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UNITED NATIONS
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Public Administration, Human Resources
and Social Development Division

**PROFILES IN DEVELOPMENT AND UTILIZATION
OF HUMAN RESOURCES IN AFRICA**

November, 1991

INTRODUCTION

1. Human resources development and utilization received a major setback in Africa in the 1980s. Due to the economic crisis and the attendant financial resources constraints, many African countries were forced to adopt structural adjustment programmes (SAPs) which sought to achieve financial balances through the cutting of public expenditures, price decontrols, etc. In the wake of such SAPs, the human resources sector (that is, education, health, employment and food supply) suffered. Africa's capacity to effectively develop and utilize its human resources is not only limited by SAPs but also by the economic structure which is import-dependent and lacking in meaningful domestic productive linkages.

2. In the context of the foregoing, this paper profiles the development and utilization of human resources in Africa by first looking at the recent human development and employment growth in Africa. Since the paper paints a grim picture, it thus proposes a policy framework for improving human resources development and utilization.

A HUMAN RESOURCES DEVELOPMENT

(i) The Composition and Structure of the Educational and Training System.

3. In the wake of the economic crisis that engulfed the African continent in the 1980s, enrolment in the educational system registered an overall negative growth. The supply of teaching staff also registered negative growth over the 1980s. Table 1 shows that the total annual growth rate of enrolment in the educational system fell from 8.7 per cent per annum in the 1975-80 period to 2.7 per cent in the 1980-88 period. This represented a fall of about 69 per cent between the two time periods -- the highest fall when compared to other regions of the world (figure 1).

4. The African situation compares very unfavourably to other regions of the world. For example, in the Oceania region the structure of education has shifted from being primary based (level 1) to secondary based (level 2). Figure 2 shows further that Africa's desire to widen the skilled manpower base will take, if ever, a very long time to achieve. Primary education still accounts for three-quarters of the total enrolment in the African educational

Table 1:

A: SCHOOL ENROLMENT AND TEACHING STAFF BY LEVEL OF EDUCATION
ANNUAL GROWTH RATES, 1975-80 AND 1980 - 88

REGION	TIME	ENROLMENT				TEACHING STAFF			
		TOTAL	LEVEL 1	LEVEL 2	LEVEL 3	TOTAL	LEVEL 1	LEVEL 2	LEVEL 3
World	1975-80	2.2	1.6	3.3	3.7	2.9	1.9	4.0	3.6
	1980-88	1.3	0.9	2.1	2.6	2.1	1.8	2.5	2.8
Africa	1975-80	8.7	8.0	11.9	11.3	9.5	8.4	12.4	12.0
	1980-88	2.7	2.1	5.1	5.3	4.8	3.2	8.3	5.8
America	1975-80	1.6	1.2	2.2	2.8	1.8	1.4	2.4	2.3
	1980-88	1.4	1.2	1.7	2.0	2.0	2.0	2.1	2.0
Asia	1975-80	2.3	1.2	4.8	6.2	3.6	1.9	6.3	5.5
	1980-88	1.4	0.7	2.8	3.8	2.2	1.6	2.6	4.5
Europe	1975-80	-0.2	-0.8	-0.1	2.0	0.9	0.3	0.9	2.9
	1980-88	0.2	0.1	-0.2	1.6	1.5	1.3	1.6	1.5
Oceania	1975-80	1.0	1.0	0.4	3.3	2.9	3.1	2.7	2.1
	1980-88	0.5	-0.6	1.6	3.1	1.8	0.6	2.9	2.2

B: PERCENTAGE CHANGES BETWEEN TWO TIME PERIODS

REGION	TIME	TOTAL	LEVEL 1	LEVEL 2	LEVEL 3	TOTAL	LEVEL 1	LEVEL 2	LEVEL 3
World		-40.91	-43.75	-36.36	-29.73	-27.59	-5.26	-37.50	-22.22
Africa		-68.97	-73.75	-57.14	-53.10	-49.47	-61.90	-33.06	-51.67
America		-12.50	0.00	-22.73	-28.57	11.11	42.86	-12.50	-13.04
Asia		-39.13	-41.67	-41.67	-38.71	-38.89	-15.79	-58.73	-18.18
Europe		200.00	112.50	100.00	-20.00	66.67	333.33	77.78	-48.28
Oceania		-50.00	-160.00	300.00	-6.06	-37.93	-80.65	7.41	4.76

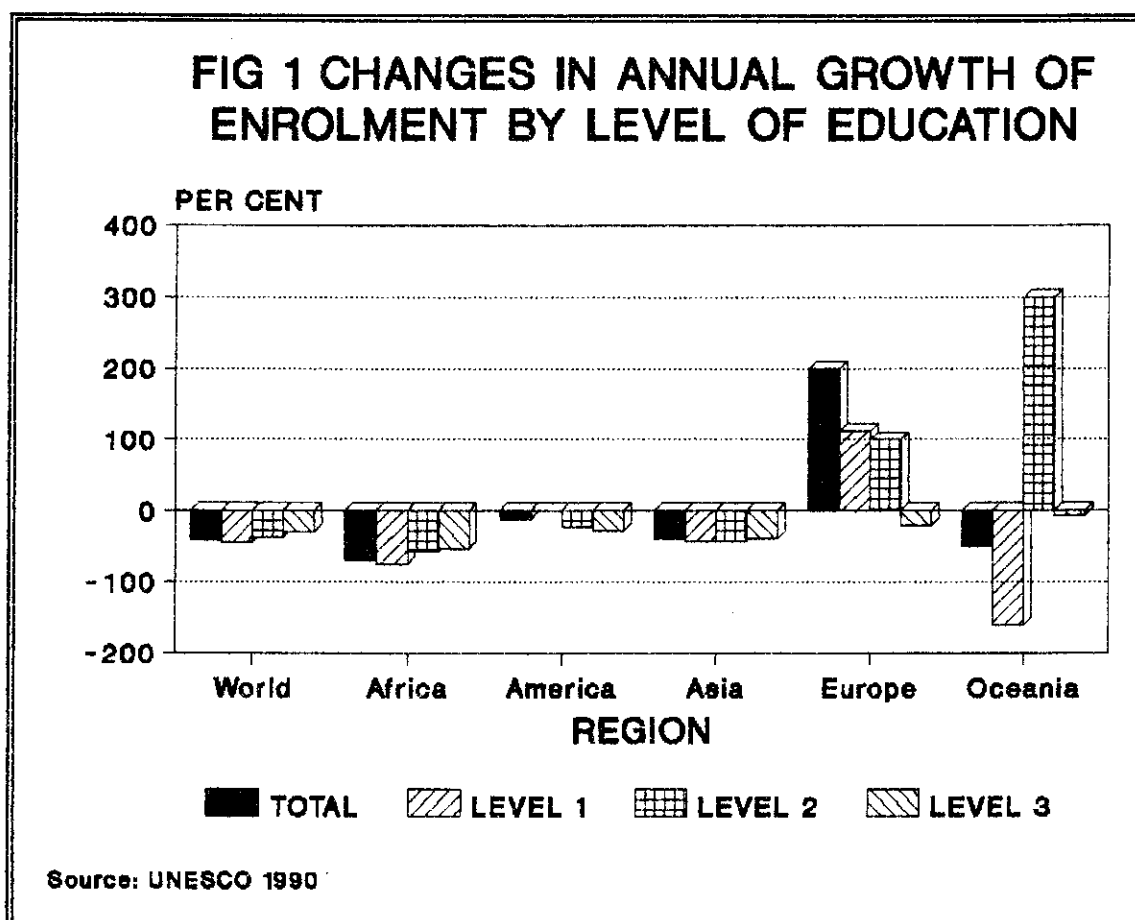
C: AFRICA: ENROLMENT BY LEVEL OF EDUCATION ('000), 1975 - 1988

TIME	TOTAL	LEVEL 1	LEVEL 2	LEVEL 3
1975	48851	40229	7804	818
1980	74295	59182	13040	1396
1985	86799	65872	19040	1886
1987	89419	67430	19924	2065
1988	92213	69747	20350	2115

D: AFRICA: STRUCTURE OF EDUCATIONAL ENROLMENT (%)

TIME	LEVEL 1	LEVEL 2	LEVEL 3
1975	82.35	15.98	1.67
1980	79.66	17.55	1.88
1985	75.89	21.94	2.17
1987	75.41	22.28	2.31
1988	75.64	22.07	2.29

Source: UNESCO 1990 Statistical Yearbook

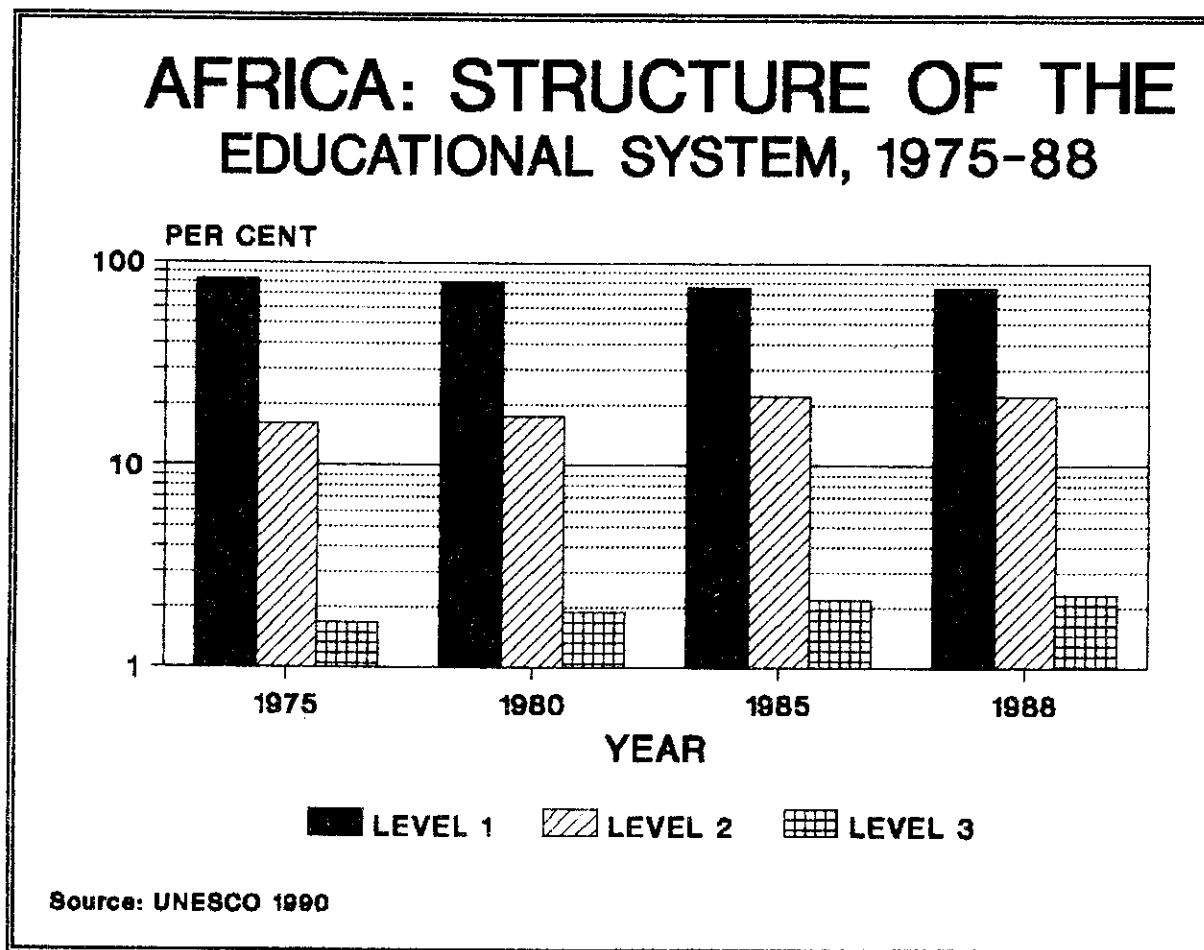


system. The share of higher education (level 3) at 2.3 per cent was much lower than that of Oceania at 10.6 per cent and Asia at 3.5 per cent.¹ It follows, therefore, that one of the major problems affecting Africa's middle and higher education is that of limited access.

5. Africa's educational system's weakness with regard to the supply of technical and scientific manpower is demonstrated in table 2. The proportion of technical subjects in total secondary education enrolment (SECTE%) is, by any standard, quite low. Except for five countries (Gabon, Egypt, Cameroon, Zaire and Djibouti) where the share of technical subjects in the 1986-88 period ranges from 20 to 25 per cent, all other countries shown in the table have shares below 5 per cent. For sub-Saharan Africa as a whole, only 4.4 per cent of total secondary education is enrolled in technical subjects.

¹See UNESCO, 1990 Statistical Yearbook, table 2.2.

Figure 2



6. There is a certain amount of irrelevance in Africa's higher education vis-a-vis Africa's development priorities. Course offerings are still heavily biased in favour of the liberal arts as opposed to science, engineering, agriculture, medicine and management which are the fields that are critical to socio-economic development in Africa. The enrolment in scientific subjects at the tertiary level (TERSE%) is, for a continent which has such immense basic problems, also very low. Except for Morocco, Togo and Guinea which have over 50 per cent of scientific enrolment, all other countries shown in table 2 have less than 50 per cent -- with the average for sub-Saharan Africa at 27 per cent.

7. The objectives of socio-economic transformation and long-term development in Africa present formidable challenges to Africa's educational system. Prospects for socio-economic transformation and long-term development will only be enhanced to the extent that Africa's human resources base is expanded and strengthened to enable it spearhead and sustain

Table 2: Percentage Share of Technical and Scientific Subjects in Secondary and Tertiary Education, 1986-88

COUNTRY	SECTE% 86-88	TERSE% 87-88
Mauritius	1.3	
Botswana	5.9	26
Gabon	20.6	22
Algeria	4.9	14
Swaziland	1.4	
Lesotho	3.7	16
Morocco	1.4	59
Cape Verde	8.3	
Zimbabwe	1.7	32
S. Tome & Pri.	1.4	
Kenya	1.6	21
Egypt	21.8	38
Congo	11.9	8
Madagascar	4.3	20
Zambia		
Cameroon	22.5	35
Ghana	1.9	30
Côte d'Ivoire	9.8	28
Zaire	23.1	34
Comoros	1.4	
Tanzania		9
Nigeria		30
Togo	5.9	52
Liberia		
Rwanda		25
Uganda	2.5	41
Senegal	2.9	31
E. Guinea		
Malawi	3.5	37
Burundi	19.1	45
Ethiopia	0.5	37
CAR	4.4	34
Sudan		27
Mozambique	8	25
Angola		26
Mauritania	3.1	12
Somalia		18
Benin	6	18
Guinea-Bissau	8.8	
Chad	7	12
Djibouti	25.3	
Burkina Faso	6.4	21
Niger	1.4	24
Mali	11.5	3
Guinea	6.3	59
+-----+-----+		
All Dev'ng	9.6	32
+-----+-----+		
LDCs	1.8	31
+-----+-----+		
SSA	4.4	27
+-----+-----+		

transformation and development. African governments have, themselves, acknowledged the urgent necessity for strategies, policies and programmes to be put in place to alleviate mass poverty; increase food self-sufficiency; industrial output; strengthen inter-sectoral linkages; reduce dependence on imports of production inputs, consumer goods and the export of primary commodities for foreign exchange earnings; and promote regional co-operation and integration.²

8. Self-reliant and self-sustained development to which all governments of the region are committed, are predicated on the attainment of these objectives. These in turn are dependent on the availability, not so much of money, but of factor inputs such as entrepreneurship, management capacity, manpower, production infrastructure, institutional infrastructure, technology, etc. which are all directly or indirectly the products of the higher educational systems.³

9. Unfortunately, however, higher education systems in Africa are still not yet so oriented as to be easily disposed to fulfilling this very important role in Africa's socio-economic transformation and development. The imbalances are many: the bias of the programmes offered in institutions of higher learning does not mirror the expressed priorities of development in that it gives less weight to the critical fields of science, technology, agriculture, medicine, engineering and management; access to higher education is still too limited to achieve the minimum spread necessary to ensure that development is internalized and sustained within African society; higher education is itself too dependent on external sources for teaching and research resources and the origination of knowledge and know-how; research, especially, applied research, is at too low a level to contribute in any meaningful way to the search for solutions to African development problems; the interface between university and the community at large is far from being adequate. Basic education necessary to equip the rural folk the necessary knowledge to improve their lot is far from being adequate.

²See ECA, African Alternative Framework to Structural Adjustment Programmes for Socio-Economic Recovery and Transformation (AAF-SAP), Addis Ababa, 1989.

³ECA, ECA/PHSD/HRP/89/5[6.3(ii) b], Higher Education and the Future of Africa in the 21st Century The Role of the Institutions of Higher Learning in Responding to Africa's Development Needs and Priorities, Paper Presented to the Fourth Conference of Vice-Chancellors, Presidents and Rectors of Institutions of Higher Learning in Africa, Cairo, Egypt, 28-29 January, 1989, p. 1.

10. Data from UNESCO (1990) show that higher education in Africa in the late 1980s had about 60 per cent of its enrolment devoted to courses in liberal arts and 40 per cent to scientific subjects. This ratio is about the same as in the early 1960s when the need for government public administrators and for indigenizing the public service was of high priority. Of late, however, the development priority has shifted, placing emphasis on scientific and technical skills. But the structure of higher education does not seem to have changed to reflect these new priorities. If this trend continues, it is difficult to see how the objectives of AAF-SAP (of human centred development by alleviating poverty and raising welfare of the people; establishing self-sustaining process of economic-growth and development; and increasing national and regional integration so as to attain self-reliance) and the Lagos Plan of Action, could be achieved.

11. Higher education in Africa has neither clearly defined its role nor has it worked out a strategy for applying its knowledge, expertise and research capabilities to assist governments to deal with the severe socio-economic problems facing Africa today. Professor Kamba⁴ argues that, historically, African universities were basically transplants from Europe and were "in Africa and not of Africa". They continue to draw their inspiration from the west and in the process neglect the needs of their own societies. Yet the role of a university is to serve the community and society at large. To date, the products of African universities are wanting in skills and orientation that are required to help Africa solve its economic and social problems.

12. Education for its own sake, is a luxury Africa can ill afford. Higher education in Africa should produce skills and knowledge that can be used more effectively to solve some of the region's development problems. In the recent past, problems of desertification and frequent droughts have afflicted many countries in the continent. Yet, only few African countries offer courses in hydrology, water resources and irrigation engineering.⁵

⁴W.J. Kamba, "The responsiveness of Institutions of Higher Learning to Africa's rapidly deteriorating social and economic conditions: Some initial observations" Paper presented to the Second Conference of Vice-Chancellors, Presidents and Rectors of Institutions of Higher Learning in Africa, Mbabane, Swaziland, 18-22 February, 1985.

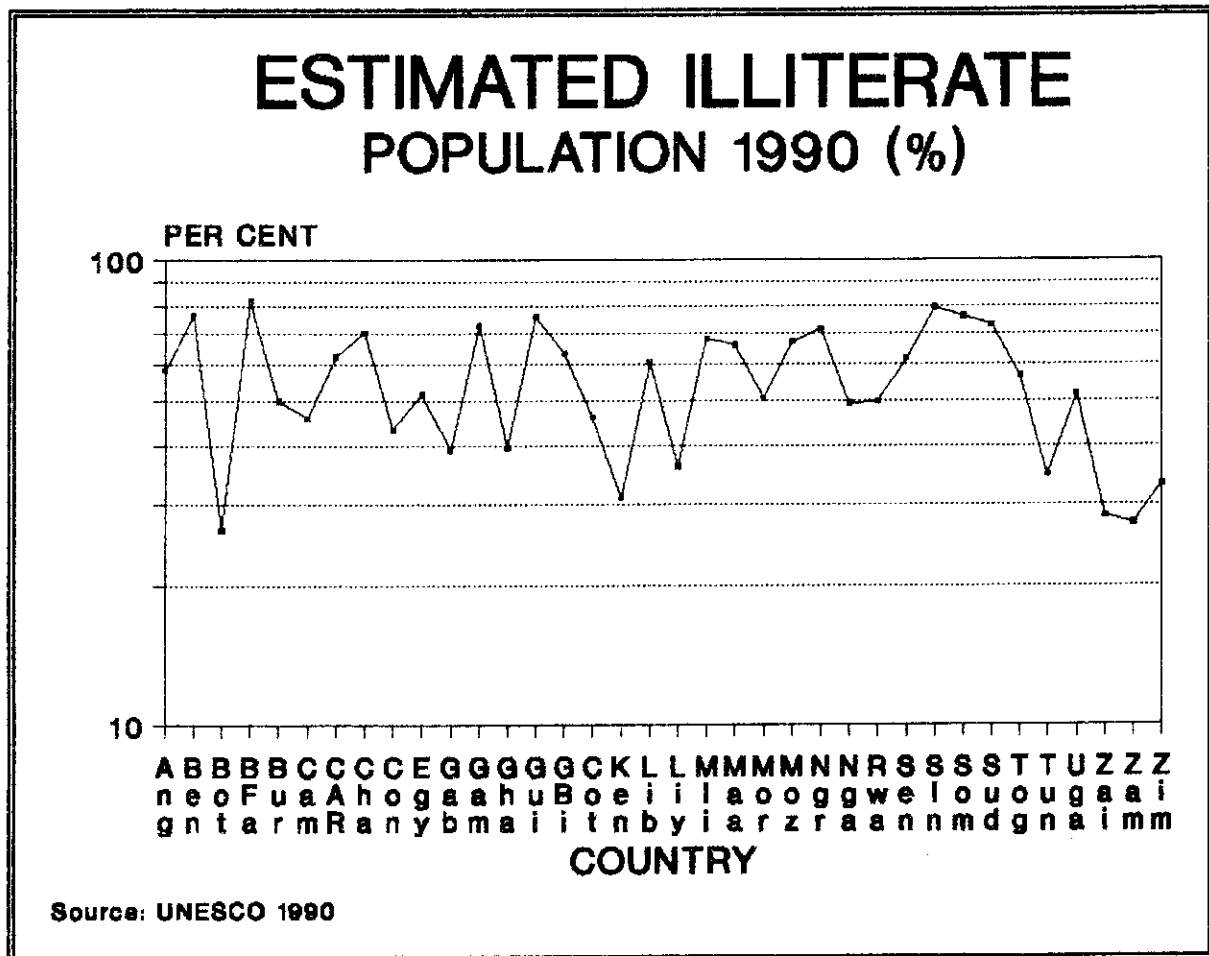
⁵See ECA, "Africa's Socio-Economic Crisis: The Challenge to Institutions of Higher Learning" E/ECA/AAU/ED/85/8, Paper Presented to the Second Conference of Vice-Chancellors... op. cit. p. 12.

TABLE 3: ESTIMATED ILLITERATE POPULATION 1990 (%)

COUNTRY	TOTAL	MALE	FEMALE
Angola	58.3	44.4	71.5
Benin	76.6	68.3	84.4
Botswana	26.4	16.3	34.6
Burkina Faso	81.8	72.1	91.1
Burundi	50.0	39.1	60.2
Cameroon	45.9	33.7	57.4
CAR	62.3	48.2	75.1
Chad	70.2	57.8	82.1
Congo	43.4	30.0	56.1
Egypt	51.6	37.1	66.2
Gabon	39.3	26.5	51.5
Gambia	72.8	61.0	84.0
Ghana	39.7	30.0	49.0
Guinea	76.0	65.1	86.6
Guinea Bissau	63.5	49.8	76.0
Cote D'Ivoire	46.2	33.1	59.8
Kenya	31.0	20.2	41.5
Liberia	60.5	50.2	71.2
Libya	36.2	24.6	49.6
Mali	68.0	59.2	76.1
Mauritania	66.0	52.9	78.6
Morocco	50.5	38.7	62.0
Mozambique	67.1	54.9	78.7
Niger	71.6	59.6	83.2
Nigeria	49.3	37.7	60.5
Rwanda	49.8	36.1	62.9
Senegal	61.7	48.1	74.9
Sierra Leone	79.3	69.3	88.7
Somalia	75.9	63.9	86.0
Sudan	72.9	57.3	88.3
Togo	56.7	43.6	69.3
Tunisia	34.7	25.8	43.7
Uganda	51.7	37.8	65.1
Zaire	28.2	16.4	39.3
Zambia	27.2	19.2	34.7
Zimbabwe	33.1	26.3	39.7
AVERAGES	54.87	43.18	66.10

Source: UNESCO 1990 Statistical Yearbook.

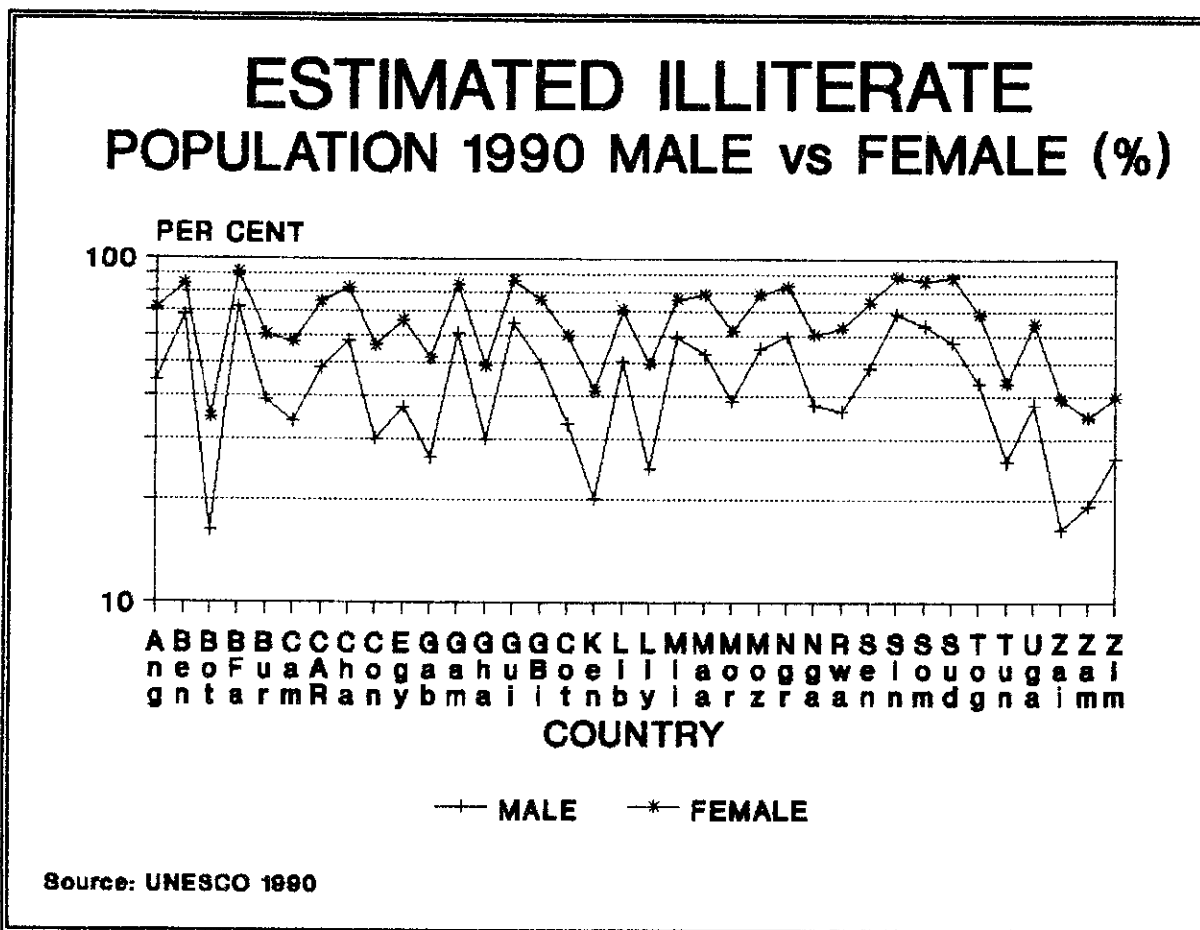
Figure 3A



13. At present, Africa has the lowest number of scientists and engineers engaged in R & D per million inhabitants. UNESCO data (1990) shows that Africa's stocks of scientists and engineers was 2,593 and 3,451 in 1980 and 1985, respectively, much lower than the average for developing countries at 6,272 and 8,263; Asia at 8,944 and 11,686; Latin America at 9,754 and 11,759; etc. With such a low endowment of scientists and engineers, Africa's ability to use science and technology in the service of development is very much limited.

14. The above statistical analysis clearly show that Africa's desire to change the educational system to suit the socio-economic needs and, thereby, to transform and develop the continent would, for a long time, be largely unattainable. The scientific skills necessary to transform the agricultural, industrial and the social sectors will, in the short-term, not be forthcoming, given the nature of the educational system.

Figure 3B



15. The quality of education has also suffered in the 1980s. The reduced budgetary allocations to the educational sector have reduced vital educational supplies such as books, laboratory equipment and supplies, magazines, foodstuffs, etc. The lack of these vital supplies means that those who leave the educational system are less qualified than their certificates purport to show. The quality of education is further eroded by the lack of quality research in higher education; reduced morale among teaching staff due to poor conditions of service; increasing student-teacher ratios and reduced transition rates.⁶

⁶For a detailed discussion of these see UN Economic and Social Council, ECA, Report to the Ministerial Follow-Up Committee of Ten of the Conference of Ministers Responsible for Human Resources Planning, Development and Utilization on the Status, Policies and Programmes of Human Resources Planning, Development and Utilization in Africa, E/ECA/PHSD/HRP/MFC/90/4, April, 1990.

16. As a consequence of rapid population growth and reduced public expenditure on education, table 3 and figure 3A show that the estimated proportion of the population which is illiterate in 1990, in some African countries, range from 27 per cent in Zambia to about 82 per cent in Burkina Faso. The average of 55 per cent illiteracy rate for the thirty-six countries listed in the table is, by world standards, quite high. The problem of illiteracy is, in Africa, most pronounced among women (see fig 3B): about two thirds of women in the countries listed in table 3 are illiterate as opposed to an average of about 43 per cent for men. The proportion of women who are illiterate ranges from about 35 per cent in Botswana and Zambia to about 88 per cent in the Sudan and Sierra Leone. Such statistics in the last decade of the 20th Century are far from encouraging in terms of human resources development and utilization. This dismal illiteracy situation is not surprising as table 4 shows that as many as 19 million children in Nigeria had no access to schools in 1990; 11 million in Ethiopia, 5 million in the Sudan, 5 million in Tanzania, 4 million in Morocco, etc.

(ii) The Health and food situation

17. One major prerequisite for human resources development is the health and food situation in the region. Except for Mauritius in 1990, no other African country listed in table 5 provided health services to its entire population. In countries such as Cote D'Ivoire, Rwanda, Angola, Mauritania, Zaire, Somalia, Benin, Chad, Mali and Guinea over two-thirds of the population had no access to modern health services. In the sub-Saharan Africa region only about 47 per cent of the total population had access to health services. Overall, table 5 shows that as of 1990, a third or more of the total national population had no access to modern health services in 25 African countries.

18. A similar situation obtains with regard to access to safe drinking water and sanitation. Table 5 shows that a third or more of the population in 35 African countries had no access to safe drinking water in 1990. In the same year, a third or more of the population had no access to proper sanitary facilities in 23 African countries. With such poor health provision, it is no wonder that diseases such as malaria, cholera, typhoid, etc., whose incidence was reduced have started to increase. More seriously, the AIDS epidemic is having a catastrophic toll on the African population not only because a cure for it has not been found but because health services provision in Africa have all but disintegrated.

19. As many as 880 thousand children died before reaching the age of five years in Nigeria in 1990; 540 thousand in Ethiopia; 210 thousand in Zaire; etc. (see table 5 -- U5M). This comes as no surprise for public expenditure on health services as a percentage of GNP (table 4) is very low in many African countries (less than 2 per cent for most countries and 0.9 per cent for Sub-Saharan Africa). In a continent which is characterised by a host of different tropical diseases and in which more than half of the population have no access to health services, such low expenditure on health services continue to undermine human resources development.

20. The irony of the African situation is that many governments spend more on the low priority area of the military than on human resources development (education and health). Except for Mauritius which spends 4 times more on the military than on the combined expenditure on education and health, all the other 47 African countries listed in table 4 spent, in 1986, at least 18 times (in the case of Botswana) on the military than on education and health. Zaire, Uganda and Chad spent over 200 times on the military than they did on education and health.

21. Food production in the Africa region has been on the decline. With 1979-81 as the base period, table 4 shows that the food production per capita index (FPPCI) had fallen to 96 by 1989 for the sub-Saharan Africa region. For the countries listed in table 4, average FPPCI for 1989 was about 94. Out of the 46 countries listed in the table, only nine countries managed to increase their FPPCI (i.e., over 100). This dismal situation is further demonstrated by the inadequacy of daily calorie supply as a percentage of requirements (DCS%RQ) which shows that in 29 African countries, over the 1984-86 period, this variable was below 100. There is every reason to believe that the daily calorie supply situation has since deteriorated further.

22. The shortage of foodstuffs in many African countries is further demonstrated by the food import dependency ratio (FIDR%) over the 1986 to 1988 period. Over this period, 14 African countries depended on imports for a quarter or more of their food supplies. In the context of the deteriorating terms of trade which afflicted the African continent during the 1980s, such a dependency has proved to be costly in terms of foreign exchange and may have further acted to aggravate the debt burden problems.

Table 4 Some Human Resources Development Indicators in Africa in the 1980s

COUNTRY	PUB HEALTH EXP %GNP	FPPCI B79-81	AGRP% GDP88	DCS%RQ 84-86	FIDR% 86-88	RATIO MILITARY 1986
Mauritius	1.9	94	13	121	77.6	4
Botswana	3.8	69	3	96	83.7	18
Gabon	2	79	11	107	34	56
Algeria	2.2	93	13	112	70.7	23
Swaziland		93		105	27.4	
Lesotho	1.7	72	21	101	52.3	44
Morocco	0.9	125	17	118	28.1	86
Cape Verde		105		125	66.2	
Zimbabwe	2.9	94	11	89	4.7	44
S Tome & Pri.		67		103	43.1	
Kenya	1.7	103	31	92	10.6	15
Egypt	1.1	107	21	132	45.2	135
Congo	2	96	15	117	28.2	66
Madagascar	1.8	92	41	106	7.4	45
Zambia	1.2	96	14	92	22.1	94
Cameroon	0.8	95	26	88	14.2	45
Ghana	1.2	111	49	76	9.9	19
Côte d'Ivoire	1.1	92	36	110	20.5	20
Zaire	0.8	92	31	98	5.7	250
Comoros		109		90	30.7	
Tanzania	1.2	90	66	96	4.4	114
Nigeria	0.2	95	34	90	6.7	63
Togo	1.7	93	34	97	17.8	39
Liberia	1.9	92	37	102	24	35
Rwanda	0.6	72	38	81	6.6	50
Uganda	0.2	85	72	95	1.4	247
Senegal	1.1	103	22	99	30.2	40
Malawi	1.9	86	37	102	2.7	45
Burundi	0.7	88	56	97	3.8	100
Ethiopia	1.3	91	42	71		172
CAR	1.2	90	44	86	7.7	26
Sudan	0.2	83	33	88	14.5	140
Mozambique	1.8	82	62	69		
Angola	1	80		82		273
Mauritania	1.9	87	38	92	57.2	62
Somalia	0.2	97	65	90	23.7	71
Benin	0.8	110	40	95	9.3	53
Guinea-Bissau		139		92	18.2	
Chad	0.6	98	47	69	4.5	231
Burkina Faso	0.9	114	39	86	9.6	91
Niger	0.8	84	36	100	7.4	15
Mali	0.7	99	49	86	9.3	71
Guinea	1	88	30	77	15.2	75
Gambia		95		103	55.4	
Sierra Leone	0.7	87	46	81	20.1	32
AVERAGE	1.3	93.6	34.7	95.6	24.6	
All Dev'ng	1.4	111	19	107	9.6	109
LDCs	0.9	95	42	89	11.6	96
SSA	0.9	96	23	91	10	70

B. EMPLOYMENT GROWTH IN THE 1980s

23. According to ILO data, the labour force is estimated to have grown at an annual rate of over 3 per cent between 1980 and 1990, but the share of the labour force in wage employment fell from an average of 10 per cent in 1980 to less than 8 per cent by 1990.⁷ The prospects for the effective utilisation of human resources in Africa are also quite gloomy. Projections by ILO/JASPA for the 1990s show that employment is estimated to grow at an annual average of 2.4 per cent per annum and the labour force at 3.3 per cent per annum. This means that the unemployment problem will continue to afflict the region in the 1990s.⁸

24. Table 6 shows that in both 1980 and later years, very few countries (Algeria, Egypt, Mauritius, Seychelles and Tunisia) had wage employment accounting for more than half the labour force. Many of the other countries listed in the table had, in 1980, low shares of wage employment: 1.07 per cent in Niger, 1.69 per cent in Burkina Faso, 2.37 per cent in Ethiopia, 2.97 per cent in Madagascar, etc. Of the twenty countries listed in the table (for which employment data for the 1980s is available) seven of them registered negative average annual growth rates of wage employment: ranging from negative 0.01 per cent in Niger to negative 9.87 in Burundi. This contrasts with only one country (Benin) which registered a marginal decline in its labour force but the share of wage employment at 5.58 per cent in 1986 was still quite low. Overall, figure 4 (which is drawn from table 6 data) show that only five countries (Benin, Botswana, Egypt, Mauritius, and Tunisia) registered annual average growth rates of wage employment in excess of those for the labour force.

25. The adoption of structural adjustment programmes (SAPs) has also contributed to the weakening of Africa's ability to generate more employment opportunities. Among other things, the policy package of SAPs include: devaluation of local currencies, control of the money supply, liberalization of the product and money markets, cutting public expenditures (for example, removal of subsidies and reduction in public sector employment), etc. The fundamental structural problems of Africa are not addressed and, moreover, the reduction in

⁷ILO/JASPA, African Employment Report 1990, (Addis Ababa: JASPA, 1991), pp. 19 and 34.

⁸ILO/JASPA, African Employment Report 1990, *ibid.*, p. ix. The same report show that to arrest and reverse the downward employment trend would require a minimum growth rate of 5 per cent per annum -- a figure which is too high when compared to recent economic performance.

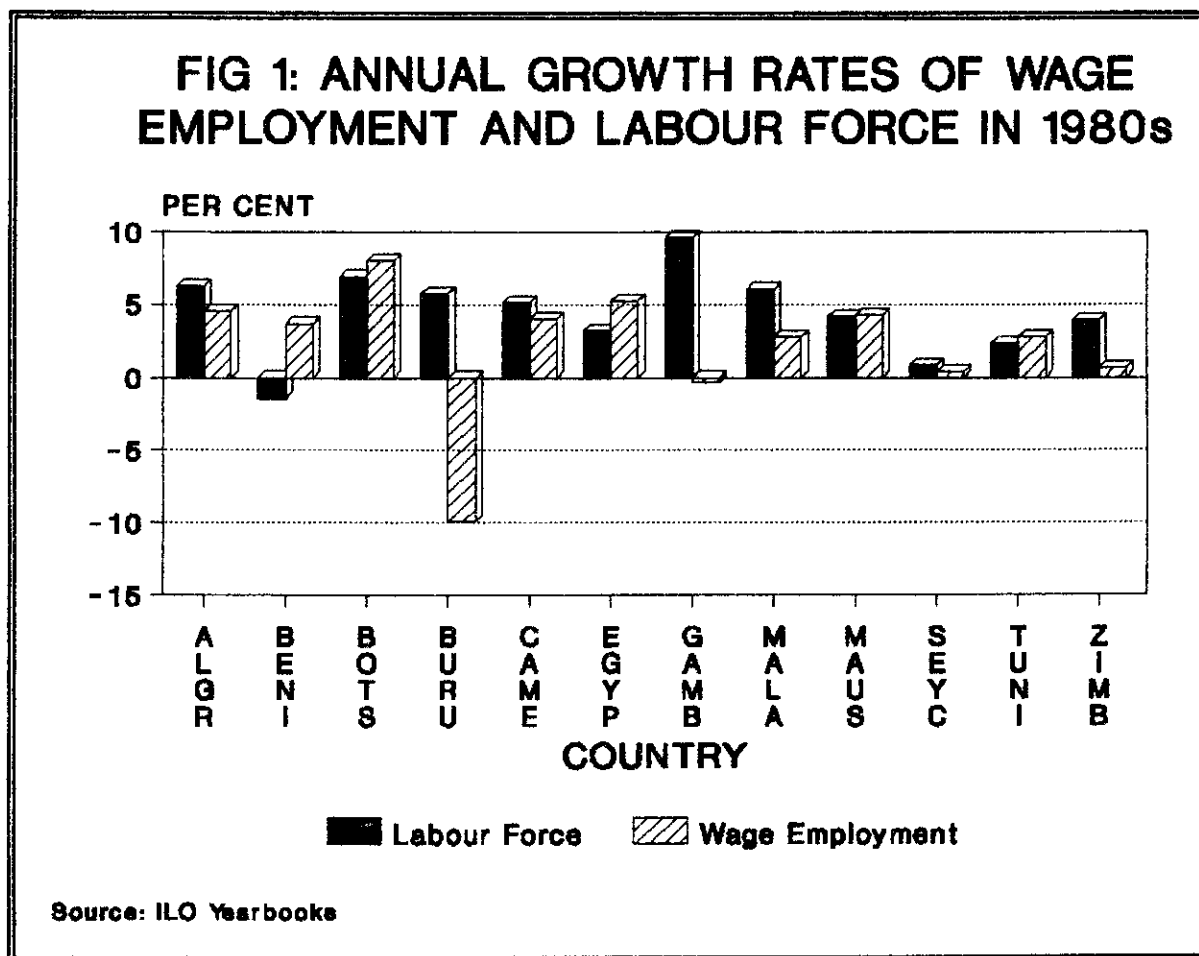
Table 6: Labour Force and Wage Employment in Selected African Countries ('000)

COUNTRY	1980 LABOUR FORCE	1980 WAGE EMPLT.	1980 YEAR	1980 LABOUR FORCE	1980 YEAR	1980 WAGE EMPLT.	1980 & SHARE	1980S & SHARE	LFORCE PA	EMPLT. GROWTH	PA GROWTH
1 ALGERIA	3707	3144.8	1987	5341		4137.7	84.83	77.47	6.30	4.51	
2 BENIN	1581	66.2	1986	1447		80.8	4.19	5.58	-1.41	3.68	
3 BOTSWANA	288	83.2	1984	368		110	28.89	29.89	6.94	8.05	
4 B. FASO	2963	50	1985	4051			1.69	-	7.34	-	
5 BURUNDI	1974	116	1986	2654		47.3	5.88	1.78	5.74	-9.87	
6 CAMEROON	3143	308.2	1987	4269	1984	357.3	9.81	8.37	5.12	3.98	
7 CONGO	575	115	1984	625			20.00	-	2.17	-	
8 C. D'IVOIRE	3119	470	1983			432.5	15.07	-	-	-2.66	
9 EGYPT	12671	9799.1	1984	14311		11849	77.33	82.80	3.24	5.23	
10 ETHIOPIA	15287	362.1	1984	18492			2.37	-	5.24	-	
11 GAMBIA	252	29.6	1983	325		29.3	11.75	9.02	9.66	-0.34	
12 GHANA	4073	461	1984	5580			11.32	-	9.25	-	
13 KENYA	5996	1005.8			1988	1311	16.77	-	-	3.79	
14 LIBERIA	635	121	1984	704			19.06	-	2.72	-	
15 MADAGASCAR	3552	105.5	1985	3929			2.97	-	2.12	-	
16 MALAWI	2316	370.4	1987	3300	1986	432.31	15.99	13.10	6.07	2.79	
17 MAURITIUS	324	197.6	1989	446		273.13	60.99	61.24	4.18	4.25	
18 NIGER	2437	26			1988	25.974	1.07	-	-	-0.01	
19 NIGERIA	27981	2722.1	1986	29974			9.73	-	1.19	-	
20 SENEGAL	2240	110	1988	2308			4.91	-	0.38	-	
21 SEYCHELLES	23	17.9	1985	24		18.23	77.83	75.96	0.87	0.37	
22 S. LEONE	1184	69.9			1987	67.4	5.90	-	-	-0.51	
23 SWAZILAND	214	75.1			1987	82.7	35.09	-	-	0.14	
24 TANZANIA	8174	607.7			1984	672.4	7.43	-	-	2.66	
25 TOGO	948	73.4			1987	63.9	7.74	-	-	-0.18	
26 TUNISIA	1954	1609	1989	2360	1986	1873.5	82.34	79.39	2.31	2.74	
27 ZAMBIA	1690	379.3			1989	359.6	22.44	-	-	-0.58	
28 ZIMBABWE	2555	1009.9	1987	3260	1984	1036.4	39.53	31.79	3.94	0.66	

Source: ILO, Yearbook of Labour Statistics, 1989-90; ILO/JASPA, 1988 African Employment Report

public expenditure is greatest on the social sector. The SAPs primarily aim at achieving short-term financial balances as opposed to laying a foundation for long-term sustainable socio-economic development and transformation of the economic structures.

Figure 4



26. In the public sector (that is the civil-service, public enterprises and parastatal companies), the adoption of SAPs meant, almost invariably, recruitment freeze accompanied by massive retrenchment with a view to increasing efficiency.⁹ The public sector was also forced to stop employment guarantees to higher education graduates. Some of the countries which stopped employment guarantees include Benin, Central African Republic, Congo, Guinea, Mali, Rwanda, Somalia and the Sudan. As such, the structure of the unemployed

⁹The African Employment Report 1990, p. 33 cites statistics which show the extent of public sector retrenchment in some African countries in the 1980s. These include 45,000 in Ghana, 40,000 in Guinea, 27,00 in Tanzania and 16,000 in Cameroon. The Report however points out that such ambitious retrenchment programmes failed to reach their targets. Instead many governments confined themselves to less controversial measures such as salary freeze, cancellation of vacant posts, enforcement of the retirement age, etc.

changed from being lowly educated to that of highly educated and predominantly youthful.¹⁰ The increased incidence of unemployment among the educated youth cannot be attributed to SAPs alone but also to the fact that the educational systems' programmes are not relevant to Africa's changing socio-economic needs. For example, enrolment in secondary and tertiary education continues to be biased in favour of liberal arts subjects while the managerial, scientific and engineering skills are the ones most likely to contribute towards solving some of Africa's socio-economic problems.

27. On the other hand, to the extent that public expenditure has to be reduced when SAPs are being adopted so as to reduce government budget deficits, this has direct impact on employment in the public-sector and an indirect effect on the private sector which supplies the former. In some African countries, the reduction in public expenditure had to be accompanied by privatisation programmes. The latter, in effect, meant the application of the profitability rule and hence increased unemployment.

28. With regard to the private sector, the liberalization of the trade regime meant that increased inflow of imported goods and services increased the rate of failure of local businesses through increased competition. The devaluation of the local currencies increased the cost of production and reduced the capacity to import the necessary inputs and other supplies. The high cost of foreign exchange (in terms of the local currencies) increased further the incidence of the foreign exchange constraint. The situation for the private sector has not been helped either by the decline in government demand (once the major customer). All these factors have reduced the private sector's labour absorptive capacity and hence reduced the capacity of African countries to increase productive employment opportunities.

29. Africa's capacity to utilise its human resources has also been undermined by the drastic fall in real earnings over the 1980s. For example, since currency devaluations under SAPs have had the effect of weakening the value of the local currency both internally and externally, the resulting high rates of inflation have eroded real wages to the extent that it is estimated, in some African countries, that real wage rates have fallen below the subsistence

¹⁰For a detailed discussion of this issue, see *ibid.*, pp. 25-31.

levels.¹¹ In the wake of such drastic decline in the compensation to employees, morale and motivation among the workforce has been greatly reduced and hence reduced efficiency. Perhaps the most glaring demonstration of the impact in the fall of real earnings has been the brain-drain phenomenon where skilled indigenous manpower is forced to migrate to other parts of the world in search of better conditions of services and remuneration. Given the skilled manpower constraints which afflict African countries, the loss of such vital manpower is something they can ill afford.

30. Currency devaluations which seek to make primary exports such as cocoa, coffee and minerals competitive only succeed in world price slump due to the fact that world supply of such commodities exceeds demand. For example, over the United Nations Programme of Action for African Recovery and Development (UN-PAAERD), 1986-90, the volume index of exports increased by 7.5 percentage points while the unit value index dropped 23.2 per cent. Over the same period, the unit value of Africa's imports rose by 13.9 percentage points but the volume index decreased by 3.8 percentage points.¹² This deterioration in the terms of trade contributed to reducing Africa's capacity to effectively utilise its human resources. The rise in the cost of imported inputs and other products reduces the capacity to import. This reduces both employment and productivity in the import-dependent industrial sector and, hence, the increased incidence of unemployment and poverty.

31. While SAPs encouraged an improved agricultural pricing policy, the positive aspects of this particular policy instrument have been negated by the increased costs of agricultural inputs such as fertilizers, seeds, implements, etc. As such, many farmers have increasingly found it difficult to increase their productivity. In this regard, SAPs have contributed to reducing the capacity of the rural sector to increase productive employment in the agricultural sector. The experience of Zambia after adopting the IMF's SAP in 1985 which, among other

¹¹The African Employment Report 1990 (p. 39) cites evidence which show, for example, that in Sierra Leone "In 1976/77 the average household in Freetown needed an equivalent of two government minimum wages to satisfy its food requirements. By early 1990, the same household required 17 government minimum wages to maintain its nutritional standards of 1976/77."

¹²United Nations, Report of the Secretary General, Economic Crisis in Africa, Final Review and Appraisal of the Implementation of the United Nations Programme of Action for African Economic Recovery and Development 1986-90 (UNPAAERD), (New York: United Nations, 1991), p. 17.

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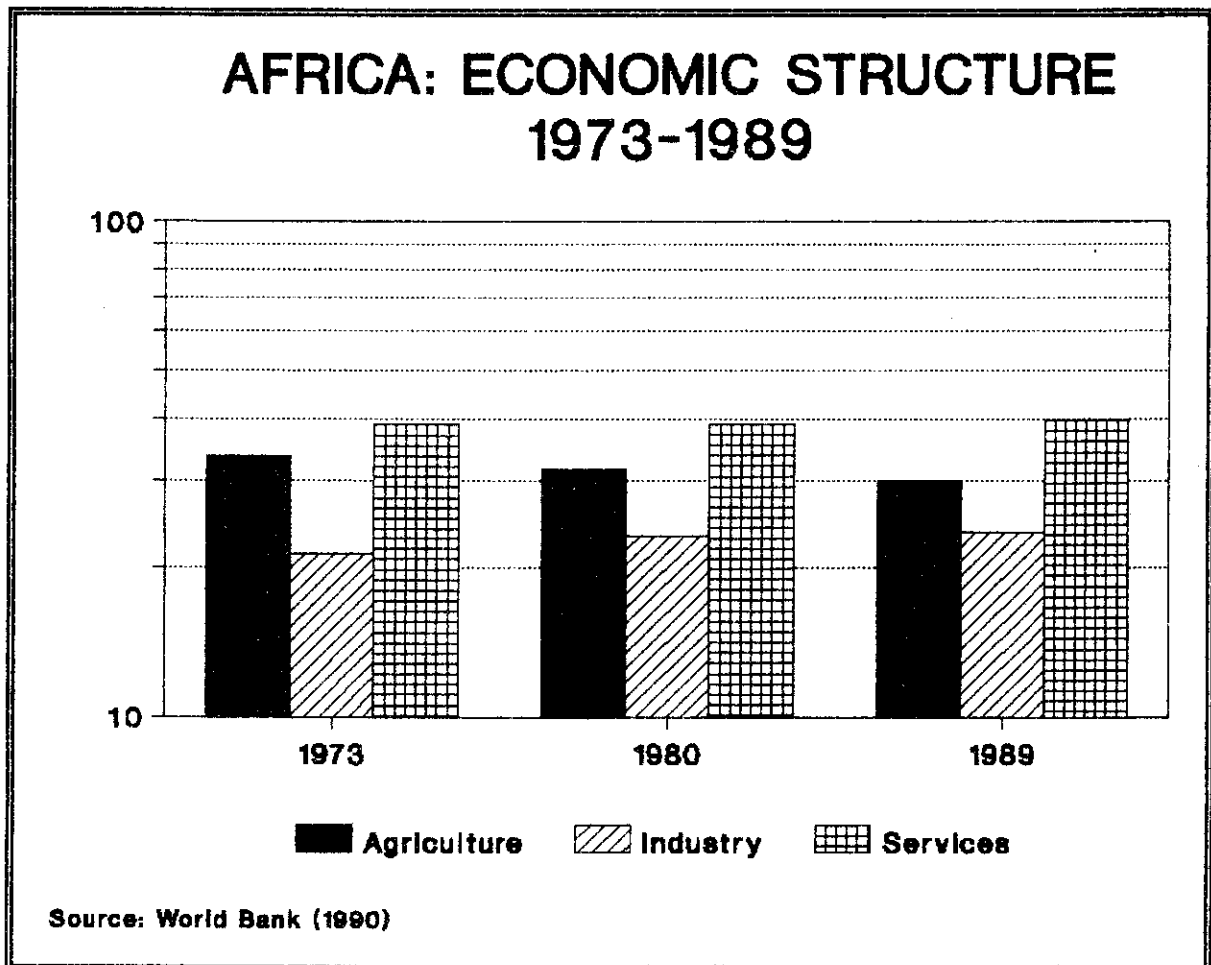
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things, meant weekly auctioning of the local currency (the kwacha) is illustrative.¹³ Even though the World Bank had set aside a reasonable amount of auctioning funds for the agricultural sector, the funds were hardly used because of the fact that the lending rate shot up to nearly 40 per cent. At the same time, the government withdrew fertilizer subsidy and this increased the agricultural cost of production. Due to the drastic depreciation of the kwacha as a result of the auctioning system, the prices of imported agricultural machinery and implements became prohibitively expensive. For example, a tractor which cost around K30,000 in 1984 began to cost anything above K150,000.00 by the end of 1985.

Figure 5



¹³See V. Seshamani, "Zambia" in A. Adedeji, S. Rasheed and M. Morrison, (eds) The Human Dimension of Africa's Persistent Economic Crisis, (London: Hans Zell Publishers for the United Nations Economic Commission for Africa, 1990), pp. 104-123.

32. Africa's capacity to effectively utilise its human resources has been, in the 1980s, adversely affected by the weak and external-dependent economic structure which could not be insulated from external shocks. Figure 5 shows that the contribution of the agricultural sector to GDP declined in the order of about 5 per cent over the 1973-80 and 1980-89 periods. Over the same periods, the contributions by industry and the services sectors to GDP also stagnated or declined -- that is, the share of industry is about the same in 1989 as it was in 1980. Given the rapid population growth of the region, the economic structure is not in a position to generate adequate employment opportunities for the ever increasing labour force.

C HUMAN RESOURCES PLANNING FOR SOCIO-ECONOMIC RECOVERY AND DEVELOPMENT¹⁴

33. The foregoing profile of human resources development and utilization in Africa suggest that the scientific manpower base as well as basic education to improve literacy rates need to be deepened and widened; the educational system need to be re-oriented so as to focus on Africa's socio-economic needs; investment in public health and food security need to be increased so as to improve the quality of life of the vast majority of the population; and that the production capacity needs to be improved so as to reduce the high rates of unemployment which characterise the Africa region at present. It follows then that the objective function of human resources planing is to transform Africa from its current economic crises to self-sustained and self-sufficient economic growth and development. To do this, the human resources base needs to be broadened and deepened. The broadening and deepening of the human resources base can be attained through the following policies:

- (a) making education relevant to the development needs,
- (b) increasing investment in human resources such as education, health and food security,
- (c) making human resources planning an integral part of the development planning process,

¹⁴This section is draws heavily from ECA, Report to the Conference of African Ministers Responsible for Human Resources Planning, Development and Utilisation on Human Resources Planning for Socio-Economic Recovery and Development, ECA/PHSD/HRP/-90/21[6.1(ii)]

- (d) raising self-confidence of the African population at the individual and national levels,
- (e) increasing human resources utilisation by promoting and integrating the agricultural sector with other sectors of the economy,
- (f) re-directing some of the resources currently being committed to, say, the military to the human development sector,
- (g) negotiate with bilateral technical assistance agencies to consider shifting their training policies towards strengthening higher education in the recipient countries,
- (h) where possible, introduce some form of human resources development tax on large corporations, and
- (i) mount well co-ordinated public campaigns to raise public awareness on the need for increased expenditures on human development and its long-term benefits.

We now turn to look at some of the above policy suggestions in some details.

(i) Making higher education relevant

34. The many problems which inhibit economic development in Africa require both theoretical and practical solutions. Local practicable solutions to the problems of increasing food self-sufficiency; providing clean drinking water, universal literacy, vaccination and quality housing; enhancing the productivity of small-scale industries, the informal and agricultural sectors; integrating the national and regional economies through improved communication links; etc. ought to be found. The role of higher education in providing solutions to some of these problems cannot be overemphasized.

35. As a first step to making higher education relevant, higher education teaching should integrate theory and practice; encourage multi-disciplinary approach to problem-solving; encourage courses which prepare students for self-employment and make students aware of the nature and extent of the problems besetting their respective communities. At the technician/technologist level, the more practical oriented forms of training like apprenticeship should be preferred. Even at the scientific and engineering level, practical training through study visits, attachment to industrial concerns, and vacation placements with industry should

be encouraged. The costs of this mode of instruction are unlikely to be very high. The costs of spoilage would, over time, be reduced and a flow of innovative ideas could be enhanced. Besides, the cost of training would be further reduced by the fact that the trainees contribute, directly, to final output.

36. Higher education training as envisaged in the preceding paragraph would also act to reduce the incidence of graduate unemployment as employers would be in a better position to advise institutions of higher learning about the adequacy or inadequacy of their training programmes; and students will be better placed for self-employment. Further, increased interaction between institutions of higher learning and potential employers of graduates through fairs, sponsorships, joint projects, consultancy, etc. could provide a sound basis for innovative research. For example, increased collaboration between the University of Zambia's School of Agriculture and the Zambia Seed Company in the 1980s led to improved varieties of seeds suitable to soil and climatic conditions of the country.

37. As a second approximation, the relevance of higher education in Africa could be improved by changing its output structure. The skills needed for Africa's transformation, among others include, veterinary, crop and soil scientists; farm management specialists and agronomists; high level accountants; economists and management specialists; engineers (of all sorts) and architects; metallurgists, geologists and mining engineers; telecommunication and electronics experts; and computing and modelling skills. Such skills could help to increase, for example, the supply of factor inputs such as entrepreneurial skills; raw and intermediate inputs; and telecommunications and transport networks.

38. To achieve this, priority should be given to scientific and technical training which is both theoretically and practically sound. The resources for such expensive and demanding training could be generated through expenditure switches from the unproductive or less productive sectors to the more productive ones. On another front, secondary school education needs to be reformed and focus on technical subjects so as to increase the number of candidates with the potential for scientific training.

39. With the problems of increasing desertification, frequent droughts and increasing industrial pollution, higher education should concentrate on programmes which seek to protect the environment. These include research on and management of preventative maintenance, energy conservation and waste recycling.

40. With regard to food security and famine, agricultural research in general and on food preservation and storage in particular need to be intensified so as to combat the inherent problems of persistent malnutrition and spoilage of foodstuff even during periods of bumper crops. Increased agricultural production would release a lot of resources through reduced imports of foodstuff and agricultural raw and intermediate inputs. The foreign exchange so saved could then be used for other national development priorities.

41. Agricultural research should concentrate on production for local needs and not for the needs of others (exports); and a detailed analysis of policies and alternative policy priorities and policy implementation such as crop varieties, reduction of post-harvest losses, soil and water conservation and land tenure systems. Such research should enable Africa to better understand the causes of drought and desertification and should, accordingly, intensify work which should, among other things, strengthen the region's meteorological and hydrological data base so as to effect early warning systems for planning and production; determine the correct balance between livestock population sizes and the capacity of the grasslands to support such sizes, especially in the arid and semi- arid areas.

42. The structural rigidities in many African economies at the moment ought to be a major area of research by higher education. The focus should be on analyzing how the bottlenecks such as the lack of productive linkages among the various sectors could be resolved. The poor information networks should be addressed, as are entrepreneurial problems of the private and public enterprises, the small-scale industries, the informal and agricultural sectors. Given the importance of knowledge, management and accounting skills, institutions of higher learning could improve these through designing distance learning management courses; organizing training workshops and seminars on management techniques; and increased research in these areas. Increased R & D could resolve some of the existing structural problems as solutions could be found to some of the outstanding technical problems such as processing of raw metals and/or agricultural materials to intermediate inputs or final outputs.

43. Many of the vital industries which are necessary for Africa's socio-economic transformation are, if existing, run and managed by foreign companies which need to be attracted to Africa at very high social and economic costs.¹⁵ These include metallurgy,

¹⁵See ECA/PHSD/HRP/89/5 (6.3)(ii)(b), Higher Education and the Future of Africa in the 21st Century, The Role of Institutions of Higher Learning in Responding to Africa's
(continued...)

engineering, chemical and petro-chemical industries. The only way the social and economic costs of these industries could be reduced is to increase the supply of necessary skills which would increase Africa's capacity to run and manage such industries. Research in this area should look at how inward-looking linkages are to be established so that industrial development does not become an economic and social liability but a dynamic engine of socio-economic transformation and long-term development.

44. Industrial research should confine itself, among other things, to establishing an inventory of locally available natural resources inputs for use in industrial production; propose small-scale industries for improving agricultural productivity; re-examine import substitution industries with the view to making them cost-effective, viable and efficient; analyse of factor-proportions suitable for industrialization; undertake R & D that could solve some of the industrialization problems in Africa; develop technological packages such as drought resistant seed varieties, fertilizers, and herbicides so as to increase agricultural yields; and develop industrial consultancy services within higher level education so as to provide assistance to the private and public enterprises.

45. Much of the management practices in Africa at present follow the abrasive styles of the western world which are characterized by manager-worker mistrust and/or conflicts; financial manipulation through creative accounting; etc. Higher education in Africa should explore how alternative management systems such as those practised in Japan of workers' life-long dedication, harmonious industrial relations, increased workers' participation in management decision making process, and reduced worker-management differentiation that ensure a constant flow of new ideas on the ways and means of improving productivity.

46. Finally, to make higher education relevant, research and programmes which seek to reduce foreign dependence in mining, transport engineering and others should be done within the African region. This is in view with Africa's desire to increase intra-African trade; increase value-added locally; and process raw materials/metals locally that may help to increase economic activity in the region. Also, given inadequate housing for the vast majority of the African population, building and construction sciences need to be introduced so that

¹⁵(...continued)

Development Needs and Priorities, paper Presented to the Fourth Conference of Vice-Chancellors, Presidents and Rectors of Institutions of Higher Learning in Africa, Cairo, Egypt, 28-29 January 1989, p. 13.

through their research, reasonable but cheap house designs could be found. Such an invention could improve the provision of one of the most basic needs which is very much in short supply.

(ii) Increased investment in human resources development

47. To enhance the capability of human resources to engineer the economic transformation process requires that more resources are committed to the formation of human capital. Making the educational relevant may not, in itself, be enough as access to secondary and higher education need to be increased so as to widen the skilled manpower base of the African continent. As a first step, and in the wake of the end of the cold war, the proportion of resources devoted to the armed forces should be reduced. While recent events in some African countries may make this impracticable, in the long-term, efforts should be directed at this source of resources for increased investment in training, health and increased food security.

48. Increased investment in human resources development would help to attain universal primary education and for higher education, increase the supply of middle- and high-level manpower to agriculture and industry. Increased literacy and numeracy skills of farmers would help to improve agricultural productivity. Among women, literacy may help to improve maternal and child health.

49. Funds for increased spending on human resources development can be secured from donor agencies which, hitherto, have been sending indigenous personnel to donor countries for further training. Through negotiations, such agencies might be persuaded to accept the fact that increased spending on training locally would make such training more relevant to local needs than would training which is given in a different environment.

50. Further, depending on the impact on allocative efficiency, taxation of big corporations which stand to benefit most from increased investment in human resources may be introduced to raise some of the necessary funds. To target such resources to human resources development, a special fund will need to be created so that all the funds collected through these means are channelled to the right places. Some African countries have already started imposing this kind of taxes/levies. For example, the Industrial Training Fund in Nigeria

collects about 1 per cent of the payroll from establishments. In Kenya, a certain proportion of the training expenses are tax deductible and, in addition, a proportion of the sales tax is also devoted to industrial training.

51. Increased investment in human resources development will come to nothing unless measures are taken to arrest the rapid population growth rates and to adopt policies that improve Africa's capacity to retain the high level manpower. The former can be attained by demonstrating to the general public that smaller families are in their own individual interests. Access to family planning devices and literature, should be increased; attitudes towards large families should also be changed.

52. Implementing measures to retain skilled manpower would not be so simple. Many African countries at the moment cannot offer pay packages that are even half of what their nationals earn in developed countries. Even where they can, political considerations, may make it impracticable. Instead, efforts should be directed at making conditions at home more conducive for nationals working abroad to return. Domestic production should be increased so as to reduce inflation and thereby improve the standard of living. African governments should also demonstrate their commitment to some forms of free expression, and show some preference of local national expert opinions over and above those of expatriates.

(iii) Making human resources planning an integral part of the development planning process

53. As we have argued above, manpower planners in Africa are either not provided with long-term directives by policy-makers or where such directives are given, they are too vague to provide a basis for manpower policy. We also demonstrated that the inadequate administrative and institutional machinery makes systematic manpower planning difficult. As a consequence, manpower planning is not integrated with the national development planning process. To plan human resources necessary for socio-economic recovery and development, manpower planning should be accorded the importance it deserves. Manpower planning should concentrate on making regular reports and the analysis of the labour market situations and trends, so as to provide an early warning system for labour market imbalances. In addition, manpower planning systems should pay more attention to the manpower and employment issues in the rural (agricultural) sector. Under the current conditions of slower

economic growth and structural adjustment, manpower planning should be re-oriented as to focus on sector-based manpower and employment planning, self-employment, and manpower analysis.

54. Unless there is a political commitment to the planning of human resources for agricultural development, the manpower planning function will continue to be ineffective and thus reduce the chances of economic transformation through agricultural development. Given the emphasis on agricultural development and self-sufficiency, educational and manpower planning should seek to make the requisite skills for these priority areas of fundamental importance.

(iv) Promoting and integrating the agricultural sector with other sectors of the economy

55. To promote and integrate the agricultural sector with the other sectors of the economy will require an increased supply of skilled and/or literate manpower. The neglect of the agricultural sector by the manpower planning authorities in the past has contributed to the stagnation of the sector. To make the agricultural sector dynamic and to increase food security, AAF-SAP suggests, among other things, to devote 20-25 per cent of public investment to the agricultural sector; land reforms to increase access to land; increased inter-linkages between agriculture and industry; creating and strengthening rural financial institutions; etc.

56. To the extent that there are few local industries in Africa which produce agricultural implements such as hoes, ploughs, axes, etc., the informal sector (and/or small-scale industries) should be strengthened to provide such goods. The human resources planning process should therefore define a role for the informal sector/small-scale industries in the transformation of agriculture.

57. Much of the modern industrial activities in Africa consists of last stage processing and/or packaging. Increased agricultural production would therefore necessitate the establishment of first-stage processing such as ginneries, seed-oil crushing plants, etc. that could provide intermediate inputs to the existing industries. Such an increase in industrial

activities would enhance internal productive linkages and improve the utilisation of human resources through increased employment.

D CONCLUSION

58. This paper has demonstrated the dismal human resources development and utilization situation in Africa in the recent past. It has shown, among other things, that the educational system is both inaccessible to large majority of the population and that the educational system is not reflective of the socio-economic needs of the African society. The former situation has been demonstrated by the high illiteracy rates and the lower shares of secondary and higher (tertiary) education in total enrolment; the latter has been demonstrated by the fact that course offerings in both secondary and tertiary education place emphasis on liberal arts subjects as opposed to technical and scientific subjects which are likely to contribute towards solving some of Africa's long-standing socio-economic problems.

59. With regard to the health and food situation, the paper has shown that more than half of the region's population have no access to modern health services. Access to safe drinking water and to sanitary services has also been shown to be limited. Under five mortality rate is high and the daily calorie supply as a percentage of the daily requirements is low. Per capita food production has been falling. All these factors have contributed to the increased incidence of poverty in many African countries.

60. On the human utilization front, the paper has demonstrated that factors such as the declining terms of trade, the domestic economic structure, and the adoption of SAPs have reduced the effective capacity of many African countries to utilise their human resources.

61. In the wake of the foregoing evidence, the paper suggested a policy framework aimed at poverty alleviation through increased investment in human resources development and utilization. The policies suggested range from increasing access to and making education relevant to Africa's socio-economic needs, to promoting and integrating the agricultural sector with other sectors of the economy so as to increase human resources development and utilization. Some of the policy instruments suggested in this paper sound far fetched but the African human situation is so grim that it may take novel ideas to put things right.