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HEALTH FINANCING IN AFRICA: TRACKING THE AID EXPERIENCE OF THE CHILD SURVIVAL EMPHASIS COUNTRIES

JUNE 1989

Resources for Child Health Project

REACH



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PA - AFD-243

**HEALTH FINANCING IN AFRICA
TRACKING THE AID EXPERIENCE OF THE CHILD SURVIVAL EMPHASIS COUNTRIES**

by
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June 1989

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I. BACKGROUND

Since the late 1970s, developing countries have given increased political support to primary health care and have made efforts toward the objective of "Health for All by the Year 2000." These efforts have been supported by international donor institutions that have developed various health strategies with the developing countries. In the 1980s, AID shifted its health strategy for Africa from "broad-scaled primary health care systems" to child survival activities aimed at increasing immunization and ORT coverages in the countries that participate in the program. Eight Sub-Saharan African countries, Kenya, Malawi, Mali, Niger, Nigeria, Senegal, Sudan, and Zaire, were designated by AID as "emphasis" countries in which the child survival activities will be most intensified.

However, since the late 1970's, while these countries were making efforts to improve their health systems, they have encountered macroeconomic difficulties which have reduced their ability to spend on health and health care. The effect and impact of these economic difficulties on the health conditions in each child survival emphasis (CSE) country needs to be evaluated.

II. OBJECTIVE

Although the effect of macroeconomics on the financing of health care in African countries has been fairly well discussed in recent literature, a database is needed that includes the evolution of the major health condition indicators. There has not yet been a comprehensive database developed that describes the organization and the financing of health and family planning services in the CSE countries. Such a database can assist country officials in tracking the development of their country. It can also serve as a reference for AID, other donor institutions, and the countries themselves in planning ways to improve and sustain health services.

The objective of this study is to present such a database on health services, financing, and family planning in the African CSE countries. This database provides information on the organization and the financing of health and family planning services. It can be used for evaluation of health and family planning policies in each of the eight countries.

This study also indicates how much data actually exist. Recommendations are made regarding what efforts can be made to improve the quality and quantity of the existing data.

III. METHODOLOGY

1. Sources

The majority of this data are from secondary sources. These sources include, more specifically, the following.

- a) Demographic and general health status indicators were obtained from various World Bank documents.
- b) Basic health expenditure and macroeconomic data were obtained from the World Bank's World Development Report, the International Monetary Fund's International Financial Statistics and Government Finance Statistics Yearbooks, and Ministry of Health (MOH) documents gathered by consultants.
- c) EPI coverage data were obtained from REACH. ISTI and ORT data were obtained from REACH and PRITECH.
- d) Data on family planning indicators were obtained from the Population Reference Bureau and by researchers at Columbia University.
- e) Country-specific data (such as regional distribution of health facilities and personnel, health services by type of provider, health expenditures by functional and economic categories and by source of financing) were obtained by consultants.

2. Time Frame

In general, data were solicited for the period 1975-1987. For many of the desired data elements, however, information was only available for certain periods.

3. Limitations

There are three limiting factors in this database:

- a) there is an insufficient amount of data available;
- b) the available data are not consistent, especially among different sources. (To increase consistency and allow better inter-country comparisons, efforts were made to obtain each variable or set of variables from the same source. In this regard, the World Bank and the International Monetary Fund were the preferred sources.);
- c) the data are from the public sector. Information obtained on the private sector was not sufficient to allow analysis.

Data on life expectancy, and rates of infant mortality and child death, crude birth, and population growth are available for all countries. Data on government health expenditure are available for all countries for selected years. Detailed information on the provision and the financing of

health and family planning services exists for Kenya, Sudan, Zaire, and Senegal. Data for Senegal are, however, available only for given years during which studies have been undertaken.

The most comprehensive data were available for Kenya. Zaire had detailed information on health facilities by region and by provider, although it was available only for 1985. Detailed information on health facilities and health personnel by region for 1985 was also available for Sudan. For Senegal, there is a very good data series available on the distribution of government health expenditure between hospital and non-hospital activities, between personnel and non-personnel spending, and between capital and recurrent expenditures.

Data for Malawi included MOH expenditure by category and type of activity. However, data are still needed on the provision of health and family planning services by region and by type of provider. Also needed are data on the role of the private sector in the financing of these services for all CSE countries.

A fairly detailed data set was obtained for Mali and Niger on government provision of health services by region in 1984. Both countries also had a good data series on the distribution of MOH recurrent expenditures between personnel and non-personnel costs, but this series stopped in the early 1980s. The series for Mali is supplemented by a WHO study in 1986.

Data were available for Nigeria on the Federal Ministry of Health's expenditures for 1975-80, 1980 and 1983. Some information has been obtained on the role of State Ministry of Health and the State Health Management Board in Lagos and on the provision of health facilities in selected years.

4. Organization of the Database

The data have been organized on a Lotus 123 spreadsheet in matrix form. Data were sought for each variable for the period 1975 to 1987. Each cell on the spreadsheet represents a given variable, for a given country in a given year.

The main database consists of data that have been obtained for more than one country, or that are standardized or comparable among countries. Country-specific data such as the distribution of hospital beds between specific regions, provinces, districts or cities are included in Appendix A. The references and definition of variables of the data are included in Appendices B and C respectively. .

IV. RECOMMENDATIONS

1. Expansion of the Database

The database is incomplete due to missing data. Increased effort is needed in all of the CSE countries for the establishment of a complete and reliable database. Even for countries such as Kenya, where a large amount of data have been obtained, some types of data are available only for a given year. Also, efforts to obtain additional information where the data sets are not complete have led to data that are not compatible with the data obtained earlier.

To complete and expand the database, increased effort should be made to obtain the types of detailed information that the secondary sources do not routinely provide. In particular, the following types of information should be given priority in data collection efforts:

- a) health facilities by type of provider and by region;
- b) health personnel by provider and by region;
- c) total health expenditures by source of financing, functional category, economic category, and region; and
- d) MOH expenditures by region and by functional and economic categories.

The best sources from which such data can be obtained are from the Ministries of Health, Finance, and Planning. However, some of these data do not exist even in the countries. AID should encourage the collection of these data on a regular basis in these countries.

2. Priorities for Acquiring the Data

Some data, such as population and overall government expenditure on health, are available for all countries from World Bank and International Monetary Fund documents. These documents also contain some data on health personnel and on health condition indicators, although such data are usually published with a considerable lag. WHO, PRITECH and ISTI provide data on child survival program coverages, particularly during the 1980s.

However, the following types of data require more effort and should be given priority in order to complete the database:

- a) the role of the private sector in the provision and the financing of health services;
- b) overall expenditure on health:
 - i) by source of financing (government, private out-of-pocket payments for service, drug sales, insurance, third-party payments, donors, NGOs);

- ii) by functional category (primary, secondary or tertiary care, preventive or curative care); and
 - iii) by economic category (development versus curative expenditures, personnel versus non-personnel expenditures);
- c) MOH expenditure by functional and economic categories and by - state, region or province;
 - d) health facilities and personnel by region and by provider (numbers and types in the public sector, numbers and types in the private sector, numbers and types with the religious missions);
 - e) population per health facility (hospital bed, health center and health center bed, dispensary, primary health care unit, laboratory unit, nursing home and family planning unit) and per health personnel (specialist and general physician, dentist, nurse, health technician, clinical officer and family planning specialist); and
 - f) MOH and country expenditures on maternal and child health and family planning.

3. Sources

The types of detailed information listed above are not routinely provided by the aforementioned institutions, although they can be found in some specific World Bank country studies. The best sources for these data are in the Ministries of Health, Finance, and Planning of the respective countries. Since some of these data are not routinely collected, an effort should be made to encourage governments to start developing bases for all these data.

Given that these types of information are very important for both the countries and donor organizations for the formulation of health policy, there should be a joint effort from the countries and the donors for the development of a comprehensive database. It can be suggested that certain aid packages include explicit data requirements and encourage recipients to take specific actions in that regard.

Most countries keep a record of their total MOH expenditures. Often, the distinction is also clearly made between investment and recurrent expenditures and among different economic categories of these recurrent expenditures. However, little is done to separate expenditures between functional category, such as the level of care and type of health program (curative and preventive care, MCH/family planning, training, etc.). While this task would require additional effort, a framework should be developed for all CSE countries that will assist in the recording of information in a standardized way. If necessary, the framework should be able to be adjusted to accommodate some country-specific characteristics of budget allocation.

Of the eight countries, only Kenya has detailed information on MOH recurrent expenditures by type of health program. Even in this country, additional effort should be made to expand this information set to include total health expenditure of the country.

The database is far from complete. In addition, some of the data are not very accurate. The sources that provide the data have continued to update the figures based on new information received. Thus, the data for the most recent years in this study may need verifying in the next few years.

Table 1

CURRENT ACCOUNT DEFICIT AS A PERCENTAGE OF GDP

Country	1977	1978	1979	1980	1981	1982	1983	1984	1985
Kenya	--	--	15.4	10.9	7.2	5.3	3.3	3.7	--
Malawi	8.1	7.5	7.6	-16.5	-7.1	-6.2	5.4	1.8	--
Mali	--	--	--	9.1	10.2	9.2	10.2	12.8	--
Niger	--	--	--	-5.6	5.1	7.9	-46.5*	3.5	--
Nigeria	--	--	--	-5.6	7.3	8.8	5.7	-0.5	--
Senegal	--	--	--	15.1	17.2	15.7	--	11.5	--
Sudan	4.8	7.0	--	3.9	6.7	3.7	3.5	-0.3	-2.3
Zaire	--	--	--	1.8	7.9	8.1	6.5	-10.8	--

Sources: IMF, International Financial Statistics and Government Finance Statistics. The World Bank, World Development Report

Note: Negative signs imply surpluses

* Due to a relatively large amount of unrequited transfers received by Niger in 1983.

Table 2

GOVERNMENT BUDGET DEFICIT AS A PERCENTAGE OF GDP

Country	1977	1978	1979	1980	1981	1982	1983	1984
Kenya	3.9	4.1	6.9	4.9	7.1	8.6	5.2	5.5
Malawi	6.1	9.1	8.5	15.6	12.1	7.4	6.8	--
Mali	-0.1	1.8	3.5	5.3	3.9	7.7	8.2	--
Niger	1.9	3.8	2.9	5.0	--	--	--	--
Senegal	3.2	-0.3	0.8	-0.9	3.4	6.9	6.2	--
Sudan	--	5.8	4.7	3.3	2.5	--	4.0	--
Zaire	11.4	13.9	4.9	1.9	9.1	11.2	2.8	3.9

Source: IMF, Government Finance Statistics

Note: Negative signs imply surpluses
Data for Nigeria were unavailable

Table 3

RATE OF GROWTH OF REAL PER CAPITA GOVERNMENT EXPENDITURE
(in percent, based on 1980 domestic currency prices)

Country	1978	1979	1980	1981	1982	1983	1984	1985
Kenya	2.3	2.2	7.0	-2.7	-9.3	-18.1	-6.8	--
Malawi	30.8	11.8	0.0	-13.2	--	--	--	--
Niger	19.9	10.8	9.5	--	--	--	--	--
Nigeria *	--	--	--	-4.3	-6.9	-33.3	--	--
Senegal	6.0	2.9	-5.6	5.5	-1.1	-12.7	--	--
Sudan	-12.8	-20.6	0.0	-3.7	-7.7	-12.5	-19.0	-23.5
Zaire	-22.8	-23.9	-13.0	23.4	17.2	--	--	--

Sources: IMF, International Financial Statistics and Government Finance Statistics; MOH, Sudan

* Federal government expenditures only

Table 4

HEALTH EXPENDITURES AS A PERCENTAGE OF TOTAL GOVERNMENT EXPENDITURE

Country	1977	1978	1979	1980	1981	1982	1983	1984	1985
Kenya	--	7.7	7.6	8.2	7.9	7.5	7.2	--	--
Malawi	5.9	6.4	6.4	6.4	5.7	5.2	6.8	--	--
Mali	6.2	5.3	5.3	3.1	4.6	2.8	2.5	--	--
Niger	4.5	4.6	4.7	4.1	4.1	--	--	--	--
Senegal	3.5	3.5	4.2	4.7	4.6	3.9	3.3	3.5	3.6
Sudan	6.6	5.6	4.4	5.4	5.1	5.1	5.0	4.5	4.0
Zaire	4.0	3.9	3.2	2.5	2.6	3.2	--	1.8	--

Sources: IMF, International Financial Statistics and Government Finance Statistics; World Bank, World Development Report; MOH, Sudan; Direction de la Prévision et de la Conjoncture, Ministère des Finances, Sénégal

Note: Data for Nigeria were unavailable

Table 5
(in percent)

OVERALL HEALTH EXPENDITURE BY SOURCE OF FINANCING

Country (Year)	Public	Private	Donor	NGO
Recurrent Expenditures				
Kenya (1983/84)	48	44	2	5
Malawi (1983/84)	75	13	--	--
Mali (1986)	35	57	3	2
Niger (1984)	93	--	--	--
Senegal (1981)	45	39	--	--
Sudan (1985)	23	70	--	--
Investment Expenditures				
Kenya (1983/84)	53	--	44	2
Malawi (1983/84)	8	--	92	--
Mali (1986)	21	--	64	14

Table 6

MOH EXPENDITURE AS A PERCENTAGE OF GDP

Year	1977	1978	1979	1980	1981	1982	1983	1984	1985
Kenya	2.7	2.4	2.4	2.5	2.5	2.4	2.1	2.1	--
Malawi	1.3	1.8	2.1	2.2	1.9	1.6	2.0	--	--
Mali	1.0	1.0	0.9	0.7	1.0	0.8	0.8	--	--
Niger	0.7	0.8	0.8	0.8	--	--	--	--	--
Nigeria *	--	--	--	0.5	0.6	0.6	0.6	--	--
Senegal	1.0	1.1	1.1	1.1	1.2	1.2	1.3	--	--
Sudan	1.4	1.2	1.1	1.3	1.3	1.1	1.0	0.9	0.8
Zaire	1.3	1.1	0.9	0.7	0.9	1.1	--	0.7	--

Sources: IMF, International Financial Statistics and Government Finance Statistics; MOH, Sudan; Federal MOH, Nigeria

* Federal government expenditure only

Table 7

REAL PER CAPITA GOVERNMENT HEALTH EXPENDITURE
(in 1980 prices and U.S. dollars)

Year	1977	1978	1979	1980	1981	1982	1983	1984	1985
Kenya	6.2	7.6	9.3	10.1	9.2	6.5	5.4	5.0	--
Malawi	2.9	2.9	4.7	4.6	3.6	--	--	--	--
Niger	2.6	3.0	3.5	3.6	--	--	--	1.8	--
Nigeria *	--	--	--	5.5	4.7	4.1	2.5	--	--
Senegal	4.8	5.3	6.0	5.9	5.5	4.3	4.1	--	--
Sudan	11.5	9.7	6.8	5.4	4.8	2.5	1.7	1.3	0.6
Zaire	11.0	8.6	3.1	1.7	1.3	1.2	--	1.0	--

Sources: IMF, International Financial Statistics and Government Finance Statistics; MOH, Sudan; Federal MOH, Nigeria.

* Federal government expenditure only

Note: Data for Mali were unavailable

Table 8

RECURRENT EXPENDITURES AS A PERCENTAGE OF TOTAL MOH EXPENDITURE
(Nominal Terms)

Year	Kenya	Malawi	Nigeria	Senegal
1977	71.9	80.1	--	98.0
1978	79.2	89.7	--	97.0
1979	82.0	91.1	--	91.9
1980	80.3	81.6	58.5	92.6
1981	80.6	77.9	51.9	100.0
1982	84.1	92.3	49.2	93.2
1983	89.0	92.7	45.6	97.0
1984	80.5	76.8	--	98.2
1985	--	--	--	98.3

Sources: Kenya: Statistical Abstract (various issues); Nigeria: Federal MOH (Includes only federal government expenditures); Senegal: Direction de la Prevision et de la Conjoncture, Minister of Finance.

Table 9

CURATIVE HEALTH AS A PERCENTAGE OF MOH RECURRENT EXPENDITURES

Fiscal Year	Kenya	Malawi	Senegal
77/78	--	82.0	--
78/79	68.7	84.0	--
79/80	66.7	81.0	--
80/81	68.4	82.0	--
81/82	72.3	82.0	--
82/83	72.4	82.0	87.8
83/84	72.8	82.0	88.4
84/85	66.5	81.0	85.3
85/86	--	81.0	78.8

Sources: Kenya, MOH, "Expenditure and Financing of the Health Sector in Kenya, 1986," Malawi, The World Bank; Senegal, Ministry of Finance, Direction de la Prévision et de la Conjoncture.

Table 10

PREVENTIVE CARE AS A PERCENTAGE OF TOTAL MOH RECURRENT EXPENDITURES

Fiscal Year	Kenya	Malawi
76/77	--	9.0
77/78	--	6.0
78/79	6.6	6.0
79/80	6.0	7.0
80/81	6.6	6.0
81/82	4.6	5.0
82/83	4.6	6.0
83/84	4.4	6.0
84/85	4.0	5.0
85/86	--	6.0

Sources: Kenya, MOH, "Expenditure and Financing of the Health Sector in Kenya, 1986;" Malawi, The World Bank

Table 11

PERSONNEL COSTS AS A PERCENTAGE OF MOH RECURRENT EXPENDITURES

Year	Kenya	Malawi	Mali	Niger	Nigeria*	Senegal	Zaire
1976	--	25.9	--	--	--	--	--
1977	--	27.5	64.0	--	--	--	--
1978	--	28.2	--	--	--	--	--
1979	--	26.0	64.0	--	--	--	--
1980	53.4	23.6	--	--	6.3	--	--
1981	53.6	23.6	54.0	--	7.8	--	--
1982	--	30.9	60.0	51.0	7.2	64.7	--
1983	55.7	31.5	--	53.0	--	65.5	43
1984	--	26.2	--	54.0	--	64.8	--
1985	--	26.6	--	51.0	--	67.7	--
1986	--	--	63.9	51.0	--	--	64

Sources: Kenya, Appropriations Accounts (various issues); Malawi, The World Bank; Niger, Ministry of Health; Nigeria, The World Bank; Senegal, Direction de la Conjoncture, Ministry of Finance

* FMOH only

Table 12

NUMBER OF HEALTH FACILITIES BY LEVEL OF CARE IN SELECTED YEARS

Country	Primary	Secondary	Tertiary		
			Hosp	Beds	Pop/Bed
Kenya (1983/84)	1,697	560	182	25,682	790
Mali (1984)	387	--	12	4,869	1,634
Niger (1984)	306	65	8	3,038	2,022
Nigeria (1985)	3,505	3,008	825	56,600	1,682
Senegal (1982)	779	787	12	35,323	1,278
Sudan (1985)	5,000	288	190	18,594	1,108
Zaire (1985)	--	--	400	68,508	557

Sources: Various unpublished World Bank and MOH Documents

Note: Not included in this figure are hospitals providing primary care through outpatient units.

Table 13

POPULATION PER PHYSICIAN

Country	1965	1980	1981	1982	1983	1984	1985
Kenya	13,280	7,890	10,120	--	10,285	--	--
Malawi	46,890	40,950	52,830	--	--	--	--
Mali	51,510	22,130	26,030	--	--	16,612	--
Niger	65,540	38,790	--	--	--	--	--
Nigeria	29,530	12,550	9,400	--	--	--	--
Senegal	21,130	13,800	13,070	18,670	--	--	--
Sudan	23,500	8,930	9,810	--	--	--	8,122
Zaire	35,130	14,780	13,430	--	--	--	15,000

Source: The World Bank, World Development Report, 1984-88; WHO Annual Report on Mali, 1986; Ministries of Health in Senegal, Sudan and Zaire

Table 14

POPULATION PER NURSE

Country	1965	1980	1981	1982	1983	1984	1985
Kenya	1,930	550	990	--	1,546	--	--
Malawi	--	3,830	2,980	--	--	--	--
Mali	3,360	2,380	2,380	--	--	3,508	--
Niger	6,210	4,650	--	--	--	--	--
Nigeria	6,160	3,010	2,690	--	--	--	--
Senegal	2,640	1,400	1,990	2,219	--	--	--
Sudan	3,360	1,430	1,440	--	--	--	1,370
Zaire	--	1,920	1,740	--	--	--	--

Source: The World Bank, World Development Report, 1984-88; WHO Annual Report on Mali, 1986; MOHs, Kenya, Senegal, Sudan

Table 15

LIFE EXPECTANCY
(in years)

Year	Kenya	Malawi	Mali	Niger	Nigeria	Senegal	Sudan	Zaire	SSA
1965	45	39	38	37	42	41	40	44	42
1982	57	44	45	45	50	44	47	50	--
1983	57	44	45	45	49	46	48	51	--
1984	54	45	46	43	50	46	48	51	49
1985	54	45	46	44	50	47	48	51	--
1986	57	45	47	44	51	47	49	52	--

Source: The World Bank, World Development Report, 1984-1988
SSA = Sub-saharan African countries

Table 16

INFANT MORTALITY RATE
(per 1000 live births)

Year	Kenya	Malawi	Mali	Niger	Nigeria	Senegal	Sudan	Zaire	SSA
1965	112	199	200	180	177	171	160	135	155
1982	77	106	132	132	109	155	119	106	--
1983	81	164	148	139	113	140	117	106	--
1984	92	158	176	142	110	138	113	103	129
1985	91	156	174	140	109	137	112	102	--
1986	74	158	144	135	104	130	108	100	--

Source: The World Bank, World Development Report, 1984-1988
SSA = Sub-saharan African countries

Table 17

CHILD DEATH RATE
(per 1,000 children less than 5 years old)

Year	Kenya	Malawi	Mali	Niger	Nigeria	Senegal	Sudan	Zaire	SSA
1965	25	55	47	46	33	42	37	30	27
1982	13	29	27	27	20	34	23	20	--
1983	14	38	31	28	17	28	19	20	--
1984	16	36	44	29	21	27	18	20	18
1985	16	35	43	28	21	27	18	20	--
1986	12	21	23	23	18	19	17	14	--

Sources: The World Bank: World Development Report, 1984-1988; USAID, Child Survival Action Plan, 1987

SSA = Sub-Saharan African countries

Table 18

ORT COVERAGE RATES
(percentage)

Year	Kenya	Malawi	Mali	Niger	Nigeria	Senegal	Sudan	Zaire
1982								
1983							3.0	
1984								
1985	3.0	2.3	2.0	0.6	5.0	2.6	5.0	1.1
1986	14.5	9.9	2.0	0.6	7.0	3.0	7.7	10.0

Table 19

BCG COVERAGE RATES
(percentage)

Year	Kenya	Malawi	Mali	Niger	Nigeria	Senegal	Sudan	Zaire
1980							2.0	
1981		86.0	19.0	28.0	23.0		3.0	34.0
1982		91.0					3.0	
1983	76.0	95.0					5.0	
1984		75.0			12.0		8.0	
1985	82.0	87.0			19.0	32.0	12.0	57.0
1986	80.0	99.0	15.0		41.0		22.0	52.0
1987	86.0	92.0				92.0	46.0	

Table 20

MEASLES COVERAGE RATES
(percentage)

Year	Kenya	Malawi	Mali	Niger	Nigeria	Senegal	Sudan	Zaire
1980								17.0
1981		65.0		19.0	55.0		1.0	23.0
1982		58.0					1.0	
1983	55.0	67.0					2.0	29.0
1984		56.0			17.0		5.0	29.0
1985	63.0	51.0			14.0	40.0	6.0	40.0
1986	65.0	42.0	5.0		31.0		4.0	39.0
1987	60.0	53.0				70.0	22.0	

Table 21

DPT 3 COVERAGE RATES
(percentage)

Year	Kenya	Malawi	Mali	Niger	Nigeria	Senegal	Sudan	Zaire
1980							1.0	
1981		66.0		6.0			1.0	18.0
1982		50.0					2.0	
1983	58.0	71.0					3.0	16.0
1984		58.0			5.0		4.0	
1985	70.0	52.0			10.0	54.0	8.0	37.0
1986	72.0	70.0	3.0	5.0	20.0	53.0	14.0	32.0
1987	75.0	55.0					29.0	

Table 22

POLIO 3 COVERAGE RATES
(percentage)

Year	Kenya	Malawi	Mali	Niger	Nigeria	Senegal	Sudan	Zaire
1980						1.0		
1981		68.0		6.0		1.0		
1982		72.0				2.0		
1983	57.0	67.0				3.0		
1984		59.0		3.0		4.0	41.0	
1985	70.0	46.0		10.0	54.0	8.0	50.0	
1986	72.0	56.0	3.0	21.0		14.0	27.0	
1987	75.0	50.0			53.0	29.0		

Table 23

TETANUS 2 COVERAGE RATES
(percentage)

Year	Kenya	Malawi	Mali	Niger	Nigeria	Senegal	Sudan	Zaire
1981								
1982			1.0	3.0	11.0		1.0	
1983		1.0					1.0	
1984		25.0			6.0		2.0	
1985	4.0	38.0			7.0	8.0	3.0	41.0
1986		38.0	3.0		13.0		3.0	50.0
1987		20.0					6.0	27.0
							12.0	

Table 24

CRUDE BIRTH RATES
(per thousand population)

Year	Kenya	Malawi	Mali	Niger	Nigeria	Senegal	Sudan	Zaire
1965	52	56	50	48	51	47	47	47
1982	55	46	48	52	50	48	45	46
1983	55	54	48	52	50	46	46	46
1984	53	54	48	51	50	46	45	45
1985	54	54	48	51	50	46	45	45
1986	52	53	48	51	50	46	45	45

Source: The World Bank, World Development Report, 1984-1988

Table 25

AVERAGE ANNUAL POPULATION GROWTH RATES
(percentage)

	Kenya	Malawi	Mali	Niger	Nigeria	Senegal	Sudan	Zaire
1973-1980	3.6	2.9	2.1	2.7	2.5	2.5	3.0	2.8
1980-1986	4.1	3.2	2.3	3.0	3.3	2.9	2.8	3.1
1986-2000	3.9	3.3	2.7	3.2	3.3	3.0	2.9	3.0

Source: The World Bank, World Development Report

Table 26

CONTRACEPTIVE PREVALENCE
(percentage)

Year	Kenya	Malawi	Mali	Niger	Nigeria	Senegal	Sudan	Zaire
1977	7	1	1	1	--	--	--	1
1978	--	--	--	--	--	4	5	--
1980	--	--	--	--	--	5	--	--
1981	--	--	--	--	6	--	--	--
1982	--	--	--	--	5	--	--	--
1984	17	--	--	--	--	--	--	1
1985	--	--	2	--	5	11	--	1.6
1986	--	--	6	--	--	12	--	--
1987	--	--	--	8.5	--	--	--	--
1988	24	--	--	--	--	--	--	--

Source: Population Reference Bureau; Ross et al., 1988; the World Bank, World Development Report

Table 27

POPULATION
(in millions)

Country	1977	1978	1979	1980	1981	1982	1983	1984	1985
Kenya	14.1	14.6	15.1	16.7	17.3	18.0	18.8	19.5	20.3
Malawi	5.5	5.7	5.9	6.1	6.2	6.4	6.6	6.8	7.1
Mali	6.5	6.7	6.9	7.1	7.3	7.5	7.7	8.0	8.2
Niger	4.8	5.0	5.1	5.3	5.5	5.6	5.8	5.9	6.1
Nigeria	73.2	75.9	--	80.6	83.3	86.1	89.0	92.0	95.2
Senegal	5.2	5.3	5.5	5.6	5.8	6.0	6.3	6.4	6.4
Sudan	16.5	17.3	17.9	18.7	19.2	19.8	20.4	20.9	21.5
Zaire	24.0	24.8	25.6	26.4	26.6	27.4	28.2	29.7	30.4

Sources: IMF, International Financial Statistics and Government Finance Statistics; World Bank, World Development Report.

Table 28

PERSONNEL SPECIFICALLY ALLOCATED TO FAMILY PLANNING SERVICES

Country	1970	1973	1978	1980	1984	1986
Kenya	90	10	603	817	--	--
Niger	--	--	--	--	--	70
Sudan (1984-85)	--	--	--	--	--	27,388

Source: Ross et al., 1988; unpublished World Bank Documents

Table 29

FACILITIES SPECIFICALLY ALLOCATED FOR FAMILY PLANNING SERVICES

Country	1968	1970	1973	1978	1980	1984	1986	1987
Kenya	174	262	305	495	631	--	850	--
Nigeria	--	--	--	--	--	--	728	--
Senegal	--	--	--	--	--	--	22	--
Sudan	--	--	--	--	--	5,281	--	--
Zaire	--	--	--	--	--	20	--	80

Source: Ross et al., 1988; unpublished World Bank documents

Table 30

ACCEPTORS OF FAMILY PLANNING SERVICES:
(in thousands)

Year	Kenya	Malawi	mali	Niger	Nigeria	Senegal	Sudan	Zaire
1970	30.9				7.6			
1974	41.0				33.2			
1975	39.0							
1976	59.0							
1977	71.0							
1978	75.0							
1986					209.0			

Source: Ross et al., 1988.

Table 31

INFLATION RATE
(in percent)

Country	1977	1978	1979	1980	1981	1982	1983	1984	1985
Kenya		19.0	11.3	10.4	12.7	16.7	16.0	10.5	
Malawi		7.6	13.9	19.8	11.8	9.8	13.5	20.0	
Mali									
Niger	23.3	10.7	7.3	10.2	29.9	5.6	-2.5	8.4	-0.9
Nigeria					20.8	7.7	23.2	39.6	5.5
Senegal	11.4	3.3	9.8	8.7	5.9	17.4	11.6	11.8	13.0
Sudan		14.5	25.6	36.0	24.6	25.7	30.6	34.1	45.4
Zaire		48.5	108.6	42.1	34.9	36.3	77.1	52.3	

Sources: IMF, International Financial Statistics and Government Finance Statistics; MOH, Sudan

APPENDIX A
COUNTRY TABLES

Table K-1

KENYA: HEALTH CARE FACILITIES BY PROVIDER, 1983-84

	No. of Hosp.	No. of Beds	Percent of Total	Urban Health Centers/ Clinics	Rural Health Centers	Rural Dispensaries/ Clinics
<u>Government</u>						
MOH	80	16,776	65	31	245	1,032
Defense Dept	2	108	1	43		
Prisons Dept	9	356	1	28		
Municipalities	1	350	1	107		
Missions	42	5,480	21	11	72	165
Private Companies	4	257	1			59
Private "Market"	44	2,355	9	22		17
TOTAL	182	25,682	100	242	317	1,273

Source: MOH, Expenditure and Financing of the Health Sector in Kenya, 1986

Table K-2

KENYA: HEALTH PERSONNEL BY PROVIDER, 1983-84

	Doctors		Clinical Officers	Nurses	
	General	Specialist		Enrolled	Registered
<u>Government</u>					
MOH	588	235	1,360	7,137	2,157
College of Health Sciences	3	84			
Municipalities	64	--	121	506	126
Missions	112	--		46	1,073
AMREF	1	13	6	1	10
Private Companies	7			23	8
<u>Private "market"</u>					
Institutions	59	56		61	441
Practitioners	425	190			
TOTAL	1,259	578	133	9,001	3,217

Source: MOH, Expenditure and Financing of the Health Sector in Kenya, 1986

Table K-3

KENYA: HEALTH EXPENDITURE, 1983-1984
(million Ksh and as percentage of total)

	Recurrent		Capital		Total
	Amount	%	Amount	%	
GOK, Total	1,232.2	43	143.4	52.7	1,375.6
MOH	(1,206.8)	(42)	--	--	--
Collective					
Health Services	(25.4)	1	--	--	--
Non-Fee Appropriation in Aid to MOH	3.7	1	--	--	--
Municipalities	152.6	5	1.0		155.4
NHIF	109.0	4	--	--	109.0
Missions	29.3	1	5.0	1.8	34.3
Foreign Contrib	(13.1)	--	--	--	--
Local Contributions	(9.4)	--	--	--	--
Non-Fee Earnings	(6.8)	--	--	--	--
Other NGO's	13.4		--	--	13.4
Foreign					
Contributions	(11.3)		--	--	--
Local Contributions	(2.1)		--	--	--
Private Companies	53.9	2	--	--	53.9
Private Insurance	35.3	1	--	--	35.3
Out-of-Pocket Payments	1,175.6	41	--	--	1,175.6
International Donors	71.0	2	120.7	44.4	191.7
TOTAL	2,876.0	100	271.9	100.0	3,147.9

Source: Statistical Abstract (various issues)

Table K-4

KENYA: TRENDS IN MOH GROSS RECURRENT EXPENDITURE
(in constant 1978/79 KSh millions with annual rates of growth)

	78/79	79/80	80/81	81/82	82/83	83/84	84/85
Kenyatta National Hospital	101.8	110.7 (8.8)	107.1 (-3.3)	107.4 (0.3)	99.8 (-7.1)	84.8 (-15.1)	89.4 (5.4)
Provincial Hospitals	117.4	128.3 (9.3)	147.4 (14.9)	150.9 (2.4)	139.1 (-7.8)	127.8 (-8.1)	131.6 (3.0)
District Hospitals	225.7	294.4 (10.5)	284.2 (14.0)	286.5 (0.8)	272.6 (-4.9)	278.2 (2.1)	276.3 (-0.7)
Total Curative Health Expenditures as % of Recurrent Expenditures	485.9 68.7	531.6 66.7 (9.4)	592.3 68.4 (11.4)	593.1 72.3 (0.1)	559.6 72.4 (-5.6)	535.3 72.8 (-4.5)	538.3 66.5 (0.7)
Total Preventive/Promotional Programs as % of Recurrent Expenditures	46.6 6.6	47.6 6.0 (2.2)	56.9 6.6 (19.5)	37.4 4.6 (-34.3)	35.6 4.6 (-4.9)	32.1 4.4 (-9.8)	32.1 4.0 (0.1)
Rural Health Service as % of Recurrent Expenditures	54.4 7.7	73.0 9.2 (34.2)	79.5 9.2 (8.9)	67.1 8.2 (-15.6)	71.4 9.2 (6.3)	53.7 7.3 (-24.8)	46.5 5.7 (-13.4)
Training as % of Recurrent Expenditures	47.8 6.7	48.3 6.0 (1.0)	51.9 6.0 (7.5)	48.9 6.0 (-5.6)	46.0 6.0 (-6.1)	42.8 5.8 (-6.8)	42.6 5.3 (-0.5)
TOTAL MOH	707.6	797.1 (12.1)	866.5 (8.7)	819.9 (-5.4)	772.8 (5.7)	735.4 (-4.8)	809.5 (10.1)

Source: MOH, Expenditure and Financing of the Health Sector in Kenya, 1986

Table K-5

KENYA: TRENDS IN GOVERNMENT HEALTH EXPENDITURE
(million Kenyan pounds)

Year	Recurrent		Development		Total			Local Gov't Total
	Amount Kenya Pounds	Percent Growth Rate	Amount Kenya Pounds	Percent Growth Rate	Amount Kenya Pounds	Percent Growth Rate		
						Nominal	Real	
1977	21.26	--	8.30	--	29.56	--	--	3.3
1978	29.21	37.4	7.69	-3.5	36.90	24.8	5.8	3.7
1979	35.38	21.1	7.75	0.8	43.13	16.9	5.6	4.2
1980	43.72	23.6	10.75	38.7	54.47	26.3	15.9	4.8
1981	52.60	23.0	12.68	18.0	65.28	19.8	7.1	5.6
1982	59.83	13.7	11.30	-10.9	71.13	9.0	-7.7	7.9
1983	62.37	4.2	7.70	-31.9	70.07	-1.5	17.5	7.1
1984	60.79	-2.5	14.72	91.2	75.51	7.8	-2.7	5.2
1984-85	73.01	20.1	11.11	-24.4	84.12	11.4	--	8.4
1985-86	79.65	9.1	14.81	33.3	94.46	12.3	--	7.0
1986-87	96.50	21.2	14.73	-0.5	111.23	17.8	--	7.2

Source: Statistical Abstract (various issues); Kenya Economic Surveys, 1979-1988

Table K-6

KENYA: TRENDS IN GOVERNMENT HEALTH EXPENDITURE
(percentage)

	Recurrent	Development	Total	Total as Percentage of	
				Gov't Exp.	GNP
1977	71.92	28.08	100	7.2	2.7
1978	79.16	20.84	100	6.3	2.4
1979	82.03	17.97	100	6.2	2.4
1980	80.26	19.74	100	7.0	2.5
1981	80.58	19.42	100	6.7	2.4
1982	84.11	15.89	100	6.3	2.1
1983	89.01	10.99	100	5.9	2.1
1984	80.51	19.49	100	5.8	--

Source: Statistical Abstract (various issues)

Table K-7

KENYA: TRENDS IN GOVERNMENT AND DONOR DEVELOPMENT HEALTH EXPENDITURE
(million Kenyan pounds)

Year	Government				Donors				Total			
	Cur	Prev	Rur	Tot	Cur	Prev	Rur	Tot	Cur	Prev	Rur	Tot
78-79	5.8	0.2	1.0	6.1	1.2	0.1	0.5	1.6	6.9	0.3	1.4	8.6
79-80	7.5	0.3	0.2	8.0	0.4	0.2	1.8	2.4	7.9	0.5	2.1	10.5
80-81	7.6	0.1	0.2	7.9	0.4	0.1	1.9	2.4	8.0	0.3	2.2	10.5
81-82	6.2	0.2	0.6	7.0	0.6	0.1	1.9	2.6	6.8	0.3	2.5	9.6
82-83	6.3	0.3	1.4	8.0	1.0	0.7	1.9	3.6	7.4	0.9	3.3	11.6
83-84	--	--	--	--	--	--	--	--	--	--	--	--
84-85	3.9	0.2	0.7	4.8	0.3	--	4.5	4.8	4.2	0.2	5.2	9.6
85-86	5.3	0.1	5.0	10.4	0.7	0.4	2.2	3.3	6.0	0.4	7.2	13.6
86-87	4.8	0.3	3.8	8.9	1.1	--	3.0	4.1	5.9	0.3	6.8	13.0

Source: Kenya Economic Survey, 1982-88

Cur = Curative
 Prev = Preventative
 Rur = Rural
 Tot = Total

Table K-8

KENYA: SHARES OF THE GOVERNMENT AND DONORS IN DEVELOPMENT EXPENDITURE
(percentage)

	Curative		Preventive		Rural		Total	
	Gov' t	Donor	Gov' t	Donor	Gov' t	Donor	Gov' t	Donor
78-79	83.4	16.6	80.8	19.2	67.4	32.6	70.1	29.9
79-80	94.8	5.2	56.2	43.8	12.2	87.8	76.2	23.8
80-81	95.0	5.0	50.0	50.0	10.2	89.8	75.2	24.8
81-82	91.3	8.7	66.7	33.3	25.7	74.6	72.3	27.7
82-83	86.0	14.0	29.3	70.7	42.5	57.5	69.0	31.0
83-84	--	--	--	--	--	--	--	--
84-85	92.8	7.2	100.0	0.0	13.3	86.7	50.0	50.0
85-86	87.6	12.4	12.5	87.5	69.9	30.1	76.5	23.5
86-87	81.2	8.8	100.0	0.0	56.1	43.9	68.5	31.5

Source: Kenya Economic Survey, 1982-88

Table K-9

KENYA: MOH EXPENDITURE AS PERCENTAGE OF CENTRAL GOVERNMENT EXPENDITURE

	Expenditure Including Public Debt		Expenditure Excluding Public Debt	
	Recurrent	Total	Recurrent	Total
1978-79	7.4	6.2	8.9	7.0
1979-80	7.8	6.8	9.4	7.9
1980-81	7.6	6.7	9.5	7.9
1981-82	7.2	6.3	9.4	7.7
1982-83	6.4	5.9	9.5	8.0
1983-84	6.4	5.9	9.2	7.8
1984-85	6.2	5.4	9.2	7.3

Source: MOH, Expenditure and Financing of the Health Sector in Kenya, 1986

Table K-10

RATIOS OF POPULATION TO HEALTH PERSONNEL, 1983-84
(urban/rural breakdown)

	Doctors		Doctors and Clinical Officers		Nurses	
	Public	Total	Public	Total	Public	Total
Nairobi District	2,246	1,300	1,770	1,124	751	578
Mombasa District	6,852	2,235	3,835	1,779	1,100	826
Remainder of Kenya	46,987	23,555	11,555	965	2,335	1,900

Source: MOH, Expenditure and Financing of the Health Sector in Kenya, 1986

Table K-11

KENYA: RECURRENT EXPENDITURE PER CAPITA BY PROVIDER AND BY DISTRICT
1983-84

Area	MOH	Public Sub-Sector	Public and Mission	Public, Mission and Private Sector	All Sources
Nairobi District	144	242	243	404	636
Mombasa District	79	143	144	262	597
Other Districts w/ Provincial Hosp.	51	56	64	69	
Remainder of Kenya	38	38	48	50	
Other Urban Centers					407
Rural Area					61

Source: MOH, Expenditure and Financing of the Health Sector in Kenya, 1986

Table K-12

KENYA: STRUCTURE OF MOH RECURRENT EXPENDITURE
(million Kenyan pounds)

	1980		1981		1983	
	Amount	% of Total	Amount	% of Total	Amount	% of Total
Personal Emoluments	17.9	48.0	20.6	47.1	26.5	48.4
House Allowance	2.0	5.4	2.8	6.5	4.0	7.3
Transport Operating and Maintenance	1.5	3.9	1.8	4.1	1.6	2.8
Electricity Water & Conservancy	1.5	3.9	1.8	4.1	2.0	2.6
Medical Stores, Sera and Vaccines	9.4	25.2	10.3	23.5	11.8	21.4
Patients Food	2.3	6.1	2.5	5.6	2.9	5.3
Medical Equipment	0.4	1.0	0.5	1.2	1.7	3.0
Travel & Accommodation	0.7	1.9	0.8	1.8	0.8	1.4
All Other Recurrent Expenses	1.5	3.9	2.7	6.2	3.4	6.2
TOTAL	37.2	100.0	43.7	100.0	54.7	100.0

Source: Appropriations Accounts (various issues)

Table K-13

KENYA: GOVERNMENT MANPOWER LEVEL FOR SELECTED CATEGORIES, 1972, 1982, 1984

PERSONNEL	1972	1982	1984
Doctors	350	835	1,284
Dentists	14	79	--
Registered Nurses	723	2,347	3,217
Enrolled Nurses	2,410	7,696	9,001
Clinical Officers	546	1,251	1,533
Public Health Officers	111	374	--
Public Health Technicians	421	1,420	--
Pharmacists	19	86	--
Pharmaceutical Technologists	125	304	--
Laboratory Technicians	119	525	--
Laboratory Technologists	120	282	--

Source: Complement Control, September, 1982; The World Bank, World Development Report

Table K-14

KENYA: STRUCTURE OF MOH EXPENDITURE ON PREVENTIVE/PROMOTION PROGRAMS
(million KSh and in percent of overall MOH expenditure)

	78/79	79/80	80/81	81/82	82/83	83/84	84/85	86-87	87-88
Communica- bles	12.3 (1.7)	14.0 (1.6)	29.0 (2.7)	19.5 (1.6)	13.1 (1.1)	14.8 (1.2)	15.0 (1.0)		
Public Health	3.8 (0.5)	4.1 (0.5)	6.1 (0.6)	5.3 (0.5)	5.9 (0.5)	5.8 (0.5)	5.8 (0.4)		
Nutri- tion	1.3 (0.2)	1.5 (0.2)	2.0 (0.2)	0.2 (.02)	4.4 (0.4)	7.5 (0.6)	7.4 (0.5)		
MCH/FP	12.0 (1.7)	11.9 (1.4)	11.3 (1.0)	11.4 (1.0)	15.4 (1.2)	13.2 (1.1)	14.9 (1.0)	24.0	26.2
Educa- tion	0.8 (0.1)	1.5 (0.2)	2.0 (0.2)	1.7 (0.1)	1.7 (0.1)	1.3 (0.1)	1.7 (0.1)		
Labor- atory	16.1 (2.3)	18.0 (2.1)	18.1 (1.7)	15.4 (1.3)	15.4 (1.3)	10.1 (1.0)	11.3 (1.0)		
DCI	0.2 (.03)	0.2 (.02)	0.5 (.05)	0.3 (.02)	0.6 (.05)	0.4 (.04)	0.5 (.04)		
Radiation	--	--	--	--	--	0.6 (.05)	1.4 (0.1)		
TOTAL	46.6 (6.6)	51.3 (6.0)	69.4 (7.0)	53.9 (4.6)	56.4 (5.2)	53.7 (5.2)	58.0 (4.0)		

Source: MOH

Table K-15

KENYA: ANNUAL CONTRACEPTIVE ACCEPTORS

Year	Pill	IUD	Injections	Others
1981	36,182	12,575	1,499	3,410
1982	38,149	14,813	1,928	4,195
1983	42,756	16,812	2,610	4,709
1984	50,839	20,673	4,561	4,324
1985	46,127	19,445	7,321	4,044
1986	61,813	15,558	6,470	9,304

Source: The World Bank

Table K-16

KENYA: FACILITIES ALLOCATED FOR FAMILY PLANNING SERVICES

Year	Clinics	Community Posts	Mobile Teams	Total	MWRA Per Service Point
1968	--	--	8	174	7,368
1970	250		12	262	5,511
1973	298		7	305	5,531
1978	166	329	--	495	4,222
1980	234	397	--	631	3,579

Source: Ross, et al., 1988

Table K-17

KENYA: PERSONNEL ALLOCATED FOR FAMILY PLANNING

Year	Physicians	Paramedics	Field Workers	Total	MWRA per FP Personnel
1970	60	30	--	90	16,044
1973	--	10	--	10	--
1978	--	--	603	603	3,466
1980	--	--	817	817	2,765

Source: Ross et al., 1988

Table K-18

KENYA: NATIONAL HEALTH INSURANCE FUND
(million Kenyan pounds)

Year	Receipts	Benefit Payments	Balance
1977-78	2.17	2.13	0.04
1978-79	2.58	1.58	1.00
1979-80	3.00	1.81	1.19
1980-81	3.56	1.94	1.62
1981-82	5.04	2.98	2.06
1982-83	5.64	4.61	1.03
1983-84	6.46	5.46	1.00
1984-85	5.36	5.95	-0.59
1985-86	7.14	5.24	1.90
1986-87	7.62	6.16	1.46

Source: Kenya Economic Surveys, 1982-88

Table K-19

KENYA: PATTERN OF PATIENTS VISITS TO HEALTH CARE PROVIDERS

Type of Provider or Facility Visited	Percentage of Patients			
	1st Visit	2nd Visit	3rd Visit	4th Visit
Government Health Center or Dispensary	28.6	20.3	13.2	11.5
Government Hospital	2.9	5.0	6.8	5.3
Mission Clinics	19.8	31.6	24.7	20.4
Private Clinics	3.9	5.4	9.4	3.5
Pharmacy Retail Shop	26.3	10.9	9.5	3.5
Traditional Healers	6.5	5.6	6.3	8.9
Self	5.9	3.7	3.7	2.7
None	6.1	17.5	26.3	44.2
Total	100.0	100.0	100.0	100.0
Sample size	479.0	320.0	190.0	113.0

Source: Mwabu, 1986, p. 316

Table K-20

KENYA: SELECTED DATA FOR VARIOUS GOVERNMENT HEALTH FACILITIES

Facility	Number of Facilities (1982)	Average No. of Outpatient Visits Per Day (1985)	Total No. of of Beds and Cots (1982)
Dispensaries	802	50	--
Health Centers and Sub-District Hospitals	233	200	2,677
District hospitals	75	300	5,388
Provincial Hospital	7	800	3,093
Kenyatta National Hospital	1	3,930	1,804

Source: Ellis, 1987

Table MA-1

MALAWI: MOH RECURRENT EXPENDITURE BY SOURCE OF FINANCE

Fiscal Year	Treasury Allocation	Fees	Medical Personnel	Drugs	Total Non-Treasury Sources	% Expenditure Financed by Non-Treasury Sources
1981/82	1,8723	393	2,300	3,100	5,793	31
1982/83	1,7422	537	2,300	2,100	4,937	28
1983/84	2,0599	533	2,600	2,100	5,233	25
1984/85	2,8031	568	2,000	2,000	5,168	19
1985/86	3,6753	148	2,600	6,000	9,648	26

Source: The World Bank

Table MA-2

MALAWI: MOH RECURRENT EXPENDITURE BY ACTIVITY
(in thousands)

Fiscal Year	Administion & Training		Preventive & Control		Curative Care		Total	
	Amount	%	Amount	%	Amount	%	Amount	%
1976/77	833	12	615	9	5,636	79	7,761	100
1977/78	956	12	466	6	6,338	82	7,761	100
1978/79	1,048	10	634	6	8,645	84	10,326	100
1979/80	1,440	12	802	7	9,841	81	12,083	100
1980/81	1,693	11	910	6	12,377	82	14,980	100
1981/82	2,377	13	948	5	15,338	82	18,663	100
1982/83	2,108	12	1,121	6	14,193	82	17,422	100
1983/84	2,645	12	1,221	6	17,734	82	21,600	100
1984/85**	2,789	14	1,526	5	22,963	81	28,031	100
1985/86*	3,069	13	1,360	6	18,628	81	23,057	100

Source: The World Bank

* Estimate

** Revised Estimate

Table MA-3

MALAWI: MOH RECURRENT EXPENDITURE BY CATEGORY
(in thousands)

Fiscal Year	Wages and Salaries						Goods and Services		Total Prices	
	Admin. and Training	Preventive Care	Curative Care	Total Current Price	Total Constant Price	Percent of Total	Current	Constant	Current	Constant
75/76	163	157	1,391	1,711	2,237	26.8	4,668	6,249	6,379	8,486
76/77	165	172	1,495	1,832	2,386	25.9	5,251	6,841	7,083	9,227
77/78	215	195	1,735	2,132	2,578	27.5	5,629	6,807	7,761	9,387
78/79	284	276	2,354	2,914	2,914	28.2	7,412	7,412	10,326	10,326
79/80	358	320	2,462	3,140	3,140	26.0	8,943	8,733	12,083	11,873
80/81	359	318	2,857	3,534	3,506	23.6	11,446	8,638	14,980	12,144
81/82	435	437	3,554	4,476	4,168	23.6	14,297	9,846	18,723	14,014
82/83	537	627	4,221	5,385	4,575	30.9	12,037	7,566	17,422	12,141
83/84	539	643	5,619	6,801	5,529	31.5	14,798	8,351	21,599	13,880
84/85	794	758	5,797	7,349	5,837	26.2	20,682	10,777	28,031	16,614
85/86	657	843	6,566	8,066	5,953	26.6	22,303	9,825	30,369	15,478

Source: The World Bank

Table MA-4

MALAWI: MOB CAPITAL EXPENDITURE
(in thousands)

Fiscal Year	Approved Budget				Actual Expenditure			
	Government	Donor	Total	% of Overall Gov't Budget	Current Prices	Budget Surplus as % of Budget	Expenditures in Constant Prices	Expenditures Per Capita in Constant Prices
76/77	220	2,196	2,416	4.0	1,674	30.7	2,180	
77/78	129	1,070	1,199	1.2	875	27.0	1,058	0.19
78/79	423	1,171	1,594	1.2	1,007	36.8	1,007	0.18
79/80	424	2,643	3,067	2.1	2,726	11.1	2,662	0.45
80/81	68	3,316	3,384	2.0	4,246	25.5	3,205	0.53
81/82	34	2,654	2,688	1.9	1,554	42.0	1,020	0.12
82/83	210	2,386	2,596	1.9	1,378	47.0	866	0.14
83/84	733	6,202	6,935	4.3	6,519	6.0	3,679	0.56
84/85	1,147	7,731	8,878	6.6				
85/86*	1,252	6,263	7,515	4.8				

* Estimate

Source: The World Bank

Table MA-5

MALAWI:
MOH RCURRENT BUDGET AS A PERCENT OF TOTAL GOVERNMENT RECURRENT BUDGET

1980	1981	1982	1983	1984	1985	1986
6.8	8.2	7.0	6.7	7.3	7.0	6.4

Source: The World Bank, World Development Report

Table MA-6

MALAWI REGIONAL DISTRIBUTION OF HOSPITAL BEDS, 1986

District	Population Per Bed	Percentage of Bed Occupancy		Balance
		Actual	Expected	
Salima	4,114	160	315	155
Nchisi	4,007	201	307	106
Ntchen	3,410	156	261	105
Mchinji	2,899	129	222	93
Machinga	2,767	81	212	131
Dedza	1,650	38	126	88
Kazungu	1,637	145	125	-20
Mulanje	1,498	92	115	23
Chikwawa	1,462	144	112	-32
Dowa	1,443	72	110	38
NKhata-Bay	1,400	104	107	33
Zomba	1,383	197	106	-91
Thyolo	1,226	80	94	14
Chitipa	1,207	103	92	-11
Mmangotchi	967	51	74	-23
Lilongwe	868	78	66	-12
Chiradzulu	861	67	66	-1
Karonga	841	104	64	-40
Mzimba	670	68	51	-17
Nkhotakota	593	86	45	-41
Mwanza	577	35	44	9
Blantyre	569	56	44	-12
Nsanje	390	55	30	-25
Rumphi	368	56	28	-28
MALAWI	1,067	82	82	0

Table MB-1

MALI: HEALTH MANPOWER

Personnel	1979	1980	1981	1984
Doctors -	233	264	293	473
Pharmacists	11	22	32	110
Dentists	14	15	15	15
Sanitary Engineers	1	1	3	5
Midwives	269	272	275	342
State Nurses	687	715	768	784
Other Nurses	1,269	1,338	1,417	1,453
Health Technicians	41	48	58	84
Lab. Technicians	61	67	70	138
Social Workers	61	61	61	65

Source: National Department for Planning and Social Health Training; WHO/Mali, Annual Report 1986

Table MB-2

MALI: TRENDS IN MOH EXPENDITURE
(billion Malian Francs)

Expenditure 1977	1978	1979	1980	1981	1982	1983
Personnel 2,637	2,812	3,058	3,597	2,903	2,997	
Goods and Services 1,486	-	1,678	-	2,023	2,029	
Recurrent Personnel 4,125	-	4,751	-	4,926	5,026	
Percentage of Recurrent Expenditure 64	-	64		54	60	
Total Health Expenditure 4,281	4,143	4,778	4,536	8,020	6,332	6,598
Per Capita Expenditure in Malian Francs 658.0	618.4	692.5	638.9	1,100.1	843.1	852.5
Health as Percentage of: Government Expenditure 6.2	5.3	5.3	3.1	4.6	2.8	2.5
GDP 1.0	1.0	0.9	0.7	1.0	0.8	0.8

Sources: IMF, Government Finance Statistics and International Financial Statistics; Mali, Ministry of Finance and Commerce

Table MB-3

MALI: HEALTH FACILITIES BY SECTOR AND REGION, 1984

Region	Public Sector		Private Sector		Total	Percent of Total
	Hospitals	Health Centers	Dispensaries	Maternities		
Kayes	2	55	10	2	69	18
Koulikoro	-	46	4	-	50	13
Sikasso	1	53	10	3	67	17
Segou	3	46	5	-	54	14
Mopti	1	63	5	3	72	18
Tombouctou	1	36	2	1	40	10
Gao	1	28	1	-	30	8
Bamako	3	10			13	2
TOTAL	12	337	37	9	391	100

Source: Ministry of Public Health and Social Affairs

Table MB-4

MALI: HOSPITAL BED DISTRIBUTION BY REGION, 1984

Region	Hospital Beds	Population	Population Per Bed
Kayes	558	1,045,034	1,873
Koulikoro	295	1,107,893	3,756
Sikasso	558	1,320,034	2,366
Segou	733	1,304,320	1,779
Mopti	612	1,351,472	2,208
Tombouctou	254	581,447	2,289
Gao	228	440,014	1,930
Bamako District	1,631	707,166	433
MALI	4,869	7,857,397	1,634

Source: WHO/Mali, Annual Report, 1986

Table MB-5

MALI: HEALTH PERSONNEL BY REGION, 1984

Region	General Doctors	Special- ists	State Nurses	Other Nurses	Mid- wives	Lab. Techn.	Pharma- cists
Kayes	32	2	55	117	10	7	12
Koulikoro	20	-	36	91	19	7	1
Sikasso	33	1	51	126	12	7	4
Segou	30	3	63	115	17	7	3
Mopti	25	1	50	119	22	8	3
Tombouctou	18	1	36	63	5	5	2
Gao	18	1	39	69	8	5	2
Bamako Dist.	195	92	454	753	249	92	89
MALI	371	102	784	1453	342	138	110

Source: WHO/Mali, Annual Report, 1986

Table MB-6

MALI: POPULATION PER HEALTH PERSONNEL, 1984

Region	Physicians	Midwives	State Nurses	Nurses	Population
Kayes	30,736	104,503	19,001	8,932	1,045,034
Koulikoro	55,395	58,310	30,775	12,175	1,110,893
Sikasso	38,825	110,004	2,157	10,477	1,320,043
Segou	39,525	766,725	20,704	11,342	1,304,328
Mopti	51,980	611,431	27,029	11,357	1,351,472
Tombouctou	30,602	116,289	16,151	9,229	581,447
Gao	23,157	555,002	11,282	6,377	440,014
Bamako District	2,464	22,840	1,558	939	707,166
MALI	16,612	22,975	10,022	5,408	7,857,397

Source: WHO/Mali, Annual Report, 1986

Table NA-1

NIGER: PRINCIPAL HEALTH FACILITIES BY DEPARTMENT, 1984

Facility	Agades	Diffa	Dosso	Maradi	Niamey		Tahoua	Zinder	Total
					District	City			
Hospitals	1	1	1	1	-	2	1	1	8
Hospital Beds*	168	125	308	432	1,173**		334	498	3,038
Medical Centers	3	3	5	7	6	1	7	6	38
MOH Centers	2	1	1	3	2	10	2	6	27
Maternities	4	3	6	10	7	3	9	8	50
Dispensaries	16	11	32	37	53	12	34	34	229
Mobil Units	1	1	1	1	1	-	1	1	7
Pharmacies	2	2	2	2	3	2	3	2	18
Pop. ('000)	150	201	835	1,138	1,412	1,198	1,209	6,144	

Sources: Ministries of Public Health and Social Affairs

* Includes hospitals and medical centers

** Same for district and city

Table NA-2

NIGER: HEALTH PERSONNEL BY CATEGORY, 1984

	Doctors	Midwives	State Nurses	Certified Nurses
Hospitals	14	22	134	166
Medical Centers*	11	155	127	298
Dispensaries	-	-	38	249
Mobile Units	3	-	19	26
Administration	19	2	10	30
Other	5	4	19	20
Total Active	52	183	347	789
In Training	12	83	207	217
TOTAL	64	266	554	1,006
Staff in Rural Facilities**	6	62	125	360
Share of Total Active	11.5	33.9	36.0	45.6

Sources: Ministries of Public Health and Social Affairs

* Includes maternities and MCH centers

** Medical centers (including maternities and MCH centers) in rural areas
rural dispensaries and mobile units

Table NA-3

NIGER: HEALTH COVERAGE BY PERCENTAGE OF POPULATION, 1984

Village Health Team	45
Fixed Health Facilities	
- Excluding Dispensaries	15
- Including Dispensaries	40
- Up to 15 km From Facility	55

Table NA-4

NIGER: VILLAGE HEALTH WORKER SYSTEM

	1972	1978	1980	1984
Villages with Teams	275	1,496	2,223	3,898
Health Assistants	500	2,185	3,335	6,611
Birth Assistants	594	1,836	3,225	7,056
Percentage of Villages With Teams	3.2	17.3	25.8	45.2

Source: Ministry of Planning

Table NA-5

NIGER: MACROECONOMIC DATA

	1977	1978	1979	1980
Population (million)	4.8	5.0	5.1	5.3
GDP (billion CFA)	274.8	343.8	422.5	507.0
Government Expenditure (billion CFA)	42.5	58.6	70.8	98.7
Health Expenditure (billion CFA)	1.9	2.7	3.3	4.0

Table NA-6

NIGER: HEALTH EXPENDITURE, 1984
(million CFA)

	Amount	% of Total
<u>1. Public Expenditure</u>		
Ministry of Public Health	4,455	
Ministry of Higher Education	350	
Ministry of Finance	1,090	
(Medical Evacuation)*	(800)	
Other	105	
<u> Total Public Expenditure</u>	<u>6,000</u>	<u>52.2</u>
<u>2. Private Expenditure</u>		
Drugs	2,800	
Other	200	
<u> Total Private Expenditure</u>	<u>3,000</u>	<u>26.1</u>
<u>3. External Assistance</u>		
Technical Assistance	500	
Drugs and Supply	1,000	
Village Health Worker Program	1,000	
<u> Total External Assistance</u>	<u>2,500</u>	<u>21.7</u>
TOTAL HEALTH EXPENDITURE	<u>11,500</u>	<u>100.0</u>

* Medical evacuation of about 180 persons, generally to hospitals in France

Table NA-7

NIGER: OPERATING EXPENDITURE IN THE HEALTH SECTOR, 1982-1986
(million CFA)

	1982		1983		1984		1985		1986	
	Amnt	%Tot								
Personnel	1,944	51	2,327	53	2,405	54	2,487	51	2,613	51
Medicines	1,105	29	1,150	26	1,150	26	1,150	24	1,300	26
Transport	305	8	360	8	345	8	360	7	383	8
Other	457	12	529	12	556	12	836	17	775	15
TOTAL	3,812	100	4,366	100	4,455	100	4,833	100	5,071	100

Sources: Ministries of Public Health and Social Affairs

Table NA-8

NIGER: RECURRENT GOVERNMENT BUDGET FOR HEALTH, BY SOURCE OF FINANCE, 1984
(million CFA)

	<u>Amount</u>	<u>% of Total</u>
1. MOPHSA		
Personnel	2,150	35.8
Drugs and Vaccines	1,150	19.2
Training (Nurses and Midwives)	310	5.2
Total MOPHSA	<u>4,455</u>	<u>74.25</u>
2. Ministry of Finance		
Medical Evacuation*	800	13.33
3. Ministry of Higher Education		
Training (M.Ds.)	350	5.8
4. Other	395	6.6
TOTAL	6,000	100.0

Sources: Ministries of Public Health and Social Affairs

* Medical evacuation of about 180 persons, generally to hospitals in France

Table NA-9

NIGER ALLOCATION OF RECURRENT BUDGET BY TYPE OF FACILITY, 1984
(percentage)

<u>Hospitals</u>	<u>Provincial Facilities</u>	<u>Rural Facilities</u>	<u>Total</u>
50	40	10	100

Sources: Ministries of Public Health and Social Affairs

Table NA-10

NIGER: NUMBER OF OUTPATIENT VISITS PER DAY, 1984

<u>Hospital Admissions</u>	<u>New Consultations</u>	<u>Total Visits</u>	<u>Visit/Person</u>
47,680	3,300,000	9,000,000	1.5/year

Sources: Ministries of Public Health and Social Affairs

Table NA-11

NIGER: HEALTH SECTOR INVESTMENT PROGRAM, 1979-88
(million CFA)

	1979-83		1984-85		1985-88	
	Amount	%	Amount	%	Amount	%
Dispensaries	4,280	28	1,413	16	4,376	20
Maternity and MOH Centers	795	5	400	4	3,500	16
Medical Centers	NA	-	260	3	195	1
Hospitals	1,097	7	3,529	39	1,100	5
Schools (Nursing & Medical)	5,555	36	1,020	11	35	0
Vaccination Program	-	-	200	2	-	-
Public Health Programs	-	-	-	-	4,879	22
ONPPC	561	4	-	-	-	-
Village Health Workers	NA	-	1,948	21	6,943	32
Other	3,209	20	366	4	400	3
Total	15,497	100	9,136	100	21,428	100

Table NB-1

NIGERIA: HEALTH ESTABLISHMENTS, 1981

	Facilities	Beds
<u>Hospitals</u>	<u>786</u>	<u>54,978</u>
Teaching Hospitals	7	4,736
Specialized Hospitals	56	3,879
General Hospitals	705	44,773
Maternities, Paediatric Hospitals	18	1,590
<u>Health Centers</u>	<u>3,008</u>	<u>17,874</u>
Medical Health Centers	688	3,561
Maternity Homes	1,021	5,491
Maternity Health Centers	1,299	8,818
<u>Clinics and Dispensaries</u>	<u>3,505</u>	<u>344</u>
<u>Others</u>	<u>2,909</u>	<u>4,357</u>
Leprosarium and Clinic	2,878	1,389
Armed Forces Medical Reception Staion/Prisons	31	2,968
TOTAL	10,208	77,553

Source: Federal Ministry of Health

Table NB-2

NIGERIA: POPULATION/HEALTH FACILITY RATIOS, 1981

Hospital Bed	1,540
Health Facility Beds	1,092
Maternity Home/Center Bed	5,917
Health Center	28,157
Clinic, Dispensary	13,009

Source: Federal Ministry of Health

Table NB-3

NIGERIA: FMOH INVESTMENT EXPENDITURES
(thousand nairas)

EXPENDITURES	1975-80		1981		1982		1983
	Amnt	% Tot	Amnt	% Tot	Amnt	% Tot	(Budgeted)
Hospital Programs	231,448	62.8	82,750	58.2	137,180	87.3	126,000
Teaching	215,728	58.5	71,819	50.5	93,495	59.5	100,000
Neuro-Psychiatric	2,855	0.8	2,723	1.9	2,593	1.6	4,000
Orthopedic	7,323	2.0	1,614	1.1	1,845	1.2	4,000
Children's	-	-	695	0.5	320	0.2	6,000
Others	5,542	1.5	5,899	4.2	38,936	24.8	12,000
Public Health Program	113,771	30.9	52,423	36.9	13,540	8.6	30,800
Malaria	1,149	0.3	436	0.3	427	0.3	2,000
EPI (DC)	3,429	0.9	176	0.1	1,835	1.1	3,000
Onchocerciasis, Leprosy, TB	-	-	400	0.3	272	0.2	4,000
PHC (BHSS)	109,154	29.6	50,852	35.8	10,898	6.9	20,000
Port Health	39	0.03	559	0.4	108	0.1	1,800
Training	13,702	3.7	4,608	3.3	2,194	1.4	5,700
Supporting Institutions	9,709	2.6	2,321	1.6	4,204	2.7	7,500
Laboratories	5,326	1.4	1,458	1.0	3,388	2.2	4,760
Blood Products	-	-	-	-	28	0.0	1,000
Other	4,383	1.2	863	0.6	788	0.5	1,740
TOTAL FMOH INVESTMENT	368,630	100.0	142,102	100.0	157,127	100.0	170,000
% of Total Investment Expenditures	1.6		1.8		2.8		2.4

Sources: Federal Ministries of Health and Planning

Table NB-4

NIGERIA: TRENDS IN FEDERAL MOH EXPENDITURE, 1980-1983

(thousand nairas)

	1980	1981	1982	1983
Recurrent	145,667	153,436	152,208	142,488
Investment	93,457	142,102	157,127	170,000
TOTAL	249,124	295,538	309,335	312,488
Per Capita (current nairas)	3.03	3.49	3.55	2.91
Per Capita (constant 1980 nairas)	3.03	2.9	2.7	1.8
Total as Percentage of GNP	0.5	0.6	0.6	0.6

Sources: Federal MOH

Table NB-5

NIGERIA: FEDERAL MOH RECURRENT EXPENDITURE
(thousand nairas)

EXPENDITURES	1980		1981		1982		1983
	Amount	% Tot	Amount	% Tot	Amount	% Tot	(Budgeted)
<u>FMOH Personnel</u>	<u>9,151</u>	<u>6.3</u>	<u>11,973</u>	<u>7.8</u>	<u>10,987</u>	<u>7.2</u>	<u>11,077</u>
<u>Grants and Subventions</u>	<u>127,451</u>	<u>87.3</u>	<u>135,015</u>	<u>88.0</u>	<u>135,026</u>	<u>88.7</u>	<u>123,500</u>
Teaching							
Hospitals	102,933	70.7	109,100	71.0	109,200	71.7	98,322
NPHs	8,000	5.5	8,600	5.6	8,600	5.7	8,910
Orthopedic							
Hospitals	12,880	8.8	13,400	8.7	13,400	8.8	13,203
Other Hospitals	976	0.7	590	0.4	693	0.5	1,062
Laboratories and Research	140	0.1	105	0.1	130	0.1	117
Training							
Institutions	559	0.4	637	0.4	677	0.4	609
Other Support Institutions	1,963	1.3	2,583	1.7	2,327	1.5	2,443
<u>Other Operating Expenditures</u>	<u>9,065</u>	<u>6.2</u>	<u>6,448</u>	<u>4.2</u>	<u>6,195</u>	<u>4.1</u>	<u>7,911</u>
Transport & Travel	1,455	1.0	1,208	0.8	1,599	1.1	1,260
Maintenance	426	0.3	351	0.2	330	0.2	450
Utilities	465	0.3	354	0.2	542	0.4	504
Cosultancies	-	-	-	-	70	0.0	225
Training							
Staff Divisions	1,499	1.0	861	0.6	603	0.4	810
Health Supply							
Logistics	1,801	1.2	905	0.6	337	0.2	720
Health Services Programs (FMOH)	2,802	1.9	2,262	1.5	1,938	1.3	2,115
Health Training Programs	245	0.2	141	0.1	405	0.3	612
Vehicle Advances	-	-	-	-	-	-	766
Miscellaneous	372	0.3	366	0.2	331	0.2	449
TOTAL FMOH RECURRENT EXPENDITURE	145,667	100	153,436	100	152,208	100	142,488

Table SE-1

SENEGAL: MACROECONOMIC DATA

	1977	1978	1979	1980	1981	1982	1983
<u>Population</u> (millions)	5.2	5.3	5.5	5.6	5.8	5.9	6.2
<u>GDP</u> (billion CFA)	471.5	489.2	538.3	612.4	656.3	757.0	890.0
<u>Budget Deficit</u> (billion CFA)	15.1	-1.5	4.3	-5.4	22.6	52.3	55.5
<u>CPI</u> (100=1980)	79.2	86.1	89.8	100.0	105.0	119.2	133.3
<u>Government Expenditure</u> (billion CFA)	97.0	96.8	111.5	147.2	171.9	231.0	250.0
<u>Health Expenditures</u> (billion CFA)				6.9	7.9	9.1	11.8
(million US\$)				33.0	33.5	30.5	47.2
<u>Real Health Expenditures</u> (billion CFA)				6.9	7.5	7.6	8.9
(million US\$)				33.0	31.9	25.6	25.1
Percentage Growth Rate					8.7	1.3	17.1
<u>Health Expenditure Per Capita</u> (thousand CFA)				1.2	1.4	1.5	1.8
(US\$)				5.9	5.7	5.1	5.0
<u>Real Expenditure Per Capita</u> (thousand CFA)				1.2	1.3	1.3	1.4
(US\$)				5.9	5.5	4.3	4.1
<u>Health Expenditure Per Government Expenditure</u> (percentage)				4.7	4.6	3.9	3.3
<u>Health Expenditure Per GDP</u> (percentage)				1.1	1.2	1.2	1.3

Source: IMF, Government Finance Statistics; MOH, Dakar

Table SE-2

SENEGAL: HEALTH BUDGET
(million CFA)

Fiscal Year	Recurrent		Equipment		Total Health Budget		
	Amount	% Total Budget	Amount	% Total Budget	Amount	% Total Budget	% GDP
1977/78	4,788	5.40	100	0.63	4,888	3.48	1.0
1978/79	5,594	5.52	171	0.51	5,765	3.49	1.1
1979/80	5,874	5.66	520	3.33	6,394	4.24	1.1
1980/81	6,023	5.24	479	3.04	6,502	3.78	1.0
1981/82	6,285	5.06	00	0.00	6,285	3.33	0.9
1982/83	7,663	5.14	555	3.03	8,218	3.96	1.1
1983/84	8,145	4.93	250	1.67	8,395	3.54	0.9
1984/85	8,701	5.87	155	1.41	8,856	3.50	--
1985/86	9,254	4.97	155	1.72	9,409	3.58	--

Source: Ministry of Finance

Table SE-3

SENEGAL: HEALTH FACILITIES AND PERSONNEL, 1982

Facility	Amount
Hospitals	12
Hospital Beds	35,323
Health Centers	35
Health Center Beds	787
Maternities	231
Health Posts	448
MCH Centers	65
Physicians	295
Nurses	2,482
Midwives	381
Population per Hospital Bed	1,278
Population per Physician	18,670
Population per Nurse	2,219

Source USAID, The Sine Saloum Project, 1984

Table SE-4

SENEGAL: BREAKDOWN OF GOVERNMENT HEALTH EXPENDITURE BY ECONOMIC CATEGORY
AND BY TYPE OF HEALTH FACILITY
(million CFA)

Expenditures	1982/83	1983/84	1984/85	1985/86
<u>Recurrent</u>				
Hospitals	6,963	7,314	7,616	7,472
Miscellaneous	627	534	572	1,085

Total	7,898	8,390	8,933	9,477
Hospital as Percentage of Total	87.8	88.4	85.3	78.8

Wages & Salaries	5,111	5,491	5,790	6,418
Goods & Services	2,683		2,889	2,916

Wages and Salary as Percentage of Total	64.7	65.5	64.8	67.7
Goods and Services as Percentage of Total	34.0			

<u>Capital Expenditure</u>				
Hospitals	430	250	164	40
Miscellaneous	70	00	115	115

Total	500	250	279	155
Hospital as Percentage of Total	86.0	100.0	58.8	25.8

Source: Ministry of Finance

Table SE-5

SENEGAL: COVERAGE OF VACCINATION PROGRAMS
0-5 Year Age Group
(in thousands)

Region	1981	1982	1983	1984	1985	1986
Thies	-	133	32	33	34	35
Cape Vert	-	-	-	202	52	53
Casamance	146	35	36	36	36	36
River	-	101	23	24	25	26
Sine Saloum	202	47	47	48	49	51
Senegal Oriental	-	-	63	15	15	15
Louga	-	-	-	193	21	21
Diourbel	-	-	94	21	21	21

Total	348	316	295	578	253	258

Table SE-6

SENEGAL: TOTAL EXPENDITURE ON HEALTH
(thousand CFA)

	1977	1978	1979	1980	1981
<u>Central Government</u>					
MOH Budget	5,369,908	6,133,799	6,572,014	6,698,202	6,890,380
Housing, Indemnities of Foreign TA	352,890	352,840	541,320	541,320	601,200
Military Force	276,000	276,000	278,000	220,000	220,000
Promotion Humaine	-	2,808	2,808	8,019	8,019
University of Dakar					
Medical and Pharmaceutical Facilities	-	-	-	160,000	164,431
Social Security	89,146	102,427	166,158	175,748	-
IPRES			-	50,000	50,000
Total	7,127,944	8,008,074	8,800,600	9,093,528	10,115,270
<u>Local Government</u>					
Urban Communes	699,571	944,851	1,107,557	1,143,498	954,073
Rural Communes	-	-	-	225,000	225,000
Total	699,571	944,851	1,107,557	1,368,498	1,179,073
<u>Parapublic Enterprises</u>	-	1,112,454	1,575,625	1,525,061	1,525,061
<u>Private Expenditure</u>					
Pharmaceutical Import	2,812,799	3,251,989	4,726,471	5,238,424	6,494,920
Main Hospital	-	-	-	2,074,000	2,294,000
Private Doctors	-	-	-	562,800	562,800
Private Clinics	-	-	-	1,300,000	1,300,000
Community Participation	-	-	-	350,000	425,000
Total	2,812,799	3,251,989	4,726,471	9,425,424	11,076,720
<u>External Expenditure</u>					
Bilateral Funds	3,383,833	3,727,095	3,169,330	3,144,133	3,563,328
Multilateral funds	173,230	153,565	184,884	260,077	222,483
Other	580,000	606,097	696,297	696,297	745,068
Total	4,137,063	4,486,757	4,050,511	4,070,507	4,530,879
TOTAL EXPENDITURE	14,477,377	20,804,125	20,980,765	25,483,018	28,427,003

Table SE-7

SENEGAL: MPH EXPENDITURE REGIONAL DISTRIBUTION IN 1981/82
(thousand CFA)

Region	Percent of Pop- ulation	Hos- pital	Region- al Ser- vices	Ctr End Dis.	Preven- tive & Hygenie	MCH	Shared Facil- ities	Total	Per Capita
Cape Vert	19.0	2,029	275	21	229	57	105	2,716	2,540
River	10.2	511	196	24	31	9	56	827	1,569
Thies	21.9	219	234	87	20	12	74	646	843
Senegal Oriental	5.8	-	168	52	13	8	32	273	837
Diourbel	8.5	167	150	13	12	8	47	397	832
Casamance	14.6	89	330	58	13	8	80	578	708
Sine Saloum	20.0	219	342	22	-	9	110	702	625
Louga	8.5	-	126	19	7	8	47	207	437
Total	100.0	3,234	1,821	296	325	119	551	6,346	1,132

Source: The Sine Saloum Project, 1984

Table SU-1

SUDAN: HEALTH EXPENDITURE DATA
(million Sudanese pounds)

Year	Central Gov't (1)	Regional Gov't (2)	Total Gov't (3)	% GDP (4)	% GDP Exp. (5)	(1)/(3) %
1971	7.668	6.000	13.868	1.98	9.47	56.7
1972	8.514	6.067	14.581	1.94	9.51	58.4
1973	8.429	6.000	14.429	1.62	8.76	58.4
1974	4.631	5.977	10.608	0.85	5.96	43.7
1975	5.480	14.522	20.002	1.32	5.70	27.4
1976	6.400	17.731	24.131	1.31	6.09	26.5
1977	7.400	25.053	32.453	1.39	6.65	22.8
1978	9.400	24.628	34.028	1.18	5.59	27.6
1979	9.400	26.240	35.640	1.10	4.39	26.4
1980	9.100	41.820	50.920	1.28	5.39	17.9
1981	9.800	52.540	62.540	1.26	4.14	15.7
1982	14.900	59.340	74.240	1.12	5.08	20.1
1983	29.600	60.160	89.760	1.03	4.98	33.0
1984	36.000	64.400	100.400	0.91	4.46	35.8
1985	37.500	77.440	114.940	0.77	3.96	32.6
1896	40.000	91.000	131.000	0.63	4.60	30.5

Table SU-2

SUDAN: TRENDS IN PER CAPITA PUBLIC/PRIVATE HEALTH EXPENDITURE
(in US\$)

Fiscal Year	Public		Private	
	Nominal	Real	Nominal	Real
1975-76	1.27	4.62	1.68	5.42
1976-77	1.46	4.82		
1977-78	1.74	4.58		
1978-79	1.97	4.13		
1979-80	2.74	4.73	6.05	7.59
1980-81	3.27	4.61		
1981-82	3.77	4.24		
1982-83	4.44	3.70		
1983-84	4.83	3.08		
1984-85	5.38	2.32		
1985-86	5.97	1.98	21.22	6.25
Average Annual Growth	14.04	-7.71	23.08	1.33

Source: MOH

Table SU-3

SUDAN: SUMMARY OF ESTIMATED EXPENDITURES ON HEALTH BY SOURCE
(million Sudanese pounds)

Year GDP	Households		PV. Firms	GOS	Total		% GDP	
	High	low			High	Low	High	Low
1971	10.6	10.6	--	13.9	24.5	24.5	3.2	3.2
1975	24.6	24.6	--	20.0	44.6	44.6	3.0	3.0
1980	100.2	66.8	--	50.9	151.1	117.7	3.8	3.0
1985	413.7	275.8	--	114.9	528.6	390.7	3.5	2.6
1986	574.9	383.3	7.5	131.0	705.9	514.3	3.4	2.5

Table SU-4

SUDAN: REGIONAL DISTRIBUTION OF HEALTH FACILITIES: 1968, 1977, 1983

Region	Hospitals			Health Centers			Dispensaries			Dressing Stations			PHC Unit 1983
	'68	'77	'83	'68	'77	'83	'68	'77	'83	'68	'77	'83	
Northern	10	15	21	5	31	20	72	126	152	30	271	152	149
Central	16	32	52	31	71	66	156	220	284	189	800	758	458
Eastern	7	19	16	14	18	23	69	67	121	95	176	141	266
Kordofan	9	11	16	6	21	27	72	102	124	83	209	165	553
Darfur	7	11	12	4	15	16	56	63	64	40	86	91	379
Khartoum	8	15	23	20	33	40	33	50	65	23	91	74	44
Southern	17	30	24	2	12	13	102	108	169	131	268	225	353
TOTAL	74	133	164	64	201	225	560	736	978	591	1,901	1,636	2,202

Table Z-1

ZAIRE: CENTRAL GOVERNMENT REAL HEALTH EXPENDITURE, 1980
(million Zaires)

Expenditures	1980	1981	1982	1983	1984	1985	1986
Ordinary	64	62	83	--	30	38	35
Investment	12	4	66	19	7	7	6
Annex	56	90	30	40	26	27	20
Counterpart	0	0	0	8	13	17	29
Total	132	156	179	--	75	88	89
Percentage of Gov't Expenditure	5.3	4.1	4.3	--	3.7	4.1	2.0

Table Z-2

ZAIRE: MOH ORDINARY BUDGET
(thousand nominal Zaires)

Expenditure	1980	1981	1982	1983	1984	1985	1986
Remuneration	54,844	73,882	99,618	--	132,200	--	275,792
Travel	305	984	2,682	1,362	2,097	--	6,615
Subsidies	2,474	1,175	20,495	25,574	28,626	--	8,780
Operational Costs	5,928	8,049	27,056	19,512	15,015	--	36,855
Total	63,551	84,090	149,851	--	177,938	295,423	328,042
Percentage of Renumeration	86	88	66	--	74	--	84

Sources: Department of Finance, Department of Planning

Table Z-3

ZAIRE: MOH INVESTMENT BUDGET
(thousand Zaires)

Year	1980	1981	1982	1983	1984	1985	1986
With Counterpart	1,156	0					
Without Counterpart	10,364	6,360					
Total	11,520	6,360	119,668	61,534	43,878	53,609	52,439

Sources: Department of Finance, Department of Planning

Table Z-4

ZAIRE: MOH ANNEX BUDGET
(thousand Zaires)

Expenditures	1980	1981	1982	1983	1984	1985	1986
Remunerations					48,132		
Travel							
Subsidies							
Operational Costs					107,123		
Total	50,385	100,237	144,107	132,282	238,198	273,147	441,091
Percentage of Renumeration		18	27		22	35	49

Sources: Department of Finance, Department of Planning

Table Z-5

ZAIRE: MOH REGIONAL BUDGET
(thousand Zaires)

Expenditure	1980	1981	1982	1983	1984	1985	1986
Travel	133	445	895	1,223	1,209		
Subsidies	72	41	58	45	10		
Other	8,074	5,677	6,384	8,327	9,969		
Total	8,279	6,163	7,337	9,595	11,188	11,057	--

Sources: Department of Finance, Department of Planning

Table Z-6

ZAIRE: PHARMACEUTICAL IMPORTS
(thousand Zaires)

Exporter	1980	1981	1982	1983	1984	1985
Belgium	30,175	28,789	30,843	81,873	341,726	620,506
France	1,652	6,524	6,830	8,993	104,853	168,849
West						
Germany	8,953	8,535	7,924	11,132	64,866	131,718
Switzerland	6,162	7,022	10,844	14,552	51,730	90,804
UK	2,833	2,663	1,401	7,293	19,728	48,588
Other	11,218	13,442	9,536	33,758	98,946	275,212
Total	60,992	66,974	67,377	157,602	681,848	1,335,676

APPENDIX B
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APPENDIX C
DEFINITION OF VARIABLES IN THE DATA BASE

DEFINITION OF THE VARIABLES IN THE DATABASE

<u>Code</u>	<u>Definition</u>	<u>Source</u>
Pop	Population	World Bank, World Development Report
Pgr	Annual Population Growth Rate (percent)	World Bank, World Development Report
EO	Life Expectancy (years)	World Bank, World Development Report
Imr	Infant Mortality Rate (per 1,000 live births)	World Bank, World Development Report
Cdr	Child Death Rate (per 1,000 children less than 5 years old)	World Bank, World Development Report
Cbr	Crude Birth Rate (percent)	World Bank, World Development Report
Ors	ORT coverage Rate (percent)	PRITECH
Bcg	BCG Vaccine Coverage (percent)	ISTI
Msl	Measles Vaccine Coverage (percent)	ISTI
Dpt	DPT Vaccine Coverage (percent)	ISTI
Polio	Polio Vaccine Coverage (percent)	ISTI
Tet2	Tetanus Vaccine Coverage for Pregnant Women	ISTI
Cpr	Contraceptive Prevalence Rate (percent)	PRB and Ross et al. (1988)
Fpa	Family Planning Acceptors (percent)	Ross et al. (1988)
Ppp	Population per Physician	World Bank, World Development Report
Ppn	Population per Nursing Person	World Bank, World Development Report

Ghxp	Government Health Expenditure (millions of units of local currency)	IMF, Government Finance Statistics
H/G	Share of Health in Government Expenditure (percent)	IMF, Government Finance Statistics
Gh/Y	Government Health Expenditure as a Percentage of GDP (percent)	IMF, Government Finance Statistics
H/p	Per Capita Nominal Government Health Expenditure (U.S. dollars)	IMF, Government Finance Statistics
Rh/p	Real per Capita Government Expenditure on Health (local 1980 prices, U.S. dollars)	IMF, Government Finance Statistics
Rcgh	Recurrent Government Health Expenditure (millions of units of local currency)	Consultants
Rc/gh	Share of Recurrent Expenditures in Government Health Expenditure (percent)	Consultants
Cu/gh	Share of Curative Care in MOH Recurrent Expenditures (percent)	Consultants
Pr/gh	Share of Preventive Care in MOH Recurrent Expenditures (percent)	Consultants
L/gch	Share of Labor Costs in MOH Recurrent Expenditures (percent)	Consultants
Toth	Total Country Expenditure on Health (millions of units of local currency)	Consultants/Koita (1988)
Rch	Total Country Recurrent Expenditures on Health (millions of units of local currency)	Consultants/Koita (1988)
Cpi	Consumer Price Index (base 100=1980)	IMF, International Finance Statistics
Inf	Annual Inflation Rate (percent)	IMF, International Finance Statistics

Def/Y	Government Budget Deficit as a Percentage of GDP (percent)	IMF, Government Finance Statistics/International Statistics
Td/Y	Current Account Deficit as a Percentage of GDP (percent)	IMF, International Financial Statistics
Lc/\$	Units of Local Currency per U.S. Dollar	IMF, International Financial Statistics
Fpp	Personnel Specifically Allocated for Family Planning	Ross et al. (1988)
Fpf	Facilities Specifically Allocated for Family Planning	Ross et al. (1988)
Doc	Number of Physicians	
Gnd	Number of General Doctors	
Spc	Number of Specialists (Doctors)	
Hb	Number of Hospital Beds	