attained the highest echelons. /18/ The 1975 cohort provides a useful profile as reported in Table XIII. In both the 1979 and 1983 cohorts, males and females changed jobs at virtually the same rate. For the 1975 cohort, ten years after graduation, males had made 25 percent more job changes.

The inability of women graduates to reach the policy and decision-making levels of the government infrastructure reflects the general condition in Kenyan society. Only one woman, graduate or otherwise, has held a position of Cabinet rank or permanent secretary since independence. As of 1985, out of 170 deputy, under, and senior assistant secretaries in the government ministries, 8 (4.7 percent) were women. Similarly, out of 4356 civil servants classified at 'Job Group K' or above employed by the government, 313 (7.2 percent) were women. One third of that number was located in the Ministry of Health. The litany continues in parastatals and in the private sector. The top two strata of management and the governing boards of the organizations in these sectors generally have no female representation. For example, in three private sector firms totalling over 7,000 employees, women constituted but 10 percent of those employees classified supervisor or above (Ruigu, 1985, pp 32-44). It is, perhaps, in this area that women have suffered the most egregious exclusion.

TABLE XIII

Current Level of Position Within the Organization-
1975 Cohort By Sex (Hughes, 1986)

	Job Level	Male	Female
Lower	Job Group 'H' or Equivalent	5.8%	7.1%
"	Job Group 'J' or Equivalent	13.5	35.7
"	Job Group 'K' or Equivalent	44.2	35.7
"	Job Group 'L' or Equivalent	26.9	21.4
"	Job Group 'M' or Equivalent	1.9	-
Higher	Job Group 'N' or Equivalent	7.7	-

N = 66 Chi-Square = 4.702 DF = 5 p = .4533

There is an active but unresolved discussion about the extent to which family demands serve as a barrier for the advancement of women in the work-place (Gutto, 1971; Pala, etal., 1978; Ruigu, 1985). Even

when a woman is employed, primary responsibility for the operation of the house continues to be her domain in most Kenyan families. This is a significant drain on time and energy and may inhibit or prohibit the undertaking of professional advancement activities or may, in fact, necessitate a career interruption (child-bearing and/or child-rearing). This commitment to the family may mitigate career aspirations reducing the willingness to take the risks often necessary to advance one's career, e.g., changing employers, relocating /19/, pursuing further training. In addition, women must overcome biases held by personnel directors (and others) who assume that women will refuse to work overtime, will lack mobility, will experience work interruptions through maternity leave, have fewer leadership skills, and will be unable to supervise men (Smock, 1977; Ruigu, 1985).

TABLE XIV

Basic Salary By Sex -- First Job (1983 Cohort) and Current Job (1975 Cohort) (Hughes, 1986)

Basic Income - 1983 Graduates - First Job

SEX	0-1000	1000-2500	2500-5000	5000-7500	7500-10000	N
Male	5.4%	50.0	42.9	1.8	-	56
Female	-	52.2	47.8	-	-	23

Chi-square = 1.749 DF = 3 p = .6261

Basic Income - 1975 Graduates - Current Job

SEX	2500-5000	5000-7500	7500-10000	10000-12500	12500-15000	15000-17500	17500-20000	20000-
Male	27.5%	17.6	13.7	19.6	7.8	3.9	2.0	9.8
Female	28.6	28.6	14.3	14.3	-	7.1	7.1	-

N = 65 Chi-square = 4.493 DF = 7 p = .72

It is perhaps not surprising, given the similarities illustrated above, that there is a lack of a significant difference in basic incomes for men and women either at the entry level or in the current position. Table XIV looks at the beginning (first job) salaries of the 1983 cohort and the current salaries of the 1975 cohort on the basis of sex. It is quite possible that some subtle differences may be disguised within the ranges provided (e.g., 2500 - 5000 KSh/month) on the questionnaire. However, data reported by the International Labour Organization (ILO) on female-male earnings ratios for all non-agricultural activities in Kenya would tend to support this comparability. For the years from 1977 to 1982, women earned between 80 percent and 94 percent of men's earnings,

of which much of the disparity could be attributed to differences in the manufacturing sector earnings (Anker and Hein, 1986, p. 103-4). Although Ruigy (1985) had slightly different figures, his conclusion was basically the same: "it was clear that men and women /with/ the same qualifications earn /the/ same amounts" (p. 29). Shields (1980), in a study of the urban labour market in Tanzania, found that the earning differences between males and females, once the amount of schooling was taken into account, was insignificant. As suggested earlier, the dominance of the public sector as employer and its carefully prescribed classification scheme may contribute to the lack of wage differences.

Once again, there is a distinct lack of female representation in the top pay categories. While no woman in the entire sample was earning 20,000 KSh or more monthly, 13 men were doing so. This finding is also supported by general data on income in Kenya. Of those individuals reported to be earning over 6000 KSh monthly in the Kenyan formal sector in 1980, only 4.3 percent were women. In other words, only 443 of the 10,407 individuals in that category were women (Republic of Kenya, 1983, p. 64).

One other salary-related concern that repeatedly came up in the interviews was the issue of housing or house allowance. In virtually all work settings, if a marriage occurs the woman loses her housing allowance. Despite recommendations to the contrary, the government pays a housing allowance only to single, widowed, or divorced women. /20/ As a result, thirty-seven percent of the employed females in the sample did not receive housing allowance as compared to only 15 percent of the employed males. This discrimination certainly does not positively enhance and may have a negative effect on the career commitment of women working in the public sector.

Hughes and Mwiria (1988) concluded that four factors appear to contribute considerably to the similarities in the experiences of male and female university graduates: the general high level of need Kenya has experienced for highly-trained personnel; the tendency for women graduates to come from relatively advantaged backgrounds; the dominant

role played by the public sector in the labour market: and, the extremely high opportunity cost of not working. Three factors appear to have contributed to the inequalities in post-graduation experiences: the barriers created by Kenya's male-dominated socio-cultural system; the prevalence of the 'asymmetrical' family (i.e., employed women continue to be expected to assume most of the responsibility for the home); and the lack of an effective network of mentors for women. Although university attendance provides women with access to jobs generally comparable to men, because of low university participation rates and the concentration of women in non-scientific fields, the University of Nairobi is not playing a dynamic role in the improvement of equity of women in Kenya society.

CONCLUSION

Since this study was intially conceptualized and ultimately conducted two successive years of double intake at the university level have occurred. The government has made a critical financial commitment to provide the support necessary to permit this expansion to transpire. Given the data generated by this study, what predictions can be made about the equity and efficiency implications of the continued expansion of higher education in Kenya. Can the tremendous cost of continued expansion be justified on the basis of equity and efficiency effects?

When university expansion is examined on the basis of efficiency, the experience of the 1983 cohort would bring into question the necessity of continued enrollment growth in order to provide skilled labour. Because the private sector is unlikely to absorb graduates at a substantially higher rate than it does currently, the employment of graduates will continue to burden the public sector. The incremental social return of these graduates begins to come at a very high cost. The 1986 budget presentation in Kenya acknowledged the untenable long-term nature of this situation, stating, "There is evidence that

Government employment has expanded excessively." It continued, "As a result, we are not providing the Civil Service with the complementary resources it needs to be productive..... A continuation of the recent growth path of Government employment is a financial and even a mathematical impossibility" (Daily Nation, 1985, p.4). Given the nature of the African economy, there appears to be an optimal rate at which the labour market can absorb highly-trained manpower. The current rapid increase in university enrollments may result in an increasing pool of underemployed and potentially disaffected graduates. In terms of provision of manpower, there is little to support the continued expansion of a highly subsidized educational system. Foster's (1965) observations made regarding the educational system of Ghana over two decades ago retain a considerable truth today:

> The plain fact is that it is easier to expand schooling than it is to expand employment opportunities in the exchange economy.... It is something of a tragedy that programmes for the expansion of education which have been pursued with vigour and imagination should carry with them such a depressing consequence" /unemployment/. (pp.296-7)

In terms of equity, education still provides a means to gain access to economic opportunity. Education remains the key to upward mobility for the vast majority of Africans. The slow pace of class crystallization in Kenya may be attributed, in part, to the continued effectiveness of higher education as a mechanism for class mobility.

To diminish educational opportunity is to limit the opportunity to compete for society's rewards. Expansion may, in fact, be what is required to maximize the openness of the access to higher education. The enrollment growth in the 1970s and 1980s may have resulted in an improved equity picture, based upon a comparison of more recent graduates with van den Berghe and Goldthorpe's data. The more university spaces are at a premium, the greater the likelihood that family background may influence the composition of the student body.

Paradoxically, unrestrained expansion (particularly in the context of poor economic growth) may ultimately undermine the very equity effects enrollment growth has fostered. Expansion, particularly at the

current exponential pace, may result in significant quality reductions in the caliber of the education received. Should this be reflected in the hiring decisions of employers, the advantaged may choose to send their sons or daughters abroad. In addition, the expansion of enrollments may just shift the arena of competition from access to schooling to access to quality employment. The greater the numbers of graduates competing in the labour market the more secondary factors may come into play. This phenomenon was suggested in the patterns seen in the 1983 data.

For women, equity has not been improved by expansion. The expansion of the 1980s has yielded no improvement in the proportion of women among the graduates. Moreover, the increasing concentration of women in non-technical and non-scientific fields is poor positioning for the future.

Since the early days of independence an unprecedented expansion of educational opportunity has occurred in sub-Saharan Africa. The national effort to develop the educational infrastructure that began in order to provide basic education and to train middle- and high-level manpower in sufficient numbers to accommodate the needs of modernization quickly became established as the means by which African could enter the formal wage sector of the economy. Obviously, the demand for education did not diminish as the manpower needs of the 1960s were satisfied. As a result, the 1970s and 1980s have seen this economic rationale for continued expansion of the educational system become an increasingly political rationale. Educational planning has been reduced to a footrace to catch the demand for greater and greater educational opportunity. As a result, the Ministry of Education is currently spending at a pace almost double that of four years ago; its budget comprises nearly 40 percent of the total recurrent budget (Muya, 1988, p. 10).

How exactly will this complicated set of changes in education and in the economy play itself out? Is this surge of expansion the harbinger of a subtle dismantling of the system of meritocracy that has long characterized Kenyan education? Is this expansion ushering in an era of

American-style open access that will increasingly shift the critical arena of equity to the marketplace? Although the face of Kenyan higher education in the 1990s is unclear, educational expansion is permanently altering its character.

NOTES

1. INCREASE IN HIGH-LEVEL MANPOWER: Figure for high-level manpower (i.e., those classified as professionals top-level administrators, salaried directors, executives, and middle level managers) were taken from the Annual Enumeration of Employed and Self-Employed Persons. The 1968 data were taken from Employment and Earnings in the Modern Sector" (Republic of Kenya, 1972), and the 1983 and 1986 data were provided by the Central Bureau of Statistics, Nairobi. On the basis of these figures, which seemed consistent with the statistics from adjacent years, increases were calculated at the necessary rate of 3 percent annually through 1983. From 1983 on, the rate of 4 percent was used (this would accommodate the 1986 data obtained from the Central Bureau of Statistics).

RETIREMENT: Rates were approximated on the basis of age distribution of the population and participation in the work force in order to reflect the relative dominance of younger cohorts (from International Labour Office's /ILO/ 1965-1985 Labour Force Projections, pt. 2, /Geneva: ILO, 1971/.

SUPPLY OF LOCAL GRADUATES: For the years 1968-73, the number of Kenyans attending undergraduate courses in Tanzania, Uganda, and Kenya, minus those enrolled in education courses, was divided by four (to account for attrition, emigration, etc.). For the years 1974-83, the estimates were calculated on the basis of 90 percent of the graduating class of the University of Nairobi. The 90 percent figure is based on enrollments reported in the Economic Survey 1974 (Nairobi: Republic of Kenya). The other figures are taken from the 1969, 1971, 1976, 1980, and 1983 editions of the Economic Survey and from the University of Nairobi Annual Report (Nairobi: University of Nairobi, 1980). Kenyatta University College, because it has been composed of Eeducation faculty, has been excluded. 1987 figures were calculated from reported graduation data.

SUPPLY OF OVERSEAS GRADUATES: This is the most questionnable of the four calculations. Figures for 1968-76 were based on data reported in the 1969, 1971, and 1976 editions of the Economic Survey and in Kabiru Kinyanjui, Shem E. Migot-Adholla, and F. Anaminyi, "Notes on the Evaluation of Overseas Training Policy in Kenya, "Working Paper No. 361 (Nairobi: University of Nairobi, Institute for Development Studies, 1980). The total number of students abroad was divided by five in order to reflect emigration and the proportion of students likely to graduate.

For 1981, calculations are based on estimates reported in the Technical Papers on the Establishment of the Second University (Nairobi: Republic of Kenya, 1983) and in Kenneth King, "Manpower, Technology and Employment in Africa: Internal and External Policy Agendas," Background Paper (Washington, D.C.: Committee on African Development Strategies, 1985). The Development Plan: 1984-1988 (/Nairobi: Republic of Kenya, 1983/, p. 380) cites an estimated 9,000 students studying abroad for 1983. However, this figure is possibly inflated on the basis of earlier data. Therefore, calculations are conservative estimates for the period 1976-83. The 1987 and 1990 estimates were based on 6000/5 (the King figure).

2. It should be noted that the PSC has, as of the 1984-5 class, begun maintaining records on where university graduates were assigned. This would certainly be of tremendous benefit to future tracing efforts.

3. Beginning with the 1943 Asquity Commission, there was a recognition of the important role human capital played in development. The universities in the colonies would be the source" ... of men and women with the standards of public service and capacity for leadership which self-rule requires" (1945, p. 10). The Ashby Report of 1960 suggested that funds allocated to secondary and higher education were an investment in the economic development of the nation; a theme that resurfaced in the Addis Ababa Report (UNESCO,) as it detailed the role of higher education in. the cultural, social, and economic development of African countries. The Development Plans (Republic of Kenya, 1966; 1970; 1974; 1979) each reinforced the notion of manpower development as a non-negotiable feature of the educational system. As stated in the Development Plan 1970-1974 (Republic of Kenya, 1970, p. 486), "continuing rapid rates of expansion are programmed at the University and upper-secondary levels of the educational structure in order to meet projected manpower needs."

4. Untrained graduate teachers are university graduates who do not have specific training in education. Trained graduate teachers have completed the education curriculum at Kenyatta University. Untrained graduate teachers are paid less than their trained counterparts and are hired on temporary contracts.

5. Not suprisingly, the relationship of the first job taken after graduation to undergraduate field of study showed a similar significant deterioration. The relation of undergraduate field of study to job responsibilities was rated one to four. A rating of one meant "totally unrelated," and a rating of four meant "highly related." The mean of the relationship between education and work declined from 2.467 in 1970 to 1.979 in 1983.

6. Mean scores were compared statistically using a one-way ANOVA. Significant differences were then subjected to a post hoc analysis using the Scheffe test for multiple comparisons. A critical alpha of .05 was used for all comparisons.

7. The economic conditions, as measured by the growth rate of wage employment, were not dramatically different for the 1983 graduates than that experienced by the 1979 and 1975 cohorts. Only the 1970 cohort appeared to face unqualified economic prosperity, as can be seen in the following data (Vandemoortele, 1984, p. 50; Republic of Kenya. 1988, p. 36):

1969 - 4.4%	1974 - 0.9%	1978 - 6.7%	1982 - 4.5%
1970 - 7.2	1975 - 4.7	1979 - 3.4	1983 - 2.0
1971 - 4.1	1976 - 5.3	1980 - 1.8	1984 - 2.4

8. During the period addressed by this study, the Kenyan educational system consisted of seven primary grades (Standards 1-7), four grades (Forms I-IV) of "ordinary" secondary (or "O" level), two grades (Forms V-VI) of "advanced" secondary (or "A" level), and 3 years of university training. Students admitted to the University of Nairobi are drawn from the best "A" level performers.

9. Cut-off points required for admission into the Faculties of Commerce and Arts from 1975 to 1985 have ranged from 11-12 and 10-11 points respectively. The Faculty of Education has had the least stringent admission criteria throughout that period.

10. The primary influence of academic performance is, as one would expect on the propensity to pursue further training. Success at the undergraduate level would seem to be a reasonable predictor of the probability of success in further training and of general interest in academic pursuits. Of those who received a 1st Class, 83.3 percent continued with some manner of study toward a credential. Of those receiving Upper Second marks as an undergraduate, 65.3 percent undertook further study. For those with lower Second and Pass results, the proportions were 36.2 percent and 31.7 percent, respectively. This pattern is duplicated when only Masters and Ph.D's are considered:

1st Class	-	50 percent completed a Masters or Ph.D.
Upper Second	-	32.4 percent completed a Masters or Ph.D.
Lower Second	-	15.2 percent completed a Masters or Ph.D., and
Pass	-	8.5 percent completed a Masters or Ph.D.

It apperas that further training has been the most substantive benefit one has tended to accrue from superior undergraduate academic performance. As one graduate commented, "It has become very obvious (that) we still do not respect academic achievement".

11. Provisional employment data provided by the Central Bureau of Statistics for 1986 illustrates the dominant role the public sector plays in the labor market for the highly-trained.

	SECTOR	
	Private	Public
Directors, Managers, and Professionals	15,266	21,632
Mid-level Executives, Dept. Heads	8,971	8,090
Technicians	9,035	28,325
Teachers with University Degrees	5,631	16,331
TOTAL	38,903(34%)	74,378 (66%)
% of Total Excluding Technicians	(39%)	(61%)

12. Sixty-one percent of the fathers of the students included in van den Berghe's study were peasants, unskilled or skilled workers, or cash-crop farmers. The comparable figure was 67.1 percent for the 1975 cohort and 64.9 percent for the 1983 cohort.

13. No differemces were found in the sector in which graduates from different socioeconomic backgrounds were employed, in the representation of various fields of study in the lower and higher groups, or in the proportion of men and women in the two groups, and there was no predominance of graduates from one region of Kenya. Any of these factors could potentially have contributed to the significant differences found in the current salaries of the 1975 cohort who came from different backgrounds, but apparently they did not have this effect. This would suggest that differences may be attributed to family background rather than field of study or sector of the economy in which a person is employed.

14. The table below illustrates the higher salaries paid by the private sector for one particular cohort:

THE BASIC CURRENT SALARY OF 1983 GRADUATES EMPLOYED BY THE CENTRAL GOVERMENT, PARASTATALS, AND THE PRIVATE SECTOR.

	Basic Monthly Salary (in Kenya Shillings)				
Sector (%)	0-2,500	2,500-5,000	5,000-7,500	7,500-10,000	10,000-12,500
Cent. Govt.	52.5%	37.5	0	7.5	2.5
Parastatal	28.1	65.4	11.5	0	0
Private Sector	0	52.9	41.2	0	5.9

N = 83 (Central Govt. = 40; Parastatal = 26; Private Sector = 17)

15. J.D. Powell (1970) posits that clientilist relationships have three characteristics: (1) a patron-client relationship develops between two parties of unequal status, wealth, and influence; (2) formation and maintenance of the relationship depends on reciprocity in the exchange of, for example, material goods for loyalty or esteem; and, (3) development and maintenance relies heavily on face-to-face contact. Kinship and patron-client relationships have many obvious similarities.

16. Overall female participation rates climbed slowly thoughout the 1970s only to plateau throughout the 1980s at around 30 percent of the total university enrollment in Kenya.

17. Hughes and Mwiria (1988) found a consistent underperformance by women university graduates in Kenya from 1975 though 1987. The differential has narrowed in recent years.

18. Data from the 1986 Annual Ennumeration of Employed and Self-Employed Persons, provided by the Central Bureau of Statistics, Employment and Earnings in the Modern Sector, breaks down the work force in a way that lends itself to grouping workers into general levels of employment.

Distribution of Positions by Level

	Males	Females	Total N
High-Level Manpower	92.1%	7.9	28,273
Mid-Level Manpower	78.9	21.1	92,464
Teachers with University Degrees	71.2	28.8	21,962
Teachers	64.2	35.8	171,650
Secretaries, Clerks, and Typists	66.8	33.2	117,248
Skilled Workers	94.1	5.9	146,979
Semi-skilled and unskilled	82.8	17.2	483,733
TOTAL	79.2	20.8	1,062,309

19. The propensity for women graduates to live in urban Kenya (primarily in Nairobi) may reflect their tendency to marry professional men. Urban areas are far more likely to be able to accommodate dual career needs.

	Males	Females
Urban	223 (79%)	63 (90%)
Rural	60 (21%)	7 (10%)

Chi-square = 3.879 DF = 1 P=.0489

20. One of the recommendations of the Waruhiu Report (1980) was that women receive a housing allowance. Unfortunately, this recommendation was not approved by the government. The Ramtu Report (1985) supported the government's decision. As a result, only women civil servants whose husbands "are not living in the same station, women who are . legally separated or divorced, and those who are the sole supporters of their households" will receive housing allowance.

BIBLIOGRAPHY

Anker, R. and Hein, C. (Eds.) Sex Inequalities in Urban Employment in the Third World. The MacMillan Press, 1986.

Bennell, P. "A Quantitative Assessment of the Utilization of Engineering Manpower in Kenya." Institute for Development Studies, Working Paper 381. Nairobi: University of Nairobi, 1981.

Blakemore, K. and Cooksey, B. A Sociology of Education in Africa. London: George Allen and Unwin, 1980.

Bwisa, H.M. PFocus on Education" Finance, August, 1988, p. 40 - 44.

Cohen, A. Politics of Elite Culture: Explorations in the Dramaturgy of Power in a Modern African Society. Berkeley: University of California Press, 1981.

Cowan, L.G., O'Connell, J., and Scanlon, D.G. (Eds.). Education and Nation-Building in Africa. New York: Praeger, 1965.

Dore, R. The Diplomma Disease. London: George Allen and Unwin, 1976.

"What Next?" Financial Review, December 14, 1987, pp. 6-8.

Foster, P. Education and Social Change in Ghana. London: Routledge and Kegan Paul Ltd., 1965.

Goldthorpe, J.E. An African Elite: Makerere College Students 1922-1960. Nairobi: Oxford Univeristy Press, 1965.

Gutto, S.B.O. "The Status of Women in Kenya: A Study of Paternalism, Inequality and Underprivilege." Institute for Development Studies, Discussion Paper No. 235. Nairobi: University of Nairobi, 1971.

Hughes, R. "Human Capital: The Wealth of Nations or Drain on Resources?" Institute for Development Studies, Working Paper No. 428. Nairobi: University of Nairobi, 1985.

Hughes, R. "Revisiting the Fortunate Few: Labour Market Experiences of University Graduates in Kenya "Comparative Education Review, 31 (4) (November, 1987), pp. 579 - 601.

Hughes, R. R. Some Equity and Efficiency Implications of the Expansion of Higher Education in Kenya. Unpublished PhD Dissertation, University of Washington, 1986.

Hughes, R. and Mwiria, K. "Kenyan Women, Higher Education, and the Labour Market." Bureau of Educational Research Seminar Paper Nov, 1988.

Hughes, R., and Wahome, J.G. "Higher Education and Employment in Kenya: A Liberal Interpretation of the Literature." Institute for Development Studies, Working Paper No. 426. Nairobi: University of Nairobi, 1985.

Hyden, G. Beyond Ujamaa in Tanzania: Underdevelopment and an Uncaptured Peasantry. London: Heinemann, 1980.

Irizarry, R.L. 'Overeducation and Unemployment in the Third World: The Paradoxes of Dependent Industrialization." Comparative Education Review, 24 (3), 1980, pp. 338-52.

Kelsall, R.K., Poole, A., and Kuhn, A. Six Years After. Sheffield, U.K.: Higher Education Research Unit, Sheffield University, 1970.

Kinyanjui, K. 'Education, Training, and Employment of Secondary School Leavers in Kenya." In D. Court and D. Ghai (Eds.), Education, Society and Development. Nairobi: Oxford University Press, 1974.

Lauglo, J. "Technical Secondary Students in Kenya: Origins, Achievement and Destinations." (mimeo), 1968.

Makau, B.M. 'Equity and Efficiency in Financing Secondary Education in Kenya: Key Issues in State-Community Partnership." Institute for Development Studies, Working Paper No. 429. Nairobi: University of Nairobi, 1985.

Matthews, R.G. "Machinery Manufacture in the Formal Sector of Kenya." Institute for Development Studies, Working Paper No. 425. Nairobi: University of Nairobi, 1985

Ministry of Economic Planning and Development. Kenya Population Census. 1962: Volume III. Nairobi: Government Printer, 1966.

Muya, W. "Education Costs: Whose Burden?" Daily Nation, July 2, 1988, p. 10.

Narman, A. 'Practical Subjects in Kenyan Academic Secondary Schools. Tracer Study Two. A Three Year Follow-up." SIDA Education Division Document No. 39. Stockholm: Swedish International Development Authority.

Njenga, A.W. "Career Patterns and Prospects Among Women and Men Agriculturists, Veterinary Doctors and Engineers. Unpublished Paper, Report to Kenya Education Research Awards. November, 1986.

Ogana, W. Personal Interview. July 10, 1985.

Olson, J.B. "Secondary Schools and Elites in Kenya: A Comparative Study of Students in 1961 and 1968." Comparative Education Review, 16 (1), 1972, pp. 44-53.

Oyugi, W.O. 'The Influence and Impact of Trans-nationals on Managerial Behaviour of National Managers." Paper presented at the Meeting of the African Association for Public Administration and Management, Blantyre, Malawi, 1984.

Pala, P., Awori, T., and Krystall, A. The Participation of Women in Kenyan Society. Nairobi: Kenya Literature Bureau, 1978.

Powell, J.D. "Peasant Society and Clientilist Politics," American Political Science Review, June, 1970, pp. 411 - 425.

Prewitt, K. "Education and Social Equality in Kenya." In D. Court and D. Ghai (Eds.), Education, Society and Development. Nairobi: Oxford University Press, 1974.

Ram, R. "Sex Differences in the Labour Market Outcomes of Education." In G.P. Kelly and C.M. Elliott (Eds.), Women's Education in the Third World. Albany: State University of New York Press, 1982.

(Ramtu Report). Report of the Civil Service Salaries Review Committee. 1985. Nairobi: Government Printer, 1985.

Rastad, S.E. Issues of University Development in East Africa. Unpublished Masters Thesis, Univeristy of Nairobi, Nairobi, Kenya, 1972.

Republic of Kenya. Development Plan 1966-1970. Nairobi: Government Printer, 1966.

Republic of Kenya. Economic Survey 1988. Nairobi: Government Printer, 19888.

Republic of Kenya. Employment and Earnings in the Modern Sector 1986. Unpublished Data. Central Bureau of Statistics.

Republic of Kenya. Kenya Population Census 1962, Vol. 3. Nairobi: Republic of Kenya, 1966..

Republic of Kenya. Kenya Population Census 1969, Vol. 3. Nairobi: Ministry of Finance and Economic Planning, 1971.

Republic of Kenya. 1979 Population Census, Vol. 2. Nairobi: Central Bureau of Statistics, 1983.

Ruigu, G. "Women Employment in Kenya." Paper Prepared for the Kenya Government Secretariat, U.N. Decade for Women Conference, 1985.

Shields, N. "Women in the Urban Labour Markets of Africa: The Case of Tanzania." World Bank Working Paper No. 380. Washington: World Bank, 1980.

Smock, A.C. "Women's Education and Roles in Kenya." Institute for Development Studies, Working Paper No. 316. Nairobi: University of Nairobi, 1977.

Smock, A.C. Women's Education in Developing Countries. New York: Praeger, 1981.

UNESCO. Statistical Yearbook 1984. London: UNESCO 1984.

Vandemoortele, J. "Kenya Data Compendium: 1964-1982." Institute for Development Studies, Occasional Paper No. 44. Nairobi: University of Nairobi, 1984.

van den Berghe, P. "An African Elite Revisited." Mawazo, 1 (4), 1968, pp. 57-71.

(Waruhiu Committee). Civil Service Review Committee Report. Nairobi: Government Printer, 1980.

World Bank. World Development Report. Washington: World Bank, 1986.

Yesufu, T.M. (Ed.) Creating the African University: Emerging Issues of the 1970's. Ibadan: Oxford University Press, 1973.

Appendix I

SURVEY INSTRUMENT

THE UNIVERSITY OF NAIROBI TRACER PROJECT

EXAMINING THE EMPLOYMENT AND INCOME EXPERIENCE OF A SAMPLE OF COMMERCE, ARTS, AND SCIENCE GRADUATES - 1970, 1975, 1979, 1982.

Instructions. This questionnaire has three major sections: Employment History. Educational History, and Background Information. Please answer all questions as completely and clearly as possible. The time required to complete the questionnaire will depend upon the complexity of your work history. Thank you.

1. EMPLOYMENT HISTORY

A. CURRENT JOB:

1. I am currently unemployed ( ) (If you check unemployed, Please move to Page 2) _____)

   employed ( )

   IF EMPLOYED:

2. Your exact job title: _____ Beginning Date: _____
3. Employer: ( ) private industry ( ) parastatal organisation
   ( ) other _____
   ( ) local government ( ) self-employed ( ) central Govt.
4. What is the main activity of your employer? _____
5. What are your job responsibilities (please list only the top four):
   a. _____
   b. _____
   c. _____
   d. _____
6. What is your level of responsibility within the organisation? Civil-service job group (classification) if applicable, number of personnel are directly responsible for, and the size of the budget you are responsible for:

   _____

   _____

   _____

7. What were the minimum qualifications your employer required for your current position and, in your opinion, what were the minimum qualifications actually necessary to do your current job, in terms of (tick ( ) the appropriate response in each column):

MINIMUM EDUCATIONAL LEVEL	Required By Employers	Actually Necessary
Masters Degree of Above	( )	( )
Bachelors Degree	( )	( )
'A' - Level	( )	( )
'O' - Level	( )	( )
Primary (Standard 7)	( )	( )
No Education Required	( )	( )

MINIMUM EXPERIENCE REQUIRED	Required By Employers	Actually Necessary
3 years of More	( )	( )
1 - 3 years	( )	( )
1 Year Required	( )	( )
No Previous Experience	( )	( )

8. What is your current basic salary level (please tick ( ) only one response):

( ) 0 - 2,500 KSh/month ( ) 7,501 - 10,000 KSh/month
( ) 2,501 - 5,000 KSh/month ( ) 10,001 - 12,500 KSh/month
( ) 5,001 - 7,500 KSh/month ( ) 12,501 - 15,000 KSh/month

( ) 15,001 - 17,500 KSh/month
( ) 17,001 - 20,000 KSh/month
( ) above 20,000 KSh/month

9. Are you provided with housing or a house allowance? ( ) Yes ( ) No

10. Are you provided with a car or a car allowance? ( ) Yes ( ) No

11. What percentage of the Knowledge you formally acquired through your University education are utilized in your job?

( ) 0 - 25% ( ) 25 - 50% ( ) 50 - 75% ( ) More than 75%

12. If this job is also your FIRST JOB AFTER GRADUATION, how long did you remain unemployed after graduation?

( ) 0 - 2 months ( ) 3 - 6 months ( ) 7 - 12 months ( ) 1 - 3 years
( ) longer than 3 years

B: WORK HISTORY:

These questions are designed to give us a picture of other jobs that you have held since you left the University of Nairobi. This will help us understand job mobility, the recruitment process, and the relationship of career aspirations to career path. Again, your complete and accurate response will be most helpful.

Beginning with the first job you held after graduation, please trace your employment history by completing the following information. Complete one box for each job that you have held since finishing your undergraduate program of the University of Nairobi.

FIPST JOB AFTER GRADUATION

1. JOB TITLE:..... BEGINNING DATE .....

2. MAIN ACTIVITY OF EMPLOYER: ..... ENDING DATE .....

3. EMPLOYER: ( ) Private Industry ( ) Parastatal Organisation
( ) Other ( ) Central Government
( ) Self employed

4. Were you employed in a ( ) PERMANENT or ( ) TEMPORARY Position?
Was it ( ) FULL-TIME or ( ) PART-TIME

5. What were your job responsibilities (please list only the primary four).
a. .....
b. .....
c. .....
d. .....

6. What was your level of responsibility within the organisation? Civil service job group (classification) if applicable, the number of personnel and the size of the budget you were responsible for should be noted.

.....

.....

7. What were the minimum qualifications your employer required for your first position and, in your opinion, what were the minimum qualifications actually necessary to do your first job, in terms of (tick ( ) the appropriate response in each column):

MINIMUM EDUCATIONAL LEVEL	Required by Employers	Actually Necessary
Masters Degree of Above	( )	( )
Bachelors Degree	( )	( )
'A' Level	( )	( )
'O' Level	( )	( )
Primary (Standard 7)	( )	( )
No Education Required	( )	( )

MINIMUM EXPERIENCE REQUIRED	Required by Employers	Actually Necessary
3 Years of More or	( )	( )
1 - 3 Years	( )	( )
1 Year Required	( )	( )
No Previous Experience	( )	( )

8. What percentage of the knowledge you formally acquired through your University education were utilized in your job?
( ) 0 - 25% ( ) 25 - 50% ( ) 50 - 75% ( ) More than 75%

9. Please note the BEGINNING salary level of your first position:
( ) 0-1,000 KSh/month ( ) 2,501-5,000 KSh/month ( ) 7,501-10,000 KSh/Month
( ) 1,001-2,500 KSh/Month ( ) 5,001-7,500 KSh/month
( ) above 10,000 KSh/month.

10. Please note the ENDING salary level of your first position:
( ) 0-1,000 KSh/month ( )2,501-5,000 KSh/month ( ) 7,501-10,000 Ksh/month
( ) 1,001-2,500 Ksh/month ( ) 5,001-7,500 KSh/month
( ) above 10,000 Ksh/month

11. Housing or house alowance? ( ) Yes ( ) No Car or Car Allowance? ( ) Yes ( ) No.

12. Reason for leaving Job: ( ) Better Salary/Allowances
( ) More Responsibility ( ) Other

13. Approximately how long did you remain unemployed after graduation?
( ) 0-2 months ( ) 3-6 months ( ) 7 - 12 months ( ) 1 - 3 years
( ) longer than 3 years.

SECOND JOB AFTER GRADUATION:

JOB TITLE: ---------- BEGINNING DATE ----------

MAIN ACTIVITY OF EMPLOYER: --- ---------- ENDING DATE ----------

EMPLOYER: ( ) Private Industry ( ) Parastatal Organisation
( ) Central Government ( ) Local Government
( ) Other _____ ( ) Self Employed

DUTIES/RESPONSIBILITIES/LEVEL WITHIN THE ORGANISATION (e.g. civil service job group (classification), number of personnel and size of budget responsible for): ----------

---

ENDING BASIC SALARY: ( ) 0-2,500 KSh/month ( ) 7,501-10,000 Ksh/month
( ) 2,501-5,000 Ksh/month ( ) 10,001-12,500 Ksh/month
( ) 5,001-7,500 Ksh/month ( ) 12,501-15,000 Ksh/month
( ) 15,001-17,500 Ksh/month ( ) 17,501-20,000 Ksh/month
Above 20,000 Ksh/month

HOUSE OR HOUSE ALLOWANCE? ( ) Yes ( ) No * CAR OR CAR ALLOWANCE Yes/No

REASON FOR LEAVING JOB: ( ) Better Salary/Allowances
( ) More Responsibility
( ) Other _____

THIRD JOB AFTER GRADUATION

JOB TITLE: _____ BEGINNING DATE _____

MAIN ACTIVITY OF EMPLOYER: _____ ENDING DATE _____

EMPLOYER: ( ) Private Industry ( ) Parastatal Organisation
( ) Central Government ( ) Local Government
( ) Other ( ) Self-employed

DUTIES/RESPONSIBILITIES/LEVEL WITHIN THE ORGANISATION (e.g. civil service job group (classification), number of personnel and size of budget responsible for: _____
_____

ENDING BASIC SALARY: ( ) 0-2,500 Ksh/month ( ) 2,501-5,000 Ksh/month
( ) 5,001-7,500 Ksh/month ( ) 10,001-12,500 Ksh/month
( )12,501-15,000 Ksh/month ( ) 17,500-20,000 Ksh/month
( ) 15,001-17,500 Ksh/month( ) above 20,000 Ksh/month

*Housing or House allowance? ( ) Yes ( ) No

*Car or Car Allowance? ( ) Yes ( ) No

Reason for Leaving Job: ( ) Better Salary/Allowances
( ) More responsibility ( ) Other

FOURTH JOB AFTER GRADUATION:

1. JOB TITLE: _____ BEGINNING DATE _____

2. MAIN ACTIVITY OF EMPLOYER: _____ ENDING DATE _____

3. EMPLOYER: ( ) Private Industry ( ) Parastatal Organisation
( ) Central Government( ) Local Government
( ) Other ( ) Self-employed

4. DUTIES/RESPONSIBILITIES/LEVEL WITHIN THE ORGANISATION (e.g. Civil Service job group (classification), number of personnel and size of budget responsible for: _____
_____
_____

FIFTH JOB AFTER GRADUATION

1. JOB TITLE ---------- BEGINNING DATE ----------

2. MAIN ACTIVITY OF EMPLOYER: ---------- ENDING DATE

3. EMPLOYER: ( ) Private Industry ( ) Parastatal Organisation
( ) Central Government ( ) Local Government
( ) Other ( ) Self-employed

4. DUTIES/RESPONSIBILITIES/LEVEL WITHIN THE ORGANISATION (e.g. civil service job group (classification), number of personnel and size of budget responsible for):----------
---
---

5. ENDING BASIC SALARY: ( ) 0-2,500 Ksh/month ( ) 12,501-15,000 Ksh/month
( ) 2,501-5,000 Ksh/month ( ) 15,001-17,500 Ksh/month
( ) 5,001-7,500 Ksh/month ( ) 17,501-20,000 Ksh/month
( ) 7,501-10,000 Ksh/month ( ) above 20,000 Ksh/month
( ) 10,001-12,500 Ksh/month

6. *HOUSING OR HOUSE ALLOWANCE? ( ) Yes ( ) No
*CAR OR CAR ALLOWANCE? ( ) Yes ( ) No

7. REASON FOR LEAVING JOB: ( ) Better Salary/Allowances
( ) More Responsibility
( ) Other

SIXTH JOB AFTER GRADUATION

1. JOB TITLE: ---------- BEGINNING DATE ----------

2. MAIN ACTIVITY OF EMPLOYER:---------- ENDING DATE ----------

EMPLOYER: ( ) Private Industry ( ) Parastatal Organisation
( ) Central Government ( ) Local Government
( ) Other ( ) Self-employed

4. DUTIES/RESPONSIBILITIES/LEVEL WITHIN THE ORGANISATION (e.g. civil service job group (classification), number of personnel and size of budget responsible for): ----------
---

ENDING BASIC SALARY: ( ) 0-2,500 Ksh/month ( ) 12,501-15,000 Ksh/month
(X) 2,501-5,000Ksh/mont ( ) 15,001-17,500 Ksh/month
( ) 5,001-7,500Ksh/month ( ) 17,501-20,000 Ksh/month
( ) 7,501-10,000Ksh/month ( ) Above 20,000 Ksh/month
( )10,001-12,500 Ksh/month

6. *HOUSING OR HOUSE ALLOWANCE? ( ) Yes ( ) No
*CAR OR CAR ALLOWANCE? ( ) Yes ( ) No

7. REASON FOR LEAVING JOB: ( ) Better Salary/Allowances
( ) More Responsibility
( ) Other

1. Please rank the following (with one (1) being the most important and four (4) being the least important) according to your perceptions of their contributions to getting your first position. They are:

( ) Academic Performance ( ) Having a Degree/Credential
( ) Personal or Family Contacts ( ) Other Experiences/Skills
(Specify): ----------

2. How important have family or personal contacts been in furthering your career?
( ) Not Important at All ( ) Are Now, Were Not Initially
( ) Were Initially, Not Now ( ) Have Been Somewhat Important Throughout
( ) Have been Essential Throughout

3. How important has the support of your classmates and University of Nairobi Faculty been in furthering your career?
( ) Not Important At All ( ) Are Now, Were Not Initially
( ) Were Initially, Not Now ( ) Have Been Somewhat Important Throughout
( ) Have Been Essential Throughout.

II. EDUCATIONAL HISTORY

C. EDUCATIONAL HISTORY:

This section is interested in further study pursued since receiving your undergraduate degree at the University of Nairobi. This should include post-graduate training, additional undergraduate degree programs, certificate studies or any program ending with a recognized credential.

1. Since graduation, I have (Please tick ( ) all appropriate responses):
   ( ) a. Not continued further study (Please continue directly to Section III. on page 6. ----------
   ( ) b. Completed Professional Studies
   ( ) c. Completed a Masters Program
   ( ) d. Completed a Doctoral Program
   ( ) e. Completed some other manner of further studies: ----------

2. What languages other than English do you speak fluently? ----------
   ---

3. In a fashion similar to that used for tracing your "Work History", please trace all further studies you have completed since finishing your first undergraduate program at the University of Nairobi. Complete one box for each separate educational experience, such as, a Masters in Sociology, a Teaching Certification, or completion of professional Accountancy examinations. Again your thorough and accurate response will be most helpful.

FURTHER STUDY LEADING TO A CERTIFICATE (Name of Certificate): ----------
BEGINNING DATE ---------- ENDING DATE ----------
Institution (if appropriate): ---------- Location:----------

Sponsor: ( ) Employer ( ) Covernment ( ) Self ( ) Other

STUDY LEADING TO A CERTIFICATE: ----------
BEGINNING DATE ---------- ENDING DATE ----------
Institution: ---------- Location: ----------

Sponsor: ( ) Employer ( ) Government ( ) Self ( ) Other

	Father	Mother
University - Undergraduate Degree	( )	( )
University - Post Graduate Degree	( )	( )

4. What is your father's total approximate monthly income? (If he is dead, retired, or presently not working, approximate most recent income.

Note year for which your assessment is made, e.g. last income earned in 1974)

( ) 0-1,000 Ksh/month
( ) 1,001-2,500 Ksh/month
( ) 2,501-5,000 Ksh/month
( ) 10,001-20,000 Ksh/month
( ) Year if applicable
( ) 20,001 KSH/month or more

5. What is your mother's total approximate monthly income? (If she is dead, retired, or presently not working, approximate most income. Note year for which your assessment is made).

( ) 0-1,000 Ksh/month
( ) 1,001-2,500 Kshs/month
( ) 2,501-5,000 Ksh/month
( ) 10,001-20,000 Ksh/month
( ) Year, if applicable _____
( ) 20,001 Ksh/Month or more

6. Your Birthplace (District , Country): _____

7. Last Secondary School You Attended (Name, Location): _____

COMMENTS ON ANY PORTION OF THE SURVEY (Use the reverse of this page if necessary):

If you would like a copy of the results of this study, the Institute for Development Studies would be pleased to send them to you if you indicate by placing a tick ( ) in the following space: ( )

If you have questions or comments about the survey, its contents or its purpose, please contact: Rees Hughes, Project Coordinator,
Institute for Development Studies,
P. O. Box 22856,
University of NAIROBI,
NAIROBI, Phone 334244 Ext. 2455.

Appendix II

CHARACTERISTICS OF RESPONDENTS, NON-RESPONDENTS, AND NONTTRACED MEMBERS OF THE SAMPLE

	1970 SAMPLE		
SEX:	RESPONDENTS	NON-RESPONDENTS*	NON-TRACED
Male	41 (91%)	34 (83%)	15 (79%)
Female	4 (9%)	7 (17%)	4 (21%)
GRADES:			
1st Class	1 (2%)	4 (10%)	-
Upper 2nd	6 (13%)	7 (18%)	-
Lower 2nd	18 (40%)	14 (35%)	7 (35%)
Pass	20 (44%)	15 (38%)	13 (65%)
MAJOR:			
Accounting	7 (16%)	9 (23%)	1 (5%)
Banking	5 (12%)	-	2 (10%)
Marketing	4 (9%)	2 (5%)	2 (10%)
Personnel	-	1 (3%)	-
Arts	15 (35%)	14 (36%)	10 (50%)
Mathematics	3 (7%)	4 (10%)	2 (10%)
Chemistry	7 (16%)	8 (21%)	2 (10%)
Other SCience	2 (5%)	1 (3%)	1 (5%)

*Non-Respondents include those about whom specific information has been obtained, although not necessarily a specific address. For the 1970 sample this amounts to 13 individuals, 32 percent of the total number f of non-respondents.

	1975 SAMPLE		
	RESPONDENTS	NON-RESPONDENTS	NON-TRACED
SEX:			
Male	54 (76%)	22 (73%)	7 (78%)
Female	17 (24%)	8(27%)	2(22%)
GRADES:			
1st Class	-	-	
Upper 2nd	11 (16%)	4(11%)	1(11%)
Lower 2nd	44 (62%)	20(54%)	8(89%)
Pass	16 (23%)	13(35%)	-
MAJOR:			
Accounting	22 (31%)	3(10%)	1(11%)
Business Ad.	6 (8%)	7(23%)	1(11%)
3-1-1 Sociology	1 (1%)	1(3%)	
3-2-2 Sociology	20 (28%)	12(39%)	5(55%)
Mathematics	7 (10%)	3(10%)	2(22%)
Chemistry	13 (18%)	5(16%)	-
Other Science	2 (3%)	-	-

1979 SAMPLE

	RESPONDENTS	NON-RESPONDENTS	NON-TRACED
SEX:			
Male	66 (64%)	23 (88%)	9 (64%)
Female	18 (17%)	3 (12%)	5 (36%)
GRADES:			
1st Class	3 (4%)	3 (12%)	-
Upper 2nd	31 (40%)	7 (28%)	5 (36%)
Lower 2nd	38 (49%)	11 (44%)	9 (64%)
Pass	6 (8%)	4 (16%)	-
MAJOR:			
Accounting	20 (26%)	11 (42%)	4 (29%)
Marketing	4 (5%)	1 (4%)	-
3-1-1 Sociology	5 (6%)	2 (8%)	-
3-2-2-Sociology	18 (23%)	8 (31%)	5 (36%)
Mathematics	15 (19%)	3 (12%)	2 (14%)
Chemistry	15 (19%)	1 (4%)	3 (21%)

1983 SAMPLE

	RESPONDENTS	NON RESPONDENTS	NON-TRACED
SEX:			
Male	69 (70%)	9 (69%)	7 (64%)
Female	29 (30%)	4 (31%)	4 (36%)
GRADES:			
1st Class	3 (3%)	-	-
Upper 2nd	26 (27%)	4 (36%)	2 (22%)
Lower 2nd	53 (55%)	7 (64%)	7 (77%)
MAJOR:			
Accounting	21 (22%)	2 (15%)	2 (20%)
Insurance	7 (7%)	1 (8%)	-
Marketing	5 (5%)	-	-
3-1-1 Sociology	3 (3%)	-	-
3-2-2 Sociology	28 (29%)	4 (31%)	4 (40%)
Mathematics	18 (19%)	5 (38%)	4 (40%)
Chemistry	14 (15%)	1 (8%)	-

TABLE II: RESPONDENT PROFILE - ANOTHER VIEW

COMMERCE
YEAR OF GRADUATION

	1970	19755	1979	1983	TOTAL
Located	27	38	36	38	139
Responses	16 (59%)	28 (74%)	24 (67%)	35 (92%)	103 (74%)
Some Data	0	0	0	0	0
Dead	3	0	0	0	3
Total Sample	36	40	40	40	156

SCIENCE

YEAR OF GRADUATION

	1970	1975	1979	1983	TOTAL
Located	20	30	34	37	121
Responses	14 (70%)	23 (77%)	30 (88%)	32 (86%)	99 (82%)
Some Data	8	0	0	0	8
Dead	1	1	1	0	3
Total Sample	34	33	40	42	149

ARTS

YEAR OF GRADUATION

	1970	1975	1979	1983	TOTAL
Located	26	32	32	36	126
Responses	15 (58%)	22 (69%)	25 (78%)	31 (86%)	93 (74%)
Some Data	5	1	1	0	7
Dead	1	1	1	0	3
Total Sample	40	39	40	40	159

COMBINED TOTAL

YEAR OF GRADUATION

	1970	1975	1979	1983	TOTAL
Located	73	100	102	111	386
Responses	45 (62%)	73 (73%)	79 (77%)	98 (88%)	295 (76%)
Some Data	13	1	1	0	15
Dead	5	2	2	0	9
Total Sample	110	112	120	122	464

PERCENT OF SAMPLE FOR WHICH THERE IS SOME INFORMATION: 88.4%

PERCENT OF THOSE LOCATED THAT RESPONDED: 76.4%

STUDY LEADING TO A CERTIFICATE: ----------

BEGINNING DATE ---------- ENDING DATE ----------

Institution: ---------- Location _____

Sponsor: ( ) Employer ( ) Government ( ) Self ( ) Other

STUDY LEADING TO A CERTIFICATE: ----------

BEGINNING DATE ---------- ENDING DATE ----------

Institution: ---------- Location: ----------

Sponsor: ( ) Employer ( ) Government ( ) Self ( ) Other

STUDY LEADING TO A CERTIFICATE: ----------

BEGINNING DATE ---------- ENDING DATE ----------

Institution: ----------Location ---------- -------

Sponsor: ( ) Employer ( ) Government ( ) Self ( ) Other

III. BACKGROUND INFORMATION

D. BACKGROUND INFORMATION:

This information supplements data available through the records of the University of Nairobi. As with the preceding sections the value of this study depends greatly upon the frankness of your reply. No specific person will be quoted in our findings: we are interested in the experience of the majority.

1. What is your father's occupation? (If he is dead, or presently not working , describe his former occupation.)

---

2. What is your mother's occupation? (If she is dead, retired, or presently not working, describe her former occupation)

---

3. What is the highest level of education of your parents? (Please tick ( ) the appropriate answer for each parent).

	Father	Mother
No formal Education	( )	( )
Primary Education	( )	( )
'O' Level Secondary Education	( )	( )
'A' Level Secondary Education	( )	( )
Post-Secondary Training	( )	( )