The Roles and Responsibilities of the Beneficiaries of Higher Education in sub-Saharan Africa

Geoffrey Lungwangwa

In developing nations, higher education or that segment of the educational system for the privileged few, has become a subject of critical analysis in recent years. The points of discourse on higher education have been varied. First, because this level of education is usually accompanied by significant opportunity costs, questions have been raised as to who the beneficiaries of higher education are. A number of empirical studies in different countries have increasingly found the beneficiaries of higher education to be those families in the upper socio-economic statuses. Students from such families experience very little opportunity costs especially in terms of income forgone because the families are economically well off and they do not expect financial assistance from them. A major policy issue that has developed is whether higher education should continue to be subsidised from public funds when doing so entails subsidising students from high income families whose parents are capable of meeting the costs.[1] Very few countries have resolved this issue. The education authorities in Zambia recently issued a policy statement that addresses the problem of financing higher education in the country. The current policy is directed at cost recovery measures that require the beneficiaries of higher education to meet part of its costs.[2]

The second area of concern in higher education deals with its benefits.[3] Empirical investigations at this level have indicated that when the costs and benefits are calculated, higher education has a much higher private rate of return than the social rate of returns. In practical terms this means that it is the individual graduates (and the

immediate families) that stand to benefit more from investments in higher education than anybody else. Those that have stressed the benefits of higher education to the individual graduates have generally emphasized the relationship of higher education to higher socio-economic status attainments. The latter takes into account the increases in income and prestige that accrue to the beneficiaries of higher education. The beneficiaries of higher education cannot be exclusively confined to the individual graduates and their families. Rather, those that benefit from higher education include the employers and the society as a whole. The employers of graduates from higher education, be they the government, parastatal organisations or private firms benefit from higher education through the engagement of the skills and knowledge of highly trained personnel. For society as a whole, higher education contributes to improvements in the quality of the local labour force that could be utilised for productive purposes.

The third point focuses on the relevance of higher education to its surroundings. Throughout much of the developing world especially in Sub-Saharan Africa, economies have declined significantly to the point that the quality of human life is threatened. The issue is whether investment in higher education can be rationalised on the basis of its development effect on the society when the quality of life in these societies is deteriorating to such high proportions.

Fourth, the deterioration in the economies of developing nations raises questions of the capacity of these nations to sustain the systems of higher education. Higher education is generally very expensive and providing it at a certain level of quality requires enormous resources in financial, human and material terms. A number of developing nations are unable to meet such resources.[4]

Fifth, highly publicly subsidised higher education has major opportunity costs to society. That is, public resources directed to higher education could have been targeted to other sectors of the economy. For example, financial resources going to higher education could have been targeted towards increasing production among peasant farmers, through provision of extension services, loans for implements, fertilizers among others. Poor nations have to forego these opportunities for increasing production because part of their hard earned resources have to be channelled to support higher education. Often, financial allocations to higher education are greater than what other equally important sectors are getting from the

national budget. The issue is not that there should be not public resources expended on higher education. Rather, it is that the ever escalating unit costs of higher education should not only be met from already constrained public resources but that the base for meeting such costs be broadened.[5]

The current areas of debate in higher education make the point of departure in the analysis of the issues at this level rather difficult. It is not a sweeping generalisation to state that everything about higher education in the developing nations is under critical analysis. The current thinking on higher education among planners, policy analysts, and researchers points to a need for a critical review of the role of this level of education in the development process. In other words, the ideology of manpower development which was the basis for wholesale quantitative expansion of higher education in developing nations is currently under close scrutiny. The question is whether the systems of higher education operating in developing nations are instruments of development? In the same vein, the roles and responsibilities of the beneficiaries of higher education are also subject for review. The issue is not so much about the roles and responsibilities of the graduates from the tertiary education sector. Rather, the concern is on who these graduates are and whether they are a force for meaningful socio-economic and political transformation in their societies. In order to establish a realistic discussion of the roles and responsibilities of the beneficiaries of higher education in a less developed nation like Zambia, this paper begins with a critical review of the 'manpower approach' to the development of higher education.

The Ideology of Manpower Production

The key concept surrounding the thinking on higher education since the fifties was the production of manpower. The assumption was that developing nations needed that critical segment of the labour force which is defined as High Level Manpower. This category consists of holders of degrees, diplomas and certificates from universities, colleges, and institutes. High level manpower was considered to be the backbone of the modern economic sector because of the strategic position that it occupies.[6]

High level manpower was classified in three groups. The first being the category of professionals like scientists, doctors, engineers, lawyers, educationists, architects, accountants, agronomists and so on. The second group being that of administrators, managers and

teachers. The final category belonged to the sub-professionals and technical personnel like engineering assistants, craftsmen, skilled workers and technicians. The consensus in the fifties and sixties was that all these levels of manpower formed the cadre of leadership for social, economic, political and scientific change in the modern economic systems of the new nations. There was little empirical support for this optimism.

Most of the optimism about the economic value of investing in education centred on the critical role of high level manpower in the development process. Advocates of human capital theory considered higher education as the source of professional and skilled manpower that was empowered with new knowledge which was vital for technological advancement and economic growth.[7] The beneficiaries of higher education, it was held, were not only equipped with knowledge but they had the capacity to produce new knowledge which was the source of innovation and technical change in the new nations.[8] The reason was that developing nations were in dire need of specialised scientists, technicians and researchers who could adopt, master and modify the new technologies for development purposes. The faith in the role that higher education could play in developing nations was extended to encompass the entire educational system because education:

> *"increases productivity in all sectors of the economy, reduces fertility, improves health and nutrition status and promotes significant attitude and behaviour changes, at the level both of the individual and the community which are helpful to the process of economic development."*[9]

Available evidence in Sub-Saharan Africa indicate that the optimism about what the beneficiaries of higher education can do in the development struggle led to significant expansion of this sector. Enrollment figures in higher education for example increased from 21 000 in 1960 to more than 430 000 in 1983 in the Sub-region.[10] It should however be pointed out here that the provision of high-level manpower might not have been the sole reason for the rapid expansion of higher education. Other factors did come into play especially those pertaining to the quest for a national identity, promotion of cultural life and the value of such institutions like universities as national status symbols almost similar to having a national airline that can land in foreign countries. The magnitude

with which higher education was developed in Sub-Saharan Africa can best be illustrated by Zambia's efforts.

Higher education in Zambia since independence

Like certain other countries in Sub-Saharan Africa, Zambia did not have any system of higher education during the colonial period. The advent of political independence in 1964 led to a rapid development of a system of higher education that included the university, institutes of technology, secondary and primary teachers' colleges, trades training institutes, agricultural and natural resources training colleges to mention but a few. Some of these institutions were not in the higher education category in the true sense of the term because they admitted candidates who never completed full secondary education. The goal behind quantitative expansion of higher education was to meet the immediate needs of trained manpower. The production of trained manpower was restricted under the colonial set-up as the figures in Table 1 indicate.

Table 1: Zambian University Graduates 1950-1964 by year of Graduation

Year	Numbers Graduating each year		Cumulative Totals	
	Male	Female	Male	Female
1950	1	-	1	-
1951	3	-	4	-
1952	2	-	6	-
1953	1	-	7	-
1954	1	-	8	-
1955	4	-	12	-
1956	7	-	19	-
1957	5	-	24	-
1958	6	-	30	-
1959	7	-	37	-
1960	4	-	41	-
1961	8	-	49	-
1962	6	-	55	-
1963	19	2	74	2
1964	30	3	104	5
TOTALS	104	5	109	

Source: Government of the Republic of Zambia, Manpower Report, 1965-66 (Lusaka: Government Printer, 1965) p.2.

Table 1 summarises Zambia's colonial experience with respect to higher education. The country attained political independence with a total number of 109 university graduates, among whom only 5 were females. The growth in the number of these graduates from 1950 was extremely low. The colonial government's neglect of high level manpower development is further illustrated in Table 2.

Table 2: Distribution of Workers with Post Secondary Education in Zambia

	Zambians			Non-Zambians		
	Total	Diploma	Degree	Total	Diploma	Degree
Agriculture	24 281	1	1	1156	329	93
Mining and quarrying	45 947	27	7	7 800	1 800	636
Manufacturing	26 903	41	4	4 333	617	143
Construction	41 916	-	3	2 651	310	165
Electricity and water	2 852	2	-	405	15	20
Commerce and finance	17 201	138	5	7 214	1 247	230
Transport and communications	9 442	41	2	2 088	235	39
Services; incl government	67 604	267	128	9 114	2 086	2 173
TOTAL	236 146	517	150	34 761	5 944	3 499

Source: Government of the Republic of Zambia Manpower Survey 1965 Lusaka, Government Printer, 1965)

From the standpoint of high level manpower, Table 2 shows that Zambia was in fact ill-prepared for self-rule in the true sense of the word. At independence, Zambia had only one Zambian university graduate in agriculture, seven in mining, four in manufacturing, three in construction, five in commerce and finance, and two graduates in transport and communications. The figures at the diploma level were not all that impressive. These figures reflect a lack of concern on the part of the colonial government to develop the human resources necessary for the country's development. Judging from Table 2, Zambia gained political independence while having to rely on

expatriate staff to formulate and execute development plans in all sectors of the economy. The extent of the severity of the manpower situation at the time of Zambia's independence was described in the following words:

Among the two and half million (Zambians) there were only two medical doctors, one engineer, no graduate teachers no town planner and no economist serving either the government or private enterprise in any capacity.[11]

In 1966, President Kaunda put Zambia's experience with colonial education this way:

> *"As far as education ins concerned, Britain's colonial record in Zambia is most criminal. This country has been left by her as the most uneducated and unprepared of Britain's dependencies on the African continent".*[12]

Arising from the country's desperate manpower situation was an insatiable quest to produce trained manpower in sufficient numbers. The focus was on training a cadre of high level manpower that would help develop the country's economy, fill its administrative posts and teach in its schools. In practical terms, this meant a rapid expansion of university education and also a development of specialised institutions concerned with professional and technical training. The main goal for the University of Zambia identified in 1966 was

> *"to provide the resources to enroll over 1 600 students in 1970 and develop it to take a leading part in the educational, professional and cultural life of the nation by professional training in engineering, medicine, agriculture, administration, teaching and law."*[13]

The development model of higher education since independence has largely been the manpower-industry matrix. To the policy makers and planners, higher education was vital in producing qualified personnel that constitutes sound administrative cadres for the upper and middle grades in government, commerce and industry. Zambia's development, it was widely held, depended upon the trained minds of its people. That is, the country's programme of industrial development and its perceived impact on social life was to depend for its success on administrative, managerial and technical skills and experience of the Zambian manpower to carry out with efficiency, dedication and effectiveness the objectives of development.[14]

The government's manpower policy was well intended but there were some shortcomings. A close review of the official planning documents on the problems of manpower indicates that what was considered to be Zambia's problems (i.e. shortage of manpower) was conceptualised in terms of the modern urban sector. The problems of manpower was not conceptualised in national terms to include both the modern and the traditional subsistence sectors of the economy. The assumption of the planners right from the start was to rationalise employment and educated manpower in terms of that labour force engaged in the formal wage labour market. The dominant view was that the labour force, which was predominantly urban, played a crucial role in the nation's economy by providing the initiative, skills and sheer hard work needed for production. When estimates of the manpower needs of the economy were made, the tendency was to focus on the urban needs. It was a manpower strategy for urban (and not national) development.

Table 3 summarizes Zambia's manpower problems. Out of the total labour force of 305 907, only 43 282 (14%) possessed educational levels above Form II level. From those with Form II and above level of education, 32 807 (78%) were non Zambians and only 9 475 (22%) were nationals. At the higher educational levels (i.e. diploma and degree levels) out of 10 110 persons with this level of education, 9 443 (93%) of them were non Zambians and only 667 (7%) were nationals. The conclusions coming from these figures were that Zambia's labour force was predominantly uneducated. Additionally, out of the number that was considered to be educated, the proportion of the nationals was negligible. These were indeed the hard realities of the manpower situation in Zambia that no one can deny.

The major shortcoming in Zambia's manpower planning was that it was more concerned with the modern urban industrial sector. In practical terms, what was officially regarded as the manpower problem was in short the problem of the modern urban economic sector. This was a major drawback in national planning because higher educational institutions and their products were by implication oriented towards the modern urban sector. Available research evidence supports this point.[15] The motivation for seeking entrance into higher educational institutions in Zambia has been the opportunities that the modern urban industrial economic sector could provide to those with this level of education. In other words, higher educational institutions have so far been turning out graduates who

have tended to respond more to the structure of rewards and privileges than to the developmental needs of the country. Again, this point is supported by research which has noted a significant process of mobility in the labour market among highly trained people. Throughout the seventies and eighties, a lot of university graduates in Zambia ended up in jobs that were irrelevant to their studies. This trend was most prevalent among university graduates in the Natural Sciences where 30% of them ended up taking jobs not directly related to their field of study.[16]

Table 3: Actual Educational Qualifications of Persons in the Civilian Labour Force with or in Jobs Requiring Secondary Education or Above, 1965-66

Actual Educational Qual.	Zambians	Non Zambians	Total
Degree	150	3 499	3 649
Diploma	517	5 944	6 461
"O" Level	1 516	11 965	13 481
Form II	7 282	11 409	18 691
Less than Form II but in jobs requiring secondary education or above	12 015	1 853	13 868
In jobs requiring Primary education or less	249 666	91	249 757
TOTAL	271 146	34 761	305 907

Source: Government of the Republic of Zambia, Manpower Report (Lusaka: Government Printer, 1965) p.14.

The problem with a system of education that is directed at supplying professional and technical manpower needed by the modern urban sector is that it does not adequately respond to national development needs. In Zambia, the concentration of the beneficiaries of higher education in the modern urban sector has perpetuated and enhanced the inherited structural imbalances between the modern and the rural sectors. In this way, graduates from higher institutions of learning have not been effective agents of structural transformation in society. About 90% of university graduates have generally been absorbed in the urban areas along the line of rail.[17] Credentialism has been the characteristic of the Zambian labour market. The emphasis has been

on a reward system based essentially on paper qualifications and not on productivity or internal quality of that qualification. Credentialism has in fact had a signalling effect in the labour market. That is, what individuals have been seeing is a reward system for high paying jobs which has been closely tied to the level of qualification one holds and not necessarily the amount and quality of productivity an individual displays. Like elsewhere, the popular demand for higher education in Zambia has been in response to the effects of credentialism in the labour market. The industry-occupation matrix model has possibly been tolerated thus far because of three cardinal problems. These are:

- the critical shortage of professional and skilled manpower necessary for economic development;
- dependency on expatriate manpower at the professional and technical levels; *and*
- a large pool of undeveloped human resources. These problems have probably kept criticisms of higher education in Zambia at a minimum.

However, higher education in a less developed country like Zambia is a luxury of a tiny minority at the expense of so many. This means that those that receive it are doing so at great public cost. In instituting measures of accountability the questions to be asked are: what type of higher education does the nation have? What goes on in those institutions of higher education? What kind of graduates are being produced? What value is added by the recipients of higher education to the society? To call for the accountability of higher education to its society is to demand for its relevance as a catalyst to development. What it all means is that institutions of higher education cannot exist as islands in society. There has to be a reciprocal relationship between the institutions of higher education and the society. Such a relationship cannot take effect unless steps are taken to orient the tertiary education sector to the developmental needs of the society. Examples from other societies indicate that efforts had to be made in order to mould higher education into an effective instrument for development. The United States is a case in point where the system of higher education as embodied in the landgrant colleges, institutions of technology, teachers colleges, and state universities were organised in such a way as to "stimulate and respond to every turn of development".[18] The American institutions of higher education are considered to have been significant in producing graduates that helped to stimulate and heighten agricultural productivity,

industrialisation, corporate enterprise and universal education. These developments were made possible through a careful orientation of the critical roles of higher education, namely, teaching, research and public service to local needs. The lesson for developing countries like Zambia is that higher education can be an effective tool for development if it is able to feed itself with its own scholars, researchers and teachers. These ought to be retained at all cost.

Sub-Saharan African nations like Zambia have not yet undertaken a serious but realistic assessment of the role that higher education can play in the development process. The systems of higher education in these countries are nourished in good faith founded on certain expectations namely:

- That tertiary institutions produce people needed to fill high level scientific, technical, professional and managerial jobs - the elites that can steer through its leadership a nation's development efforts.
- That higher education produces its own high level manpower in the form of teachers, scholars and managers who can undertake teaching, research and administrative functions. That the higher level manpower tenable in the education sector itself is the core of the national capacity for producing trained manpower, setting standards, maintaining quality and adjusting the educational system to changing circumstances.
- That higher education institutions generate the knowledge and innovation needed for development through
- That African Universities as institutions and their faculties as individuals can provide necessary services needed for development of both the public and private sectors.
- That tertiary institutions are a source of analytical perspective on social problems and their possible solutions.
- That higher education institutions also encourage indigenous self expression, conserve and adapt local traditions and values and constitute important symbols of national prestige and attainment.[19]

These are important and serious roles and responsibilities which the institutions of higher education and their products ought to play in African societies. The point to note however is that these functions of higher education can only be fulfilled if the institutions are equipped with the capacity to live up to these expectations. Secondly, the societies themselves must have the openness to accommodate, and

effectively utilise the knowledge and skills of the beneficiaries of higher education.

From the standpoint of the institutions of higher learning themselves, indications are that the extent to which higher education in Africa can contribute to development is threatened by a number of factors.[20] First, the depressing economic decline in Sub-Saharan African countries has eroded the quality of higher education graduates. The major cause being a lack of material and human resources. Textbooks, journals, laboratory equipment, chemicals and spare parts for equipment are in short supply in most African systems of higher education. Second, because of the deteriorating conditions in higher education, the sector is loosing the high level manpower that has the know-how to produce its own kind. The University of Zambia is a case in point where more than one hundred Phd holders have left the institution through resignations since 1978. This has major implications for the quality of teaching, research and public service which the institution can render to students and the society. Third, the unit cost of higher education is much higher, thereby exerting great pressure on the public resources that is currently being thinly distributed across all sectors of the education system. The combination of all these factors makes investments in human resources that has a capacity for problem solving difficult. The inputs required to produce highly trained manpower that is equipped with specialised skills, knowledge and intellectual sophistication are currently very meagre in countries like Zambia.

The system of higher education in Zambia and elsewhere in Sub-Saharan Africa has become a victim of the general economic depression. This depression manifests itself through massive unemployment, mounting debts, less food, less nourishment, deterioration of roads, bridges, farms and industry and declining education and health services.

The Roles and Responsibilities of Higher Education Graduates

Commentary on higher education in Africa is deeply influenced by the current macro-economic problems.[21] There is a demand for more investments in education. However, the demand is for attention to the kind of education provided. In higher education, the recipients of the education are expected to take on the role and responsibility of contributing effectively to the solutions of Africa's problems. The roles and responsibilities of higher education graduates are not only

envisaged in terms of meeting the needs of self governance.

Beneficiaries of higher education are expected to take a lead in planning and directing development through:

- taking leadership roles in education itself as researchers, teachers, consultants and administrators;
- creative application of new knowledge and innovations;
- developing analytical perspectives on social problems; and
- service to public and private sectors.

Higher education recipients are, in other words, expected to demonstrate the capacity to manage and effectively solve the problems of development that face most African states. This is a new model of higher education development which is developmental in nature.

In this developmental model of higher education, the beneficiaries of this level of education ought to be dedicated to the ideals of development. These ideals are; human resource development, rural development, containment of the problems of urbanisation, institutional transformation, economic growth, agricultural productivity and industrialisation. Products from higher education are not only expected to give guidance to development strategies but they should be effective participants in creating philosophies and strategies of development through their analytical and research skills. The challenge on higher education is how such manpower could be realistically produced. Additionally, for a country like Zambia, a major consideration is that development oriented high level manpower can only be effectively utilised if there are structural changes in the labour market. This is important because trained manpower from universities are, for example, generally deployed in service type bureaucratic jobs instead of the industrial and productive sectors.[22] In other words, reform in higher education is not enough unless it is accompanied by visible structural labour market reforms which put stress on the productive sectors rather than the service industry.

To produce the type of manpower envisaged in the development model it should be stated, necessitates that higher institutions of learning should maintain a certain level of quality. This calls for viable mechanisms to retain highly trained manpower within the institutions of higher learning themselves. It is worthless to expect the products of higher education to be effective agents of development if society does not adequately renumerate and support those whose role is to produce highly trained manpower. Second, resources have to be mobilised to maintain a reasonable supply of educational materials.

Such measures might help to produce the type of manpower that can meaningfully and effectively contribute to development. In short, what is urgently needed in higher education are policy strategies that can help to restore the quality of higher educational institutions. One of the agenda items for those that are searching for such strategies is how to *finance higher education* in order to maintain a certain level of quality in higher education which is vital to development.

A financial strategy for higher education should strive to meet several objectives. First, it should aim at retaining high level manpower in institutions of higher education. This calls for a review and national commitment to improve the conditions of staff in these institutions. Second, the goal should be to improve the quality and supply of material resources in higher institutions of learning. Third, the long term objective should be to diversify the sources of financial support to institutions of higher education. A financial strategy that wholly depends on the government is extremely unrealistic under the current economic constraints. Finally, financing higher education is not a mechanical process that is to be done by budget experts. Rather, strategies to finance higher education should seek to harness a consensus about the developmental role of institutions of higher education. It is in effect an attempt to strike a realistic relationship between investments in educational research, institution building, program design and implementation, and provision of software and hardware within the higher education sector and the impact this can have on the wider society.

Financing higher education is a commitment to the revitalisation of institutions of higher learning through strict adherence to quality. The goal is to ensure that the products from institutions of higher education are equipped with the knowledge and skills to confront the problems of development. The maintenance of quality in higher education is an expensive undertaking and it is to a large extent beyond the capabilities of the present constrained government resources. Authorities in Zambia will therefore have to work out higher education financing packages involving several alternatives. Among such alternatives could be the strengthening of the private contribution to the financing of higher education in order to ease the burden on public resources. For example, instead of having two publicly supported Universities, one of them, especially the Copperbelt University, could be turned into a private institution. This way, government resources could be concentrated in revitalising the quality

of the University of Zambia. However, the process requires careful planning and efforts should be made to undertake research studies that can guide viable policy options.

Options

This paper has not provided prescriptions on the roles and responsibilities of the beneficiaries of higher education in a country like Zambia. Instead, it has provided an analytical framework within which the issue of the roles and responsibilities of the beneficiaries of higher education can be examined. What comes out of this discussion are a number of points. First, the system of higher education as currently established was designed along the lines of the manpower approach, utilising the occupation-industry matrix as a model. Second, the system of higher education and its products has tended to respond to the modern urban economic sector. Third, much of the expectations of what the graduates from higher education can do are only in theory because indications are that the capacity of higher education to meaningfully prepare people who can effect development is threatened by current economic depression. Fourth, in order for higher education graduates to execute their development roles and responsibilities, attention will have to be focused on structural issues. In particular, efforts must be made to mobilise resources that can help to maintain a certain level of quality in higher education. This makes policy strategies in financing higher education critical. The goal should be to diversify the sources of funding higher education in order to minimize overdependence of government resources.

Footnotes

1. For detailed discussion of this point see: Psacharopoulos,G (1977) *"The Perverse Effects of Public Subsidisation of Education or How Equitable is Free Education?"*, **Comparative Education Review,** Vol.21, No.1 February, 1977, pp.69-90. Mingat, A and Jee-Peng Tan (1984) *"Subsidisation of Higher Education Versus Expansion of Primary Enrollments: What Can a Shift of Resources Achieve in Sub-Saharan Africa?"*, Education Department, The World Bank, Washington D.C. Mingat, Alain and Jee-Peng Tan (1984) *"Recovering the Cost of Public Higher Education in LDCs. To What Extent are Loan Schemes an Efficient Instrument?"*, Education Department, The World Bank, Washington D.C. Anderson, A.C. (1983) *"Social Selection in Education and Economic Development"*, Education Department, The World Bank, Washington, D.C.).

2. **Times of Zamiba** Wednesday April 5th 1989. According to the report in this paper, government sponsored students will meet 25% of the costs of higher education, those on self or family sponsorship will pay 50% while non-residents and non-Zambians will meet 100% of the cost. The justification for the change in policy was that the quality of educa-tion was in serious jeopardy. This necessitated a shift of public resources from student welfare to the improvement of educational facilities by requiring students to contribute to their welfare costs.
3. Psacharopoulos, G (1981) *"Returns to Education: An Updated International Comparison"*, **Comparative Education,** Vol.17, No.3. pp321-343. Rogers,D.C. (1972) *"Student Loan Programs and the Returns to Investment in Higher Levels of Education in Kenya"*, **Economic Development and Cultural Change,** Vol. 2 (January) pp.243-259.
4. The World Bank (1988) *"Education in Sub-Saharan Africa: Policies for Adjustment, Revitilisation and Expansion"*, The World Bank, Washington D.C.
5. In the case of Zamiba, for example, the amount (108 million Kwacha) allocated to the University of Zamiba in 1987, "was more than 75 percent of the entire national spending on police services" in M.J.Kelly (1989) A Book Review of **Elitism and Meritocracy in Developing Countries: Selection Policies for Higher Education** by Robert Klitgaard, Baltimore: John Hopkins University Press 1986.
6. Harbison, F.H. and Myers, C.A. (1964) **Education, Manpower and Economic Growth,** McGraw-Hill, New York. Arguments about the developmental role of high level manpower have their roots in the sociological concept of structural functionalism which can be traced back to such works as: Davis,K. and Moore,W.E. (1945) *"Some Principles of Stratification"*, **American Sociological Review**, Vol.10 No.2, April pp.242-249.
7. Mincer, J (1984) *"Human Capital and Economic Growth"*, **Economics of Education Review**, Vol.3 No.3 pp.195-205.
8. Inkeles, A and Smith, D (1974) **Becoming Modern: Individual Change in Six Developing Countries**, Harvard University Press, Cambridge. Inkeles, A (1969) *"Making Man Modern: On the causes and consequences of individual change in six developing countries"*, **American Journal of Sociology,** September pp.208-225. McClelland, D.C. (1966) *"Does Education Accelerate Economic Growth"* **Economic Development and Cultural Change** Vol. XIV April pp.257-279.
9. Coclough, C.L. in Court, D and Kinyanjui, K (1985) *"Education and Development in Sub-Saharan Africa: The Operation and Impact of Education Systems"*, A background paper for the Committee on African Development Strategies, p.1.
10. The World Bank (1988) *"Education in Sub-Saharan Africa"* p.1.
11. United National Independence Party (UNIP) 1962 *"The UNIP Election Manifesto"*, Lusaka.

12. Tembo, L.P. ed. (1978) **The African University: Issues and Perspectives,** NECZAM; Lusaka.
13. Office of National Development and Planning. **First National Development Plan 1966-1970,** Government Printer, Lusaka.
14. Government of the Republic of Zambia (1966) **Manpower Report 1965-1966,** Government Printer, Lusaka.
15. Sanyal, B.C. Case, J.H. Dox, P.H.S. and Jackman,M.E. (1976) **Higher Education and the labour market in Zambia,** UNESCO, Paris.
16. Ibid p.190.
17. Bardouille, R. (1982) *"The Mobility of First Degree Level Graduates of the University of Zambia: The Case of the 1976 Cohort of Graduates"* Manpower Research Unit, Institute for African Studies, The University of Zambia, Lusaka. According to this study, 56.9% of the 1976 UNZA graduates found jobs in the Cental and Lusaka region, 31.6% on the Copperbelt and 3.8% in the Southern region. The regions in which the graduates concentrated are Zambia's modern urban sector.
18. Schneider, K.R. *"Development Universities: Special Institutions for the New Nations",* **International Development Review,** March 1968 pp.17-22.
19. The World Bank (1988) **Education in Sub-Sarahan Africa.** p.69.
20. Ibid pp.69-71. Also see Kelly, M.J., Nkwanga, E.B., Kaluba, L.H., Achola, P.O.W., and Nilsson, K (1986) *"The Provision of Education for All: Toward The Implementation of Zambia's Educational Reforms Under Demographic and Economic Constraints 1988-2000",* School of Education, The University of Zamiba, Lusaka. pp.76-103.
21. See for example, Kelly, J.J. (1988) *"The Financing of Education in Zambia 1970-1986"* A paper presented to the Department of Education Seminar, The University of Zambia, 16 June 1988.
22. For a detailed discussion of the point, see R.Bardouille (1982) *op cit* p.44.