DEPARTMENT OF PLANNING
MINISTRY OF HEALTH
ARAB REPUBLIC OF EGYPT

DATA FOR DECISION MAKING PROJECT
HARVARD SCHOOL OF PUBLIC HEALTH
HARVARD UNIVERSITY

National Health Accounts of Egypt

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Acronyms

CAPMAS	Central Agency for Public Mobilization and Statistics
CCO	Curative Care Organization
DDM	Data for Decision Making Project, Harvard School of Public Health
DOP	Directorate of Planning, Ministry of Health
EU	European Union
FP	Family Planning
FY	Fiscal Year
GDP	Gross Domestic Product
GNP	Gross National Product
GOE	Government of Egypt
GP	General Practioner
HIO	Health Insurance Organization
IMF	International Monetary Fund
LE	Egyptian Pound
MCH	Maternal and Child Health
MOE	Ministry of Education
MOF	Ministry of Finance
MOH	Ministry of Health
MOSA	Ministry of Social Affairs
NHA	National Health Accounts
PIO	Pensions and Insurance Organization
SHIP	Students' Health Insurance Program
SIO	Social Insurance Organization
THIO	Teaching Hospitals and Institutes Organization
USAID	U.S. Agency for International Development
na	Not available/not applicable

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Comments and questions about the report are welcome, and should be addressed to the following:

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Definitions and Data Notes

This report estimates total health expenditures for Egypt in the early 1990s. There is no internationally accepted definition of what constitutes health expenditures, but for the purpose of this study the following definition is used. Health expenditures are defined as all expenditures or outlays for prevention, promotion, rehabilitation, and care; population activities; nutrition, and emergency programs for the specific objective of improving health.[1] Health includes both the health of individuals as well as of populations. There are many activities which have multiple objectives, including those of improving health, such as food subsidy programs, or water and sanitation projects. These are only included if the primary and main objective is the improvement of health itself. Expenditures on medical education and training are not included as part of health expenditures for the purposes of this study. Although training of medical personnel can be considered to have the objective of improving health, it can also be argued that much of the benefit accrues directly to the individuals trained. In addition, estimation of specific expenditures on medical training would have required access to different sources, which would not have been easily available for the purposes of this study. However, it should be noted that some health expenditures counted as part of these estimates, such as expenditures in teaching hospitals, are also partly for the purpose of medical training and education.

The fiscal year of GOE runs from July 1 through June 30. Since the bulk of the data collected pertained to GOE's fiscal year and since planning in the MOH is based on the fiscal year, the national health accounts presented here are organized on that basis. FY is used to denote the fiscal year, when appropriate, as in FY89 which refers to Fiscal Year 1989/90, i.e.: July 1 1989 to June 30 1990. Calendar years are referred to without such annotation, so that 1989 refers to calendar year 1989.

The estimates presented are mostly for FY89 to FY92. Data for more recent years are not given, because it was not possible in most cases to obtain more recent data on actual expenditures from the government organizations and ministries involved. The actual set of national health accounts presented are for FY90, because this was the only year for which a relatively complete data set could be compiled. Audited budgetary data on MOH expenditures were available until FY92, but other data sources on other public expenditures were often only available up to FY91, and survey data on private expenditures were in most part only available in any detail or accuracy for FY90. However, it should be noted that since relatively detailed and reliable data on household expenditures are now available for FY94 from the Harvard/DOP National Household Survey, it should be possible to estimate total national health expenditures and revised national health accounts for FY94, once audited financial accounts are available for MOH from MOF. Given the two year time lag required for corrected accounts to be made available at MOF, it should be technically possible to compile the FY94 national health accounts as early as mid-1997. Producing a set of reliable and complete national health accounts on a more timely basis than this is desirable, but will require improvements in GOE's financial information systems.

Dissaggregation of MOH expenditures into categories other than those recorded under the system of accounting described above is difficult. For this reason, DOP/DDM has been developing a Health Budget Tracking System (BTS) to track expenditures by individual governorates by function and facility, as well as by budgetary chapters. BTS data are currently only available in provisional form from three governorates (Alexandria, Beni Suef and Suez) for FY92. It is hoped to expand the BTS in the next two years to cover most or all the governorates in Egypt.

[1] This definition is similar to that used for estimation of national health expenditures in the World Bank (1993).

Provisional analysis of the BTS data indicated that approximately 50% of MOH expenditures was spent in hospital facilities, with the other 50% spent on providing non-hospital services. Analysis of MOH expenditures by functional use revealed the following range in expenditures by functional or program category: curative care: 37-51% of the total, preventive care: 13-15%, primary health and maternal and child care: 3-8%, family planning: 1-2%, and administration: 28-41%. The percentage of governorate health expenditures spent on administration is high in comparison with other countries, and should be a matter of concern.

Introduction

National health accounts describe the expenditure flows - both public and private - within the health sector of a country. They describe the sources, uses and flow of funds within the health system, and are a basic requirement for optimal management of the allocation and mobilization of health sector resources (Rannan-Eliya and Berman, 1993). All health services in Egypt are financed using funds derived from the same ultimate sources: the Government of Egypt, foreign donors, firms and households. Funding from these sources pass either directly or indirectly via intermediate financing agents to the ultimate providers of health care services. Egypt's national health accounts describe these flows, and quantify the amounts involved. They show the total amount of resources mobilized by the health sector and from what source, as well as how they are utilized.

Egypt has a highly pluralistic health care system, with several different government and public providers and financing agents, in addition to a diverse range of private providers. So it is not easy to understand this complex system. However, in general there are four major types of financing agents in Egypt: the government sector, the public sector, private firms and households. The government sector is normally understood in Egypt to refer to the various ministries and departments of GOE. The major health care providers in the government sector are the Ministry of Health (MOH), teaching hospitals, university hospitals, Health Insurance Organization (HIO), Interior Ministry and Defense Ministry. The public sector is also owned by the government, but consists of those organizations which are financially autonomous from GOE. The public sector consists mainly of government-owned companies and commercial organizations. The private sector consists of both non-profit providers in the NGO sector, as well as for-profit providers, such as private medical clinics, private hospitals and pharmacies.

Many departments and ministries within GOE spend considerable effort collecting and compiling data on various aspects of the health financing system, which might make estimation of a set of national health accounts relatively straightforward. However, in practice much of the data that is collected by both government and private organizations are not widely disseminated or accessible to either private individuals or government officials themselves. In addition, when information is available, it is often contradictory, because of problems in the standardization and reliability of data collection in the government and public sectors. This makes the estimation of health expenditures in the government and public sectors particularly difficult. The estimates presented in this report nevertheless represent the most comprehensive and accurate description of health sector financing in Egypt that can be compiled given the existing availability of data. Many individuals within MOH, MOF, CAPMAS and other government agencies provided assistance for the effort, and without their cooperation these estimates would have not been possible.

1

Overview

Total spending

Total health care spending in Egypt is estimated to have been LE 4,166 millions in FY90. This was equivalent to 4.7% of GDP, or LE 79 per capita (US$ 30 per capita). This estimate is considered accurate to within 0.4% of GDP. Actual total spending is unlikely to have been more than 5.0% of GDP in FY90.

This level of spending differs significantly from previously published estimates for 1990 of 2.6% of GDP (World Bank, 1993) and 9.6% of GDP (World Bank, 1994a), but it is much more accurate. The level is approximately in the middle of the range for most developing countries, although appreciably higher than many countries at Egypt's income level. In comparative terms, Egypt is neither an extremely low spender or an extremely high spender (Table 1.1). However, it does spend more as a percentage of GDP than either Jordan or Turkey, which are both richer countries.

Table 1.1: Per capita GNP and 1990 health expenditures in international comparison

	Per capita GNP, 1991	*Health expenditures*	*Health expenditures as percentage of GDP*		
Country	*(US$)*	*(per capita US$)*	*Total*	*Public expenditures*	*Private expenditures*
Sri Lanka	500	18	3.7	1.8	1.9
Indonesia	610	12	2.0	0.7	1.3
Egypt	610	30	4.7	2.0	2.7
Philippines	730	14	2.0	1.0	1.0
Jordan	1,050	48	3.8	1.8	2.0
Tunisia	1,500	76	4.9	3.3	1.6
Turkey	1,780	76	4.0	1.5	2.5
Malaysia	2,520	67	3.0	1.3	1.7

Source: World Bank (1993).
Note: Public expenditures in this table includes foreign assistance to countries

Total public financing comes to 1.8% of GDP, while private financing contributes 2.7% of GDP. The balance of 0.2% of GDP is made up by foreign assistance. While public expenditures on health are relatively high in comparison with countries at a similar income level, private expenditures are much higher than in the majority of countries for which there are accurate data.[1] As a percentage of GDP, Egypt generates more private financing for health than most other countries, which suggests that the perception of

[1] When compared with data from the 65 other countries for which DDM has reasonable estimates of private health expenditures, Egypt appears to have a higher ratio than 55 or 85% of the countries. Private expenditures as a percentage of GDP are not related to the income of a country, and so Egypt's high level of private health expenditures is not related to its income level.

Egypt as a country with a relatively low level of cost recovery in its health sector is untrue, at least when the whole health system is considered.

Tables 1.2 and 1.3 provide an overview of total spending in the health sector by sources and uses.

The Structure of Health Care Financing

Sources of financing

At LE 4,166 millions, spending was equivalent to LE 79 per capita (US$ 30). The bulk of the money coming from private sources is out-of-pocket spending by households. Figure 1.1 and Table 1.4 summarize the relative contributions of different financing sources to health care financing in Egypt.

In terms of the primary sources of funds, the government and donors accounted for 33% of all funding for the health system. The rest consisted of private funding, of which 9% was from firms, and 58% from households.

Flow of funds

The LE 4,166 millions mobilized in the health sector did not just pass directly from the primary sources to their final uses. Much of the money first passes through financial intermediaries, which in turn transfer resources on to the ultimate providers of care. For all sources of funding, money is transferred to more than one financial intermediary and provider. This can be visualized as shown in Figure 1.1 and Tables 1.4 and 1.5. The major intermediaries in the flow of funds are MOH, MOE, MOSA, other ministries, SIO, and private insurance schemes and syndicates. However, firms and households pass much, if not most, of their funding directly to the ultimate providers of care.

It is important to note that the direction of the flow of funds varies greatly depending on its source, and that the different intermediaries are funded by quite different sources. The flow of funds shows considerable verticality, with very limited transfers of money between three major pathways of funding.

The first pathway consists of MOF funding, which goes principally to other ministries, which in turn transfer the money to government providers of care. Donor funding shows a similar pattern, although a larger proportion of it goes to MOH. Very little of the MOF and donor funding is transferred to the various insurance intermediaries, and virtually none ultimately passes to private sector providers. Together MOF and donor funding account for approximately one third of total health sector funding.

The second major pathway consists of social insurance. The bulk of funding from firms and a small proportion of household funds pass to SIO and PIO, which in turn fund HIO. HIO acts essentially as a combined provider and financier, using most of its revenues to finance services provided by itself. Only insignificant amounts of the funding in this second pathway reaches government or private providers. Just under one tenth of total health sector funding passes through this social insurance mechanism.

The third pathway consists of direct household funding. Virtually all providers in Egypt's health care system earn revenues from direct out-of-pocket spending by households, but for most government and public providers the amounts involved are insignificant, typically less than 5% of total financing received. The only government provider receiving significant household financing are the university hospitals, which obtain approximately 14% of their funding from user fees. More than 90% of household funding passes directly to private sector health care providers, without any financial intermediation. These private sector providers consist of NGOs, private clinics and hospitals, pharmacies and other for-profit providers. Slightly more than half of all health sector funding consists of these household payments direct to private providers.

Uses of funds

Of the less than one third of total funding which comes from the Ministry of Finance, less than 54% actually is spent by MOH. More than 45% is transferred to other institutions and agencies such as the teaching hospitals, MOE (which funds the university hospitals), CCOs, and other facilities run by other ministries. MOH in total receives only 19% of total financial resources in the health sector, most of this coming from the MOF, but significant quantities also coming from international donors. Given this profile of spending, it is apparent that the MOH does not have a predominant position within the health sector from the financing perspective. At 0.7% of GDP, the amount of its own resources that GOE gives to MOH is low in comparison to other developing countries.

The modest role of the MOH is further confirmed, when one examines the final uses of the money entering the health sector. While 19% of total health financing is spent in MOH facilities, almost 24% of health spending is in other public or governmental health facilities. This occurs, because the other public providers of care, such as university hospitals, HIO, etc., have a much more diversified financial base than MOH. They are much less dependent on MOF financing, although they do receive considerable public subsidies. Levels of cost recovery in these other public facilities are also much greater than for MOH facilities. University hospitals and HIO are major recipients of health sector spending. They account for about 8% each of total health spending. The other non-MOH government providers are relatively insignificant.

Over half of total health spending (55%) is utilized by private sector providers. Most of this is spent purchasing drugs from pharmacies, or paying for the services of private clinic doctors. Other private providers such as private hospitals, NGOs and others also receive significant funding. Most financing in the private sector is used for ambulatory care, and only a small proportion (less than 10%) is used to purchase inpatient care. Overall, a large share of health sector financing is used to purchase drugs (over 35%), and mostly from private sector pharmacies.

Table 1.2: National Health Accounting Matrix for Egypt, 1990/91 (LE millions)

	Sources of finance										
	Ministry of Finance				SIO/ PIO	Official foreign donors	Foreign NGOs	Firms	Private insurance/ syndicates	House-holds	TOTAL
	Health Budget	Ministry of Education	MOSA	Other Ministries							
MOH	647	.	.	.	.	135	.	.	.	15	797
Teaching hospitals	60	.	.	.	.	3	.	.	.	4	67
University hospitals	.	270	.	.	.	24	.	.	.	48	342
HIO	64	.	.	.	280	.	.	~1	.	19	364
CCOs	38	.	.	.	.	1	.	~30	~3	~38	108
Specialized agencies	20	.	.	.	.	2	.	.	.	.	22
Other public	.	.	.	~100	.	.	.	.	.	.	~100
Private hospitals	.	.	.	.	.	.	.	~20	~8	170	198
Private clinics	.	.	.	.	.	5	.	~6	~4	650	665
Other modern private	.	.	.	.	.	.	.	~1	~1	~80	~82
Pharmacies	.	.	.	.	.	.	.	~10	~14	1,230	1,254
NGOs	.	.	7	.	.	11	~5	~2	.	~30	~55
Traditional	.	.	.	.	.	.	.	.	.	20	20
Others	.	.	.	.	90	.	.	.	.	.	90
TOTAL	829	270	7	~100	370	180	~5	~70	~30	2,304	4,166

Notes to table:

1. The total of LE 4,166 millions is equivalent to 4.7% of GDP in 1990/91 (or 5.1% of GNP). This is equivalent to LE 79 per capita (US$ 30 per capita)
2. All figures are given in nominal LE
3. Most numbers are estimates. Numbers marked with a ~ are associated with considerable potential error.
4. Totals do not necessarily equal the sum of the rows and columns, because of rounding up.
5. MOSA is Ministry of Social Affairs.
6. SIO is the Social Insurance Organization. The administrative costs associated with collection of HIO premiums is included in the table, and charged to "Others". These expenditures are not directly used for the provision of health services, but are included because they comprise part of the costs of the financing mechanism.
7. For reasons explained in Chapter 2, the figures for MOH expenditures reported in this matrix do not correspond to the figures reported in that chapter.

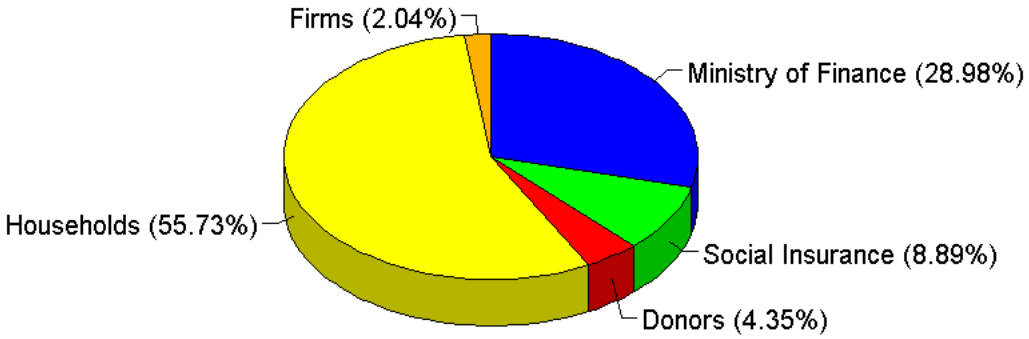
Table 1.3: National Health Accounting Matrix for Egypt, 1990/91 (as proportion of total)

	Sources of finance										
	Ministry of Finance				SIO/ PIO	Official foreign donors	Foreign NGOs	Firms	Private insurance/ syndicates	House-holds	TOTAL
	Health Budget	Ministry of Education	MOSA	Other Ministries							
MOH	16 %					3%					19 %
Teaching hospitals	1 %										2 %
University hospitals		6 %				1%				1 %	8 %
HIO	2 %				7 %						9 %
CCOs	1 %									1%	2 %
Specialized agencies											1 %
Other public				2 %							2 %
Private hospitals								1 %		4 %	5 %
Private clinics										16 %	16 %
Other modern private										2 %	2 %
Pharmacies										30%	30 %
NGOs										1 %	1 %
Traditional											
Others					2 %						2%
TOTAL	20 %	6 %	.	2 %	9 %	4 %	.	2 %	1 %	55 %	100 %

Notes to table:

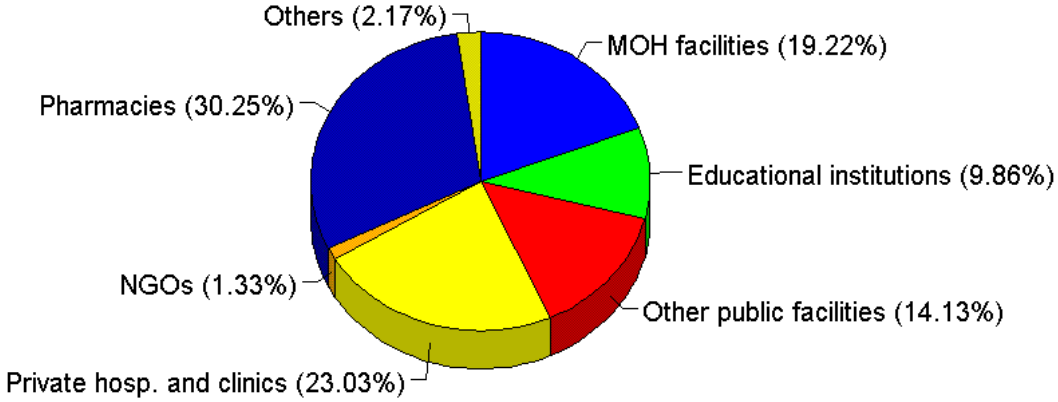
1. Only amounts greater than 0.5% of the total are given. For actual numbers, see previous table.

Figure 1.1: The Egyptian Health Pound
Where it comes from



Total = LE 4,166 millions in FY90

Figure 1.2: The Egyptian Health Pound
Where it goes



Total = LE 4,166 millions in FY90

Figure 1.3: Flow of funds in Egypt's health care financing system, FY90 (LE millions)

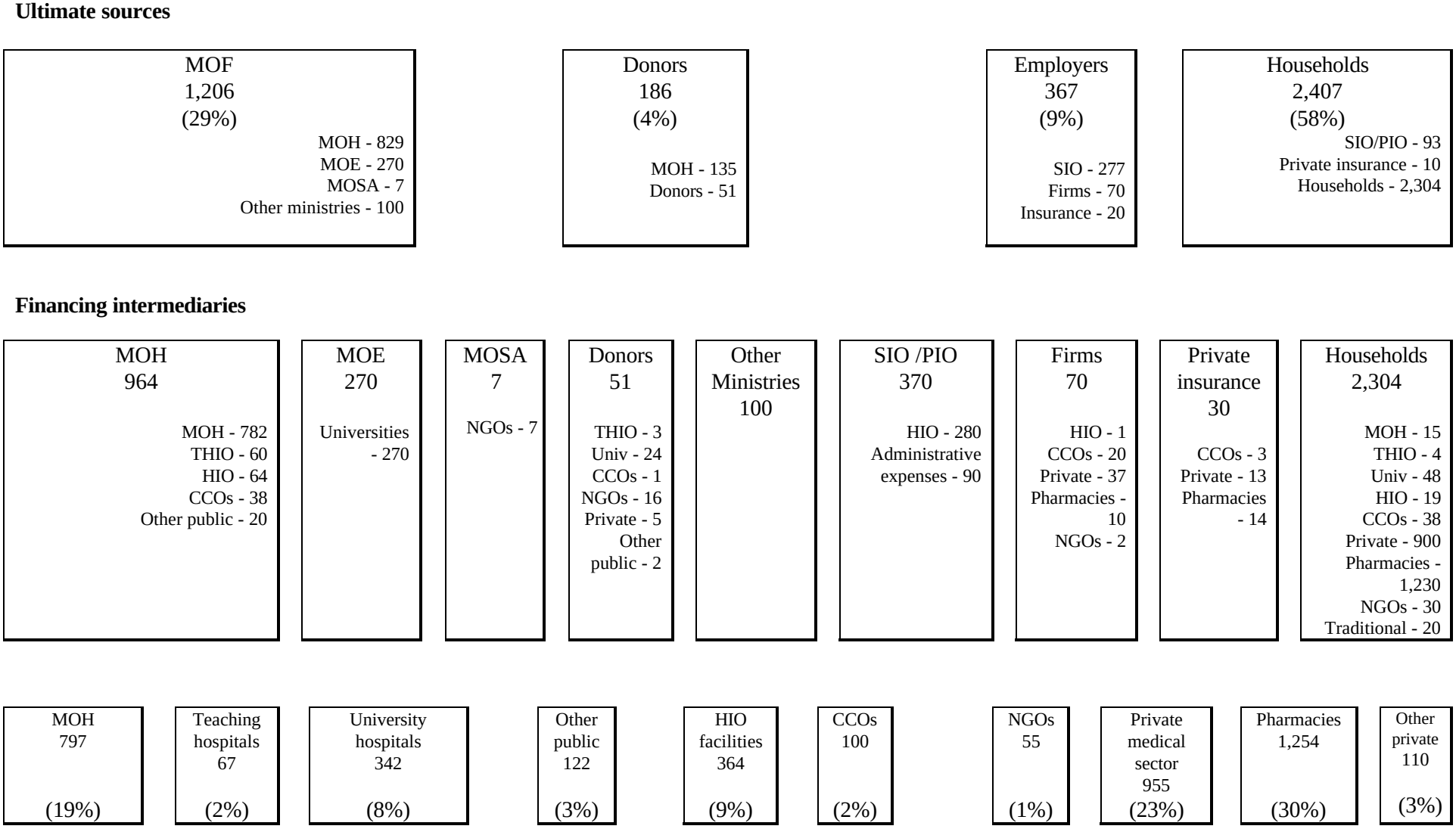


Table 1.4: Financing Flows, Egypt 1990/91: Sources to financing agents (LE millions)

		Sources				
		MOF	Donors	Employers	Households	TOTAL
	MOF	182 (4.4%)				182 (4.4%)
Financing	MOH	647 (15.5%)	135 (3.2%)			782 (18.8%)
agents	MOE	270 (6.5%)				270 (6.5%)
	MOSA	7 (0.2%)				7 (0.2%)
	Other ministries	100 (2.4%)				100 (2.4%)
	Donors		51 (1.2%)			51 (1.2%)
	SIO/PIO			277 (6.6%)	93 (2.2%)	370 (8.9%)
	Firms			70 (1.7%)		70 (1.7%)
	Private insurance/Syndicates			20 (0.5%)	10 (0.2%)	30 (0.7%)
	Households				2,304 (55.3%)	2,304 (55.3%)
	TOTAL	1,206 (28.9%)	186 (4.5%)	367 (8.8%)	2,407 (57.8%)	4,166 (100%)

Note: Percentages of total shown in parentheses. Employers includes all organizations, entities and individuals that employ other persons. This column covers all payments made for the express and immediate purpose of obtaining health care for their respective employees They consist of private and public firms, as well as GOE itself.

Table 1.5: Financing Flows, Egypt 1990/91: Financing agents to providers (LE millions)

		Financing agents										
		MOF	MOH	MOE	MOSA	Other ministries	SIO/PIO	Donors	Firms	Private insurance	Households	TOTAL
Prov-	MOH		782 (19%)								15 (0.4%)	797 (19.1%)
iders	Teaching hospitals	60 (1.4%)						3 (0.0%)			4 (0.1%)	67 (1.6%)
	University hospitals			270 (6.5%)				24 (0.5%)			48 (1.2%)	342 (8.2%)
	Other government	20 (0.5%)				100 (2.4%)		2 (0.0%)				122 (2.9%)
	HIO facilities	64 (1.5%)					280 (6.7%)		1 (0.0%)		19 (0.5%)	364 (8.7%)
	CCOs	38 (1.0%)						1 (0.0%)	20 (0.5%)	3 (0.1%)	38 (1.0%)	100 (2.4%)
	NGOs				7 (0.0%)			16 (0.4%)	2 (0.0%)		30 (0.7%)	55 (1.3%)
	Private medical providers							5 (0.1%)	37 (0.9%)	13 (0.3%)	900 (21.6%)	955 (22.9%)
	Pharmacies								10 (0.2%)	14 (0.3%)	1,230 (29.5%)	1,254 (30.1%)
	Others										20 (0.5%)	20 (0.5%)
	SIO administrative costs						90 (2.2%)					90 (2.2%)
	TOTAL	182 (4.4%)	782 (19%)	270 (6.5%)	7 (0.0%)	100 (2.4%)	370 (8.9%)	51 (1.2%)	70 (1.7%)	30 (0.5%)	2,304 (55.3%)	4,166 (100%)

Note: Percentages of total shown in parentheses.

2

Review of health financing by sources and uses

Ministry of Health

The Ministry of Health is the largest single institutional financier and provider of health care services in Egypt. It utilizes approximately 60% of the total health budget authorized by MOF. Part of this is transferred directly to MOH Headquarters in Cairo, but the bulk consists of expenditures undertaken by the governorates at the local level. Money is transferred directly to the directorates in each governorate by MOF. The directorates then allocate and spend the money, although in practice the amount available for discretionary spending is small. The possibility for discretionary spending is small, because many line items, in particular the level of salaries and number of authorized staff, are predetermined in Cairo.

The money allocated to MOH Headquarters is used to pay for the general overhead costs of running the Ministry of Health and for a number of centrally-run programs. Several of these programs, such as the Family Planning Program, supply commodities, personnel and other resources to individual governorates. It is important to note that a substantial proportion of the expenditures appearing in the accounts of MOH Headquarters actually finances resources used by the governorates themselves. There are a number of agencies and organizations which receive part of their funds through the official government health budget, such as the Teaching Hospitals and Institutes Organization and the Curative Care Organizations, but which are financially autonomous.[1] For the purposes of these estimates these organizations are treated separately, although several of them are officially under the direct authority of the Minister of Health.

Data sources

Determination of the total expenditures of the MOH and their disaggregation by funding source and use is not easy. The ministry uses the same accounting system that is used by other government departments in Egypt. This system emphasizes financial control, and is organized exclusively according to the organizational distribution of inputs. In this case the key inputs are salaries, supplies and funding for capital investment, which correspond approximately to the four budget headings, also known as chapter headings or "babs". Chapter 1 comprises salaries, Chapter 2 - non-salary recurrent expenditures, Chapter 3 - capital purchases and investments, and Chapter 4 - debt repayments and other investment transfers. This system of accounting is not designed as an instrument of managerial control or economic planning, and so does not permit analysis of expenditures by program or task.

[1] In the official accounts of MOF, the transfers to organizations such as THIO and CCO are considered part of the health budget. This health budget also includes the allocations to MOH headquarters and the individual governorates. To avoid confusion between this larger global health budget and the direct expenditures of MOH itself, the following convention is used in this report. The MOH budget is regarded as including only those expenditures by MOH headquarters and the health directorates at governorate level. Other MOF transfers to organizations which are under the administrative supervision of the Minister of Health, but which are otherwise autonomous from MOH, are treated as being separate from the MOH budget.

Comprehensive and detailed accounts of actual total expenditures by MOH at the central and local levels are not available within MOH headquarters, at least within DOP.[1] Data on budget allocations are more widely available, but in recent years there have been considerable discrepancies between budgeted and actual expenditures. DOP attempted to survey governorates to determine expenditures at the governorate level. However, this exercise proved futile, as most governorates either reported incomplete or inaccurate expenditures data or did not report at all. Given the lack of transparency in the budgeting system at the governorate level, this is not surprising. In practice, the only source of accurate data on actual MOH expenditures is the MOF itself.

While some attempt has been made to computerize the financial accounts of ministries at MOF, it would also appear that detailed and disaggregated expenditure accounts for MOH are not readily available at MOF. In order to determine the actual expenditures, it was necessary to manually review the paper records kept for each governorate at MOF in Cairo, separately identifying and collating those expenditures which were related to health. As of early 1995, audited and corrected accounts for the governorates were only available up to FY92, and therefore this report only provides data up to FY92.

The accounts kept by MOF include donor-related expenditures. When international donors provide direct assistance to MOH, it is MOF practice to include these expenditures as part of the MOH accounts. Where donations are given in kind, MOF will value these at cost and then include them also. However, while it was possible to determine total expenditures by MOH, it was not possible to determine what proportion of these were accounted for by direct or indirect support by international donors, as these are not separately tracked in MOF. Comparison of data on donor-funded projects available at MOH with data available at the donors themselves indicates that some donor assistance to MOH is not included at full cost in the MOF expenditure accounts. This can occur for a number of reasons. For example, a donor might directly finance the provision of services by third-party contractors to MOH, without making any transfer to MOH itself. Also some donor assistance which benefits MOH may come from donor programs which were not negotiated directly with MOH; an example of this would be grants for training of individuals, which are not ear-marked specifically for MOH support, but which may be used by MOH personnel.

In the case of user fees and other monies earned by individual facilities and governorates, these are included when they have been reported to MOF. However, it should be noted that a considerable proportion of such income generation by individual facilities may not be reported to MOF, according to sources within MOH.

Because of these problems, the audited MOF accounts do not reflect the true level of rescues utilized in the delivery of MOH services. However, it is not possible to accurately determine the difference between the true level and the audited numbers. For this reason, two different sets of numbers for MOH expenditures are reported in this study. The first set given in this chapter are the MOF audited figures for MOH expenditures. Analysis of chapter and governorate allocations and of time trends is done using these figures. However, for the purpose of estimating total national health expenditures in the final NHA matrices, these numbers are adjusted upwards to take into account unaccounted donor support to MOH and unreported user fees at governorate level.

[1] DOP's major responsibility within MOH has been to plan and allocate chapter 3 expenditures, and so previously it has only had access to data on this item of the budget. However, if DOP is to conduct effective analysis and planning of overall MOH spending, this will require at the very minimum access to data on the overall budget and actual expenditures of MOH.

As stated all the figures presented are for actual audited expenditures by the MOH at central and govenorate level. These are not the same as the budgeted amounts. In general, actual expenditures are greater than the amounts which were originally budgeted by GOE for any given year.

Analysis of MOH expenditures

As shown in Table 2.1, overall MOH expenditures increased in nominal terms during FY89-92 from LE 644 million to LE 1,213 million. However, this represented only a 14% increase in real terms, equivalent to a 5% increase in real per capita funding. During this time period, the governorate share of actual MOH expenditures declined from 89% to 75%, owing to a significant increase in the share of resources allocated at the MOH headquarters level. Consequently, on a real per capita basis, the amount of resources directly allocated to most governorates fell substantially. The few exceptions were Ismailia, Minya, Red Sea and New Valley governorates, which all benefited from substantial increases in funding (Table 2.2).

Annex Tables A2.1 to A2.9 provide more details on the breakdown of actual expenditures by MOH Headquarters and governorates for FY89-92, with a disaggregation by chapter headings for FY92. Tables A2.1 and A2.3 show the trends in real per capita spending for FY89-92, and the percentage breakdown of spending in FY92. These figures indicate that there was no significant change in per capita funding levels during FY89-92. More detailed information for other years is provided in the other Annex Tables.

The relative constant level of per capita spending over the four years hides a significant change in the composition of spending. When spending is analyzed by chapter headings, it is evident that there has been a decrease in the allocation to chapter 1, which is used to pay salaries and other personnel compensation. Chapter 1 expenditures declined from 64% of the total in FY89 to 49% in FY92 (Figure A2.1). There has been a corresponding increase in spending in chapter 2.

Table 2.1: Overall Trends in MOH Expenditures, FY89-92

Level	Fiscal Year FY89	FY90	FY91	FY92
Expenditures (nominal LE)				
MOH Headquarters	69,986,070	91,270,315	209,532,964	293,205,004
Governorates	574,193,008	657,190,042	837,876,604	920,087,837
Total	644,179,078	748,460,357	1,047,409,568	1,213,292,841
% change during FY89-92				+88%
Expenditures (constant 1987 LE)				
MOH Headquarters	47,552,799	51,679,443	98,314,795	120,177,781
Governorates	390,141,710	372,116,774	393,139,413	377,122,194
Total	437,694,509	423,796,216	491,454,208	493,256,492
% change during FY89-92				+14%
Expenditures per capita (constant 1987 LE)				
MOH Headquarters	0.93	0.99	1.82	2.17
Governorates	7.64	7.10	7.29	6.80
Total	8.57	8.08	9.11	8.94
% change during FY89-92				+5%
Expenditures (percentage allocation)				
MOH Headquarters	10.9%	12.2%	20.0%	24.2%
Governorates	89.1%	87.8%	80.0%	75.8%
Total	100%	100%	100%	100%

Source: Based on data collected from MOF by DOP

Note: The real expenditure estimates given are based on the index given in Annex Table A1.3. This is set at 100 in mid-1987, i.e., the beginning of FY87.

Table 2.2: Total MOH expenditures, FY89-92 (actual in nominal LE)

	Fiscal Year			
Level	*FY89*	*FY90*	*FY91*	*FY92*
MOH Headquarters	69,986,070	91,270,315	209,532,964	293,205,004
Cairo	67,215,303	75,840,726	82,025,251	88,186,210
Alexandria	42,545,496	48,452,855	50,817,750	64,414,535
Suez	7,284,515	7,379,518	9,083,105	10,265,593
Port Said	10,415,545	11,781,947	14,298,129	16,114,968
Ismailia	8,590,644	11,530,230	17,465,567	17,733,541
Daqahlia	39,231,651	44,407,767	59,764,422	61,481,304
Gharbia	39,212,088	47,106,717	54,578,529	61,024,278
Qalyoubia	27,858,217	30,551,463	35,738,870	39,858,543
Damietta	14,668,649	19,004,810	21,900,295	21,690,059
Sharqia	32,539,304	43,313,667	54,260,649	49,074,982
Beheira	33,691,974	37,725,870	48,198,457	43,671,288
Menoufia	24,976,053	27,518,468	34,708,140	38,946,072
Kafr El Sheikh	18,994,522	21,487,127	28,974,291	32,092,094
Giza	32,157,035	36,396,313	46,229,587	50,243,668
Fayoum	16,687,716	18,852,947	21,738,310	24,129,574
Assiut	25,400,588	29,318,344	38,759,278	41,051,226
Beni Suef	20,611,299	22,994,460	34,446,626	28,606,427
Aswan	17,666,021	19,506,270	23,998,566	29,509,395
Luxor	2,426,844	8,063,873	6,784,153	10,077,050
Sohag	21,295,632	24,152,683	29,465,227	34,805,844
Minya	27,822,178	30,094,534	69,159,870	81,897,455
Qena	20,907,885	17,802,337	27,194,188	31,701,654
Matrouh	3,686,726	3,659,208	4,565,649	5,150,313
Red Sea	4,000,464	3,845,349	5,135,748	9,341,555
North Sinai	6,106,172	6,975,404	6,914,740	7,883,571
South Sinai	2,424,606	2,772,711	3,423,388	4,757,120
New Valley	5,775,881	6,654,444	8,247,819	16,379,518
Total	644,179,078	748,460,357	1,047,409,568	1,213,292,841

Source: MOF and DOP. All figures are for actual expenditures in nominal LE.

Cost recovery

MOH facilities are permitted to generate their own income through various means, including charging user fees in special units or departments known as 'economic departments'. It is very difficult to determine the extent of cost recovery that is taking place in this manner, since governorates have not been required to

report this type of income to MOF. In addition, although facilities and governorates are supposed to send a fixed proportion of all such income to MOF, they often do not do so.[1]

DOP in its survey of governorates requested information on the self funding or patient revenues generated by each governorate. Most governorates did not provide this information, and when they did it was typically incomplete or showed considerable inconsistencies. It is believed that the income from self funding reported by the governorates that did report was an underestimate. Nevertheless, these figures give some indication of the extent of cost recovery that is already taking place in governorate facilities. Table 2.3 summarizes the information on patient revenues and self funding that was reported in the survey.

Table 2.3: Income from self funding reported by governorates, FY89-92 (LE millions)

	FY89	*FY90*	*FY91*	*FY92*
Total patient revenues reported	6.6	3.1	3.5	5.2
Number of goverorates reporting	9	11	8	11
Total expenditures of reporting governorates	209.5	279.6	263.4	396.1
Level of cost recovery in sample	3.1%	1.1%	1.3%	1.3%

Note: Based on data reported to DOP (1994)

On the basis of this data, it would be reasonable to assume that MOH facilities at governorate level are reaching a level of cost recovery equivalent to 1-2% of total expenditures. For the purpose of estimating NHA for FY90, it was assumed that the level of cost recovery in all governorates during FY89 -92 was the average of that reported by the above governorates, i.e.: 1.7% of total expenditures. This gives the following conservative estimate of total self funding by governorates (Table 2.4).

Table 2.4: Self-funding by all governorates, FY89 - 92 (Estimated, LE millions)

	FY89	*FY90*	*FY91*	*FY92*
Total expenditures of governorates	574.2	657.2	837.9	920.1
Assumed level of cost recovery	1.7%	1.7%	1.7%	1.7%
Estimated income from self funding	9.8	11.2	14.2	15.6

Note: Based on data reported to DOP (1994)

Uses of funds

Analysis of the MOH budgetary expenditures data provides little information on the actual uses of the funds involved, since expenditures are recorded only under the system of chapters. However, virtually all (>99%) of total MOH funds are used to finance its own services. MOH does not expend significant funds on financing services by other providers. The bulk of its resources are spent by the governorates, and most of the remaining amount spent by MOH headquarters is spent on providing services delivered at the governorate level by MOH facilities.

Drug expenditures by MOH are comparatively low. It is difficult to give an exact figure, but Chapter 2 expenditures have ranged from 15% to 30% of the total in recent years. Chapter 2 is used to pay for drugs,

[1] This is not a unique problem. In Malaysia, Meerman (1979) reported survey data suggesting that more than half the user fees collected by MOH facilities were inappropriately retained by individual facilities instead of being reported and transferred to the Finance Ministry.

supplies and other non-salary recurrent costs, such as utilities. It is unlikely that drug purchases account for more than 70% of Chapter 2 expenditures, so it is likely that total drug spending by MOH has been in the range of 10% to 20% of total MOH expenditures in recent years.

Teaching Hospitals and Institutes Organization

The Teaching Hospitals and Institutes Organization (THIO) is a separate body under the authority of MOH, which is directly responsible to the Minister of Health. It runs eight General Teaching Hospitals and eight research institutes, including the Institute for Tropical Medicine, Hearing and Speech Institute, Poliomyelitis Institute, Entomology Research Institute, Nutrition Institute and the Diabetes Institute. These are mostly located in or near to Cairo (Map 2.4), and so serve only a small proportion of the population. The facilities accounted for a total of 4,654 beds in mid-1992, which was 4% of the reported total (Kemprecos, 1994). These facilities are financed mostly through transfers from MOF, as well as some occasional grants from international donors. They raise some revenues from patient fees, and in practice they recover approximately 6-7% of their total costs through patient fees.

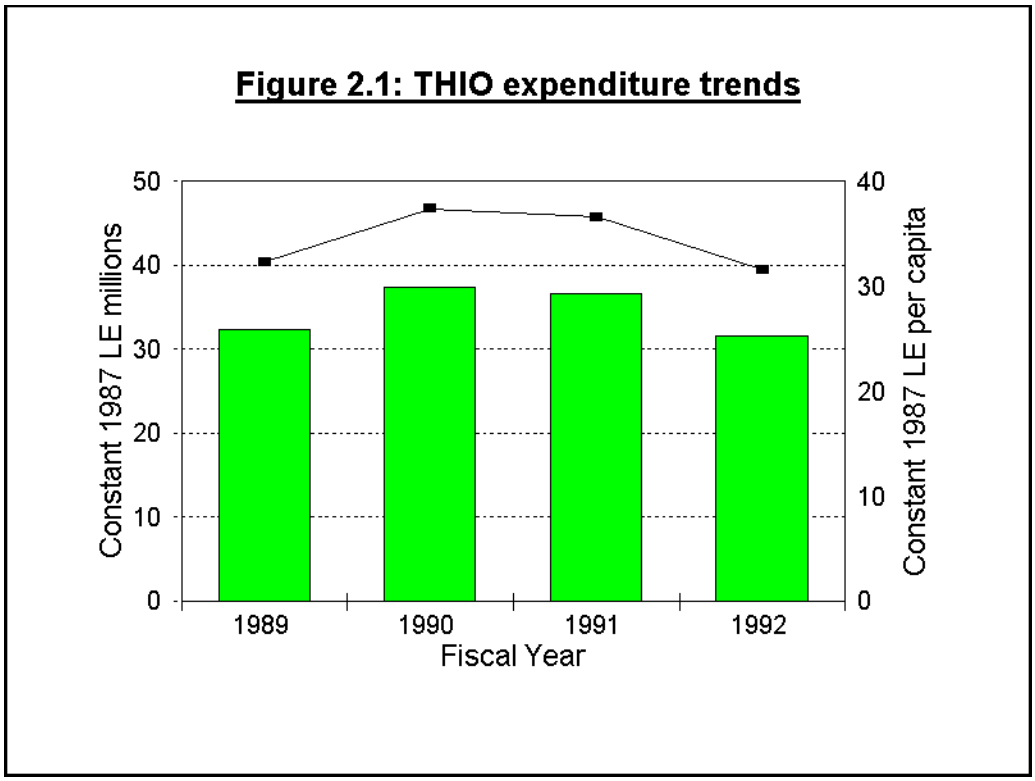
Table 2.5 gives an estimate of total expenditures and income by source for the teaching hospitals organization. Estimates of expenditures on salaries and drugs are also given.

Table 2.5: Expenditures of Teaching Hospitals and Institutes Organization (LE millions)

	FY89	*FY90*	*FY91*	*FY92*
Total expenditures	**47.491**	**65.863**	**77.882**	**77.086**
Expenditures on salaries	na	17.340	19.412	23.077
Expenditures on drugs	na	6.273	14.951	9.020
Expenditures on salaries (% of total)	na	26 %	25 %	30 %
Expenditures on drugs (% of total)	na	10 %	19 %	12 %
Patient revenues	na	4.020	5.550	5.693
Patient revenues (% of total expenditures)	na	6 %	7 %	7 %
Estimated expenditure per bed (LE)	10,204	14,152	16,734	16,563

Note: See Statistical Annex for more details. Numbers based on data supplied to DOP by teaching hospitals and MOF. It is not clear whether the sudden increase in drug expenditures in FY91 is a real change or is an error in the data reported to DOP. The expenditures per bed given are based on the number of beds in FY92, and so are an underestimate for earlier years. DOP was unable to obtain official data on the number of beds in previous years.

The teaching hospitals have greater financial and managerial autonomy than other hospital facilities in MOH. They are also generally regarded as providing higher quality care than other MOH facilities, and this probably explains their higher rate of cost recovery. Nevertheless, during the period under examination the amount of resources budgeted for the THIO actually fell from LE 0.63 to LE 0.57 per capita, when measured in constant 1987 terms (Figure 2.1). This contrasts with the main MOH budget, which showed a slight increase during this time period.



Health Insurance Organization

The Health Insurance Organization (HIO) is a governmental organization under MOH, which provides compulsory health insurance to workers in the formal sector. It was established in 1964 with the objective of eventually covering the whole population. For various reasons, this has not happened. Coverage has been extended to three major groups of beneficiaries under different acts of legislation: (i) government employees (Law 32), (ii) government,[1] public and private sector employees (Law 79), and (iii) widows and pensioners. The number of beneficiaries increased from 140,000 in 1965 to 4,895,000 in 1992 (Table 2.6). Recently, HIO has taken responsibility for extending insurance coverage to school children under a separate program, which began enrollment in 1993. The new Students' Health Insurance Program (SHIP) had enrolled over 10 million students by the end of 1992.[2]

Table 2.6: Number of HIO beneficiaries, 1965-1992

	1965	*1970*	*1975*	*1980*	*1985*	*1990*	*1992*
Number of beneficiaries ('000s)	140	318	602	1,651	3,225	4,359	4,895

Source: HIO Annual Report 1993

[1] Government employees can be covered either under Law 32 or Law 79. The distinction determines the relative contributions paid by employee and employer.

[2] According to data supplied to DOP by HIO.

HIO is organized into regional branches, which are all supervised by a central headquarters based in Cairo. In FY92, the number of regional branches decreased to six, with the amalgamation of Assiut and Aswan branches into a new combined Assiut branch (Map 2.1). The SHIP is run separately from these branches and constitutes the newest component of HIO. The extent of coverage within the six regions varies considerably, from 16% of the total population in Northwest Delta to 5.8% in the Assiut branch (Table 2.7). This is because of differences in the size and composition of formal sector employment across the country. Although a regional breakdown of coverage by SHIP was not available, it is likely that coverage levels in this also will exhibit similar variations, owing to geographical differences in school enrollment among the school-age population which favor the more urbanized and developed governorates of lower Egypt.

Table 2.7: Distribution of HIO beneficiaries ('000s) by branch, FY91

	Beneficiaries					
Regional branch	*Law 32*	*Law 79*	*Pensioners / Widowers*	*Total*	*Population*	*Coverage rate (%)*
Cairo	222	459	126	807	6,588	12.2
Northwest Delta	154	823	155	1,132	7,090	16.0
Canal and East Delta	750	220	80	1,050	13,105	8.0
Middle Delta	512	144	60	716	7,688	9.3
Giza & N. Upper Egypt	420	201	54	675	10,541	6.4
Assiut & S. Upper Egypt	423	67	25	515	8,908	5.8
Total	**2,481**	**1,914**	**500**	**4,895**	**53,920**	**9.1**

Source: DOP, HIO and CAPMAS

The regional branches run a network of hospitals, clinics and pharmacies which provide services to beneficiaries. In addition, HIO contracts with a large number of doctors and other facilities to provide services to its insured population. The role of contracting will increase under the SHIP. Beneficiaries must all enroll with a HIO designated GP, who can provide treatment or refer patients to HIO specialists. Consultation with a specialist without a referral from a GP is not permitted. HIO employed approximately 3,193 full-time physicians, 183 dentists, 250 nurses and 808 pharmacists in mid-1992, and its facilities contained approximately 4,950 beds in mid-1992 (Kemprecos, 1994).[1]

Sources of funding

HIO is principally funded through a system of premiums and co-payments for services rendered. Details of these are outlined in Table 2.8. In addition, HIO may and often does receive additional transfers from the Ministry of Finance either to cover operating losses or for specific programs, such as the student health insurance program. Mandated premiums from covered employees and employers are officially collected by the Social Insurance Organization (SIO), while the Pensions and Insurance Organization (PIO) collects premiums from pensioners, which are both supervised by MOSA. These are then supposed to transfer the collected premiums to HIO, having deducted a 25% levy, which is imposed to cover the administrative costs of collection. In practice, SIO does not provide information to HIO on the identities or numbers of beneficiaries enrolled, and so it is not possible for HIO to check whether all premium money due it has been

[1] HIO reported 4,949 beds in its annual report, but there is some evidence that HIO's own data on the number of its beds and facilities are inaccurate.

transferred. Sources within HIO believe that it in fact it receives less than the 75% share of premiums actually paid by employees and employers, although it is impossible to check the veracity of this.

Table 2.8: Beneficiary premiums and co-payments

Beneficiary group	*Salary contributions*	*Benefits and co-payments*
Government - Law 32	Employer - 1.5%; employee - 0.5%	Complete with co-payment GP visit: LE 0.05 Specialist: LE 0.10 Home visit: LE 0.20 Inpatient day: LE 0.25-0.50 Lab test: LE 1.0 maximum Clinic service: 25% Prescription: LE 1.0 maximum Prosthetics: 50%
Government - Law 79	Employer - 3%; employee - 1%	Complete coverage
Public/private sector - Law 79	Employer - 3%; employee - 1%	Complete coverage
Pensioners	1% of basic pension	Complete coverage
Widows		Complete coverage
Labor accident cases		Complete coverage
Students		Complete with 30% co-payment for drugs

Source: DOP and HIO
Note: Complete coverage means that no co-payment is levied for both inpatient and outpatient care.

Payment of premiums is compulsory for all public and private sector employers and employees. However, since 1984, companies have been allowed to waive the employee premium if they purchased comparable care elsewhere. By June 1993, 561 companies had obtained such waivers, although they continued to pay the 1% employer's premiums (Kemprecos, 1994).

The amount of premiums collected in recent years has been low relative to the level of actual expenditures, which has led to a continuing deficit in operational expenditures, since at least FY91. In FY94, annual losses are reported to have reached over LE 200 millions, but it was not possible to confirm this since more recent detailed income data are not available from HIO.[1] Since HIO has sufficient cash flow to maintain an expanding level of operations and since it has apparently had an operating deficit for a number of years, it would appear that some external financing source has been providing the cash to cover its annual deficits. It was not possible to obtain information to clarify this, but it would be reasonable to presume that this financing has come either from the MOF in the form of grants, or from the government banking system in the form of loans.

[1] The figure of over LE 200 millions was reported in the press in April 1995, but it is unclear whether this refers to the accumulated deficit or the annual deficit at that time.

While beneficiaries under Laws 32 and 79 are supposed to be paying premiums equivalent to 2-4% of their salary, it is actually much less than that since premiums are now calculated on the basis of base salaries, and not total compensation. In addition, HIO's beneficiary base is relatively small, and the majority of workers are not enrolled in HIO. Many of these may be self-employed, and others must be in the informal sector or in very large companies, which are not required to enroll. If we make a very conservative assumption that HIO's beneficiaries earn wages no higher than those workers who are not enrolled, then it would appear that HIO is receiving the equivalent of less than 1.8% of total applicable wages (Table 2.9)

Table 2.9: Analysis of HIO revenue base for FY91

	Total
Total employee number, all Egypt (millions)	13.812
Law 32/79 beneficiary number (millions)	4.566
Estimated proportion of employees enrolled in HIO	33.1 %
Total Wage base, all Egypt (LE millions)	34,126
Estimated total wage base of HIO enrollees	11,281
Estimated wages of enrolled beneficiaries	11,281
Estimated ratio of HIO premium revenues to beneficiary wages	1.8%
Estimated ratio of HIO premium revenue to total wages	0.6%

Source: Based on data from HIO and Ministry of Planning, cited in World Bank (1994b). The estimate of beneficiary wages is based on the assumption that beneficiaries earn average wages.

The level of co-payments charged for services delivered is extremely low, typically less than LE1.00, and only small amounts of revenue are raised from this source. In addition to this, HIO earns some income from selling its services to other individuals and companies. Table 2.10 gives a breakdown of HIO's revenues by source in FY91.

Table 2.10: Revenue sources of HIO

Revenue source	*Amount (LE)*	*Percentage of total*
Premiums - Labor accident	84,095,661	23.7%
Premiums - Law 32	75,048,420	21.2%
Premiums - Law 79	126,161,261	35.6%
Premiums - widows and pensioners	13,309,975	3.8%
Premiums from companies with waivers	4,119,499	1.2%
Total Premiums	302,734,816	85.3%
Sale of goods	26,192	0.0%
Sale of services	482,632	0.1%
Other operational revenues	51,523,804	14.5%
Total	354,767,444	100.0%

Source: Kemprecos (1994)

Uses of funds

Each of the regional branches are funded directly by HIO headquarters in Cairo. The actual amounts allocated are decided as a result of a negotiation process between headquarters and the branch managements. HIO expenditures are primarily used to finance its own facilities and staff, but approximately 17% of its expenditures are used to purchase services with outside contractors. Of total expenditures, a very large proportion is spent on drugs (53% in FY92). This is regarded as a problem by HIO, and is thought to stem from lax prescribing controls and the very low co-payments for drug purchases.

Total expenditures are relatively high, and expenditures per beneficiary amounted to LE 81 in FY92, which compared with MOH expenditures of LE 21.9 per capita for the whole population (FY92 figures). This four-fold difference in funding represents a much greater disparity in underlying resource allocation, since HIO beneficiaries are predominantly formal sector employees, with presumably a lower need for health services than the average Egyptian inhabitant. While expenditures per HIO beneficiary have remained several times greater than the level of MOH expenditures, overall levels in fact declined in real terms during the period under review. There was a 26% decrease in real funding levels per beneficiary during FY89-92 (Table 2.11). Table 2.12 gives the breakdown of expenditures by regional branch, which indicates that relative funding levels are lowest in Aswan and highest in Cairo (see Map 2.2).

Table 2.11: Expenditures by HIO, FY89-1992

	FY89	*FY90*	*FY91*	*FY92*
Total expenditures (LE millions)	**285.5**	**363.3**	**406.3**	**412.3**
Expenditures on contracted services	na	na	64.4	na
Expenditures on drugs (LE millions)	120.8	159.8	221.3	217.8
Expenditures on drugs (% of total)	42%	44%	54%	53%
Beneficiary numbers				
Law 32		2,343,000	2,481,000	2,557,000
Law 79		1,830,000	1,914,000	2,009,000
Widows and Pensioners		433,000	500,000	550,000
Total beneficiaries	**4,359,000**	**4,606,000**	**4,895,000**	**5,116,000**
Expenditure per beneficiary (nominal LE)	65.5	78.9	83.0	80.6
Expenditure per beneficiary (constant 1987 LE)	44.5	44.7	38.9	33.0

Note: See Statistical Annex for more details. Beneficiary numbers given exclude 10.106 million students who enrolled in 1992/93. Expenditures on this program are also excluded as its finances are kept separately from the main HIO operations.

It would be interesting to disaggregate HIO expenditures by function, such as curative and non-curative, or hospital services and non-hospital services. However, it is not possible to give a more accurate disaggregation of HIO expenditures other than provided in Table 2.11, as detailed financial accounts have not been published by HIO. Nevertheless, given the interest in expanding social insurance coverage in Egypt, this type of information would be indeed valuable to policy makers.

Student's Health Insurance Program (SHIP)

In June 1992, the People's Assembly of Egypt passed Law 99 expanding health insurance to cover all school children. In order to implement this law, HIO set up SHIP as a separate program covering school children only. Although SHIP was not operational during FY90-92, some details are given here, as it has since become a significant source of health care financing in Egypt.

SHIP is financed by a system of individual premiums paid by enrolled students (LE 4 per child), a government contribution of LE 4 per child, and a cigarette tax of 10 piastres per packet. Only registered students are eligible to enroll. Children who are not going to school, often those from the poorest families with the greatest burden of ill-health, are not eligible.

Published information on the operation of SHIP is limited. However, by June 1994, it is reported that 6.6 million children had enrolled out of a target of 10.1 million potential beneficiaries. In the fiscal year ending in June 1994, total expenditures by SHIP were LE 198.8 million, of which apparently 60% was for outpatient care, 29% for hospital based care, 2% for supply of prostheses and eye glasses, and 9% for administrative costs (Nandakumar and Swelam, 1995).

HIO funding is used mostly to fund provision of services by its own facilities. While some funds are used to fund contracts with other providers, these are relatively small in their share. For example, in 1992 only 4.5% of cases sent for review by HIO were examined by private clinics. The rest were seen at HIO-run polyclinics and HIO doctors. Similarly, of the 50% or so of total expenditures by HIO on drugs, most was spent on paying for purchases from HIO pharmacies.

Table 2.12: Comparative expenditure levels in HIO regions, FY91

	Beneficiary category				*Expenditures per beneficiary*	
Region	*Law 32/79*	*Pensioners/ widows*	*Total*	*%*	*Exc. HQ spending*	*Ratio (Aswan = 1.00)*
NWDB	154,000	155,000	1,132,000	23	63.8	1.21
Canal & East Delta	750,000	80,000	1,050,000	21	66.8	1.26
Cairo	222,000	126,000	807,000	16	112.4	2.12
Mid-Delta	512,000	60,000	716,000	15	66.9	1.26
Giza	420,000	54,000	675,000	14	84.0	1.59
Assiut	362,000	21,000	438,000	9	60.9	1.15
Aswan	61,000	4,000	77,000	2	52.9	1.00
TOTAL	**2,481,000**	**500,000**	**4,895,000**	**100**	**75.3**	**1.42**

Source: HIO and DOP

Curative Care Organizations

The Curative Care Organizations comprise six autonomous organizations providing health care services. The two largest are in Cairo and Alexandria, and were established in 1964 through nationalization of several private hospitals. The four other CCO's, in Port Said, Kalyoubia, Damietta and Kafr El Sheik, are much smaller, and only recently have been expanded. The CCO's are each run independently, but they come under the authority of MOH. All the CCO's are hospital-based organizations, and they accounted for a total of 4,846 beds in mid-1992 (4% of all reported beds). Of these beds, Cairo and Alexandria account for over 90%.

The CCOs are essentially self-financing for recurrent costs, earning revenues by providing services to individuals, HIO and companies on contracts. Fees are charged for services delivered, with four separate layers of pricing based on the class and grade of room for inpatient care, and with one set of prices for outpatient care. In addition, they all provide some limited free emergency services and maintain a fixed number of free beds for free treatment of poor patients under arrangement with GOE. For this they receive an annual grant out of the MOH Headquarters budget. The size of this grant is set in annual negotiations between the MOF and the CCO's management, and generally accounts for only a small proportion of total revenues.

MOF also provides additional funds on an occasional basis, typically for capital investment in new facilities. These amounts can be substantial, and in the case of Cairo, CCO construction-related expenditures have amounted to almost LE 200 millions during FY89-93 (Table 2.13). An accurate determination of the total expenditures by the various CCOs was not possible, as DOP was unable to obtain complete income and expenditure statements from the various organizations involved. Table 2.14 gives an estimate of total expenditures by all CCOs during FY89-92.

Table 2.13: Operating expenditures in Cairo and Alexandria CCOs

	FY89	*FY90*	*FY91*	*FY92*
CAIRO CCO				
Operating expenditures (LE millions)	49.7	58.1	77.9	84.1
Construction expenditures (LE millions)	165.6	32.6	1.1	0.1
Total expenditures (LE millions)	215.4	90.6	79.0	84.2
Expenditures on drugs (LE millions)	12.6	15.2	20.1	23.0
Grant for free beds from MOF (LE millions)	1.8	2.0	2.2	2.5
Beds	3,620	3,705	3,566	3,556
Operating expenditures per bed (LE)	13,742	15,680	21,853	23,656
ALEXANDRIA CCO				
Operating expenditures (LE millions)	8.95	9.92	11.25	11.91
Expenditures on drugs (LE millions)	1.79	2.22	2.89	3.43
Grant for free beds from MOF (LE millions)	na	1.20	1.30	1.40
Beds				939
Operating expenditures per bed (LE)				12,683

Note: See Statistical Annex for more details. Numbers based on data supplied to DOP by CCOs and MOF.

Table 2.14: Expenditures by CCOs, FY89-92 (Estimated)

	FY89	*FY90*	*FY91*	*FY92*
Operating expenditures (LE millions)	65	75	98	106
Total expenditures (LE millions)	230	108	100	106
Expenditures on drugs (LE millions)	16	19	25	29
Expenditures on drugs (% of total)	25%	25%	26%	27%
Beds				4,900
Operating expenditures per bed (LE)				21,600

Note: All numbers given are estimates. DOP was unable to obtain official data on the number of beds in previous years, or the total number in FY92.

University Hospitals

University hospitals comprise an important part of the tertiary care system in Egypt, as well as purportedly providing facilities for teaching and research. They are autonomous facilities affiliated to individual universities, and falling under the responsibility of the Ministry of Education. They accounted for 15,375 beds in 1992, which was 14% of all known beds (Kemprecos, 1994). They are funded principally by the Ministry of Finance, through the budget of the Ministry of Education. They provide care which is considered by the public to be of high quality, and they are also able to generate significant resources through user fees paid directly by households and contracts with companies.

There are twenty university hospitals in Egypt. These are not distributed equally throughout the country, and virtually all are found in Cairo or other urban areas of Lower Egypt (Map 2.3). Their distribution is similar to that of the teaching hospitals, but the overall level of provision is greater.

Table 2.15 gives estimated expenditures for all the university hospitals for FY89-92. DOP conducted a survey of the university hospitals to determine total revenues and expenditures. Based on the information provided by the sample of institutions that reported data, it was estimated that 15-24% of the total revenues of the university hospitals were generated from patient revenues during FY89-92. Part of this came from contracts negotiated with employers, but most of it was earned from direct payments by households. It should be noted that the bulk of these patient revenues were earned in the Cairo metropolitan area, principally by hospitals affiliated to Ain Shams University. Table 2.15 also gives the estimated levels of cost recovery based on data from the university hospitals which reported credible data.

Table 2.15: Expenditures in University Hospitals, FY89-92 (Estimated)

	FY89	*FY90*	*FY91*	*FY92*
Expenditures (LE millions)	276.8	334.4	410.1	468.9
Beds				15, 375
Expenditures on drugs (LE millions)	46.0	41.5	44.0	72.1
Expenditures on drugs (% of total)	*17*	12	11	15
Patient revenues (LE millions)	67.4	48.0	63.1	66.5
Patient revenues (% of total)	*24*	14	15	14
Expenditure per bed (LE)				30,498

Note: Statistical Annex for more details. All numbers given are estimates derived from a sample of facilities reporting data. Particular caution must be attached to all italicized numbers. Expenditures per bed are estimated on the basis of bed numbers in FY92, and so underestimate the actual numbers for earlier years.

Comparative costs and subsidies

The overall levels of expenditures in university hospitals are high. This includes a significant level of expenditures on drugs - approximately 14% of total costs. An estimate of total expenditures per bed can also be derived, and these indicate that overall expenditures per bed are significantly higher than for Ministry of Health hospitals. This is a crude comparison, since the university hospitals are supposed to serve the additional function of supporting teaching and research. Some of the expenditures on medical training at hospitals are included in the budgets of the medical schools, which are administered by the Ministry of Education. There are other costs of training, which are in effect shared with the university hospitals, but it is not possible to identify these separately. In addition, despite their much greater levels of

cost recovery, it would appear that this higher level of expenditures is related to a higher level of government subsidies per bed than MOH facilities (Table 2.16).

Table 2.16: Comparative expenditures and subsidies for hospital beds, FY90

Provider	*Number of beds (1992)*	*Total hospital expenditure (LE millions)*	*Total public subsidy (LE millions)*	*Expenditure per bed (LE '000s)*	*Subsidy per bed (LE '000s)*
MOH	67,042	400	390	6.0	5.8
Teaching hospitals	4,654	67	63	14.4	13.5
University hospitals	15,375	342	294	22.2	19.1
HIO	4,949	227	65	45.9	6.6
Cairo CCO	3,494	60	2	17.1	0.5
Private hospitals	10,156	210	0	20.7	0.0

Source: Based on information in NHA database and Kemprecos (1994)

Note: Expenditures and subsidies per bed are all estimates. These are estimates for running hospital facilities, and therefore include the costs of providing outpatient services, which are considerable in the case of university hospitals. MOH hospital expenditures are based on an estimate that 49% of MOH expenditures goes to hospital facilities. HIO hospital expenditures are taken as 50% of the total cost of running the HIO program, i.e., including the administrative costs of collecting premiums. It is estimated that 50% of the share of HIO operating expenditures is used to provide drugs.

The estimates given in Table 2.16 are very approximate, based as they are on limited data. However, it should be noted that MOH hospitals clearly receive less public subsidies per bed than the other major public providers (university and teaching hospitals and HIO). This may provide much of the explanation behind the generally lower level of quality in MOH hospitals, although many MOH beds are in lower level hospitals. Given that all available information indicates that university hospitals and HIO facilities are used predominantly by the non-poor, and that the poor use predominantly MOH facilities for hospitalization, it is likely that the current pattern of public expenditures on hospitalization is highly regressive.

Other Ministries

A number of other ministries operate health facilities of their own. The most important of these are the Ministry of Interior which operates its own health care facilities for police and the prison population, the Transport Ministry which operates at least two hospitals for railway employees, and the Defense Ministry which is responsible for health facilities run by the armed forces. The military hospitals are the most extensive of these, and they provide care both to members of the armed forces as well as the local civilian population. It is widely agreed that these military hospitals are better resources than MOH hospitals, and provide a much higher standard of care.

It is not possible to give figures for expenditures in these facilities, as this information was not available to DOP. It is also not possible to make an estimate based on the number of beds in these facilities, since even the number of beds is unknown. However, Gomaa (1980) reported that expenditures in Ministry of Interior and Railway hospitals facilities amounted to just under 1% of total expenditures in the MOH at that time. In addition, approximately 10% of all physicians were reported to working in the armed forces at that time. It is not possible to ascertain actual numbers of doctors employed in the armed forces today. Nevertheless, it would be reasonable to assume that the relative share of health service provision by these other ministries would not have greatly increased in the past two decades. If that is so, it would be reasonable to conclude that total expenditures by the Ministries of Interior, Transport and Defense are unlikely to be more than 20% of total MOH expenditures, i.e.: some level less than LE 150 millions in FY90.

Foreign Donors

Egypt is a major recipient of international aid. However, much of this is in the form of non-economic assistance, and not transferred to the social sectors. Nevertheless, foreign assistance is a significant source of financing in Egypt's health sector, and it is particularly important in certain areas such as population and capital investment.

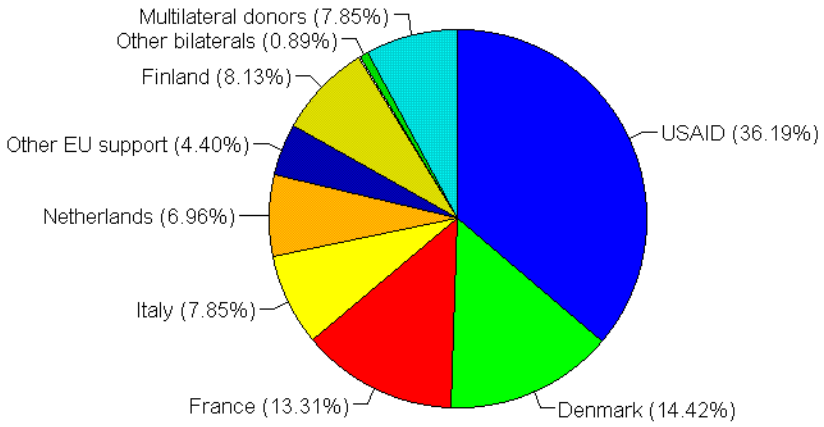
In many countries, inflows from official donors are tracked by the local UNDP office, but in Egypt this is not the case. In theory, the Ministry of International Cooperation does perform this role, as all foreign assistance must be reported to it. However, separate desks in the Ministry monitor each international donor, and there is no organized system for collating the information reported to the Ministry (Chellaraj, 1994). Within MOH, there is no single office which monitors aid flows, and even DOP appears to have only incomplete information about chapter 3 transfers. There is thus no accurate official estimate of total aid flows into the health sector. There are two previous estimates of foreign aid flows to Egypt's health sector, both for 1990. One report in 1993 estimated total health sector aid to Egypt at approximately LE 250 millions,[1] while Michaud and Murray (1993) estimated the amount at US$ 111 millions (equivalent to LE 240 millions) in 1990.

DOP attempted to collect data on aid disbursements from a number of donors. Not all donors were able to provide details on health-related disbursements by individual year, as opposed to aid commitments. In addition information was not obtained from all donors. The data collected in this manner was supplemented by data from the budgetary records of MOH, information kindly provided by G. Chellaraj (1994) and other published information. It is estimated that total aid flows to Egypt's health sector were approximately LE 180 millions in FY90, as shown in Table 2.17. It is not possible to make an estimate for other years because of a lack of data.

Of the total official aid, it is estimated that bilateral donors accounted for more than 90% in FY90. Of these, the most important were USA, Denmark, Finland, France and Italy (Figure 2.2). It should be noted that members of the European Union provide more than 50% of the total foreign economic assistance to Egypt's health sector, which is consistent with the EU's position as the largest overall donor to Egypt and most Middle-East countries. Of the aid that is given, most is given to MOH, but substantial amounts are also transferred to the University and Teaching Hospitals.

[1] Unpublished report available at DOP, dated 1993. Name of author illegible.

Figure 2.2: Official assistance, FY90
Estimated donor support for health



Total = LE 179.6 millions in FY90 (estimated)

Table 2.17: Foreign assistance to Egypt's Health Sector, FY90 (Estimated)

Bilateral donors	*Total disbursements (LE millions)*	*Proportion of total (%)*	*Recipients*
USAID	65.0[a]	37	Mostly MOH
Japan	1.3	1	Mostly MOE
European Union	5.7	3	MOH and MOE
Denmark	25.9 [a]	15	Mostly MOH
Finland	14.6 [a]	8	Mostly MOH
France	23.9 [a]	13	Mostly MOE
Germany	2.2	1	MOH
Italy	14.1	8	Mostly MOH
Netherlands	12.5	7	Mostly MOH
United Kingdom	0.0	0	
Canada	0.3	0	MOH
Saudi Arabia	0.0 [b]	0	
Kuwait	0.0 [b]	0	
Others	0.0 [b]	0	
Subtotal for bilateral donors	165.5	93	
WHO	3.0 [a]	2	MOH
World Bank	0.0	0	
Unicef	7.0 [a]	3	MOH
UNDP	0.0 [b]	0	MOH
UNFPA	2.0 [a]	1	MOH
African Cooperation Bank	2.1 [a]	1	MOH
Others	0.0 [b]	0	
Subtotal for multilateral donors	14.1	7	
Total from all official sources	179.6	100	

Source: Based on data collected from donors by DOP and Harvard/DDM, budgetary data of MOH, and G. Chellaraj (1994).

Notes: a) Estimate based on incomplete data. In most cases these donors were not able to provide information on actual yearly disbursements.

b) DOP unable to obtain data from donor. Actual amounts believed to be insignificant.

Private Insurance, Employer Schemes and Occupational Syndicates

Private insurance schemes

HIO is the major type of third-party financing in Egypt. The role of private or voluntary health insurance is comparatively small. Probably only 5-10% of patients admitted to private hospitals have some form of private insurance (D'Agnes and Picazo, 1993). Less than ten companies offer health insurance,[1] and in all cases but one, health insurance accounts for only a small proportion of their overall business. Of these, two are government-owned parastatals, Misr and Al Chark, and the rest are private insurance firms. Private health insurance policies are marketed both to companies, who want to insure their employees, and to private individuals. The companies tend to be larger private companies in the formal sector. The insurance companies typically contract with a list of hospitals to provide services to their beneficiaries. Reimbursement of services is usually only for such approved providers, and on the basis of co-payments with an annual coverage ceiling (Kemprecos, 1994).

Data collection

It is difficult to give a precise figure for the total expenditures covered by these private health insurance schemes. All known private insurance companies were directly contacted by DOP and asked for details of their schemes, the number of persons covered, and the total revenues and expenditures related to health insurance policies. Not all the companies responded, and of those that did, not all provided complete sets of information. In total, DOP received data from four companies, including the largest - Al Chark Insurance Company. In the case of Al Chark, the data received appear to refer only to health insurance schemes purchased by individuals, since according to Kemprecos (1994) the company provided coverage to approximately 50,000 employees in the Cairo area in 1992.

Estimates

Table 2.18 provides an overview of the data that was received, with an indication of the range in expenditures per beneficiary. Expenditures on drug purchases by these schemes appears to be high (>50%) according to the sample. In fact, this is little different than the situation at HIO.

Table 2.18: Analysis of data reported by a sample of private insurance companies

	FY89	*FY90*	*FY91*	*FY92*
Total expenditures (LE millions)	2.265	4.092	5.183	5.307
Total beneficiaries	18,139	16,657	15,937	16,151
Mean expenditure per beneficiary (LE)	125	246	325	329
Range in expenditures per beneficiary (LE)	117 - 745	209 - 670	301 - 677	283 - 630
Expenditures on drugs (LE millions)	1.364	2.218	2.651	2.759
Expenditures on drugs (% of total)	60.2%	54.2%	51.2%	52.0%

Note: The numbers given are only for a sample of 4 insurance companies which reported data.

[1] The exact number of companies offering health insurance is difficult to verify, but is at least 8 and not more than 11.

On the basis of these data, and other available information suggesting that at least 50,000 - 60,000 beneficiaries were not included in the reporting sample, estimates of probable total beneficiaries covered by private health insurance schemes were made. A second set of estimates were made of the possible range in mean expenditures per beneficiary for each of the years under consideration, based on the data given above and on the level of premiums charged by Al Chark for company schemes.

It is estimated that 16,000-20,000 people are covered by individual health insurance, while less than 80,000 are covered through company contracts. Given that average premiums/expenditures per beneficiary were probably less than LE 350 in FY92, it can be estimated that total expenditures by the private insurance schemes amounted to less than LE 50 millions in FY92, and probably much less (Table 2.19). Estimates of total drug purchases reimbursed by these schemes were made by multiplying the proportion observed into the final estimates of total private insurance expenditures. Approximately 20-30% of spending by private insurance schemes appears to be for hospital care.

Table 2.19: Expenditures of all private insurance companies (Estimated)

	FY89	*FY90*	*FY91*	*FY92*
Estimated expenditures (LE millions)	7 - 18	15 - 30	20 - 42	24 - 60
Number of beneficiaries	70-90,000	75 - 100,000	80 - 120,000	80 - 120,000
Expenditures per beneficiary (LE)	100 - 200	200 - 300	250 - 350	300 - 500
Estimated expenditures on drugs (LE millions)	4 - 10	7 - 18	9 - 25	11 - 35

Note: The numbers given are all subjective estimates of the possible range in actual values based on available information about some of the larger existing insurance providers. They are likely to be on the upper side. The accuracy of these estimates would be substantially improved if DOP was to obtain more complete data from Al Chark as well as responses from Delta Insurance and Middle East Medicare, the two largest insurers not in the sample.

Employer Schemes

Many companies organize their own arrangements for providing medical care to their employees. These arrangements can range from contractual arrangements with various providers to running their own health facilities, including hospitals. Several of the larger companies are exempted from paying the full HIO premiums, because they are able to provide comparable levels of care. However, it is difficult to know how large such employer-organized efforts are, and how much they cost.

Data collection

There is no representative survey of businesses which has investigated company expenditures on health services other than those related to health insurance schemes. In the absence of one, DOP attempted to survey a limited number of companies directly, mostly large ones known to have extensive health facilities of their own. The number of returns obtained was small, and so the following estimates may be quite inaccurate.

The following Table 2.20 summarizes the data collected from a sample of seven large companies. The companies included examples from the transportation, textile manufacturing, industrial, and petroleum

sectors. In addition, the numbers for FY92 include a very large private conglomerate. As can be seen most are relatively large companies.

Table 2.20: Expenditures on medical services in a sample of business enterprises

	FY89	*FY90*	*FY91*	*FY92*
Total expenditures (LE millions)	**4.606**	**6.264**	**7.681**	**49.339**
Number of companies in sample	5	5	5	7
Number of beds	643	643	662	1,145
Number of employees	76,732	75,227	73,339	1,046,244
Number of employees per firm	15,346	15,045	14,668	149,463
Expenditure per employee (LE)	130	173	230	59

Source: Data provided by companies to DOP.

Note: The sample for FY92 is significantly different to that for earlier years, because of the inclusion of Arab Contractors, a large Egyptian conglomerate.

Informal inquiries with a number of small local private firms revealed that very few had medical expenditures in addition to HIO. It is known that many of the foreign-owned companies do spend additional money. Evidence suggests that companies generally buy additional care to that provided by HIO, because it is perceived as providing low-quality care or because it is considered expensive. The concern for higher quality is most likely manifest in the more modern businesses, those which are foreign companies, and those which have employees earning above average incomes. In addition, the transaction costs involved in organizing an alternative system of provision to HIO is less likely to be a barrier to the larger firms.

Estimates

Large firms with more than 100 employees accounted for 8.3% of total non-agricultural employment in 1986 (World Bank, 1994a). Total employment, excluding agriculture and social services, was estimated at 4.75 millions in FY89. This gives an estimate of 400,000 employees in large firms in FY89. If we assume that these firms spent on average LE 50 -100 per employee, this yields an estimate of LE 20 - 40 millions in FY89. This of course excludes smaller firms, and so is likely to be a considerable underestimate.

Many employers provide or pay for medical services for their employees in addition to or instead of the coverage provided by HIO. It is difficult to estimate the level of expenditures involved in the absence of a representative survey of businesses. Available information indicates that direct provision or financing of significant amounts of medical care is most likely in the case of larger firms, foreign firms, those in the private sector, and those paying relatively higher wages, such as in the petroleum sector. The larger companies (with more than 500 employers) are also not mandated to enroll in HIO, and are required to provide alternative services instead.

Estimates of employer expenditures on health services excluding those for HIO premiums and other insurance arrangements are given below. They are subject to a considerable degree of inaccuracy, and most likely underestimates.

Table 2.21: Expenditures by companies, excluding insurance payments (Estimated)

	FY89	*FY90*	*FY91*	*FY92*
Estimated total expenditures (LE millions)	20 - 40	20 - 40	20 - 45	20 - 45

Note: The numbers given are all subjective estimates of the possible range in actual values based on available information about some of the larger companies.

Uses of funds

While some large employers run large and sophisticated hospital facilities of their own, the bulk of direct employer health expenditures are for reimbursement of out-patient medical care and drug purchases. However, the data are so limited that it is not possible to give any estimates of the actual breakdown of these expenditures by final use.

Occupational Syndicates

Several groups of professionals and workers in Egypt are organized into occupational associations known as Syndicates. These are all officially recognized and regulated representative organizations. Most offer some limited assistance with medical services to their members.

A few of the syndicates offer organized systems of medical assistance in the form of health insurance schemes. The largest and most significant of these is that run by the Medical Union, which consists of four syndicates - physicians, dentists, pharmacists and veterinarians. This small, but well-run, scheme provides coverage on payment of a subscription to all members of the four medical and their family members. The scheme also receives a substantial subsidy from the Medical Union itself.

Membership in the scheme is voluntary. Since starting in 1988, coverage has increased from 17,600 members to 28,000 in 1993. The bulk of these reside in Cairo (75%) and Alexandria (20%). It provides comprehensive benefits, albeit with a relatively low ceiling on total reimbursements, and with co-payments. Hospitalizations and major outpatient services are only reimbursed if pre-approved by the scheme, and there is an annual limit to the number of routine outpatient visits covered per year. Treatment must be sought from a list of approved providers. Drugs are not covered except in the case of in-patient treatment and chemotherapy. With these controls, the scheme appears to be relatively successful in restricting costs, and average expenditures per beneficiary are fairly low (Table 2.22).

Table 2.22: Income and expenditures of Medical Union health insurance scheme

	FY89	*FY90*	*FY91*	*FY92*
Total expenditures (LE millions)	**3.139**	**3.490**	**3.694**	**4.026**
Total subsidy by medical syndicates (LE millions)	0.773	1.053	1.200	1.338
Prepayments by beneficiaries (LE millions)	1.719	2.368	2.497	2.758
Number of beneficiaries				81,000
Expenditure per beneficiary (LE)				50

Source: Medical Syndicate

The only other organized scheme is run by the Agricultural Syndicate, and this only started operation in FY93, when it had initial expenditures of LE 143,000. Expenditures on medical services by the other syndicates is estimated at less than LE 4 millions annually during FY89 - 93.

Uses of funds

Information is scarce on the detailed activities and expenditures of the various syndicates. However, the medical syndicate is the most important, and it appears to spend the largest share of its expenditures on financing out-patient consultations and drugs. Overall drug expenditures appear to be low, and much less than the 50% reported for HIO and private insurance schemes.

Not-for-profit Organizations

There are a large number of non-governmental organizations (NGOs) in Egypt, but their presence in the social sectors is less than in most countries in Sub-Saharan Africa and Asia. In addition, foreign NGOs are comparatively unimportant in Egypt. The NGO sector as a whole is very tightly regulated by the GOE under Law 32 of 1964. All NGOs, foreign and local, require official approval to operate from MOSA, and they must register either at the national level or at governorate level, depending on scope of their activities. The financial affairs of NGOs are subject to regulation, and endowment funds are not permitted. All fund-raising activities from the general public must be approved, and only a limited number of fund-raising projects are given approval in any year. All foreign support must be reported to and approved by MOSA. These official rules are generally thought to greatly restrict the private fund-raising capacity of NGOs (World Bank, 1991a).

MOSA does have a system of grants to registered NGOs, but these appear to comprise only a small proportion of these organizations' total funding, probably less than 20% (LaTowsky et al., 1994). Since all registered NGOs must report their financial accounts to MOSA it should be relatively easy in theory to determine total expenditures by all officially-registered NGOs, and to estimate the proportion spent on health-related activities. However, MOSA has stopped publishing routine statistics in recent years, and it is not clear whether complete statistics are available centrally in MOSA, since many of the records are kept on paper at governorate level. In addition, there are probably some NGO activities which are not reported to MOSA, and in the case of those which are, it is likely that some NGOs do not divulge complete or accurate financial details.

Given these problems, the following estimates are presented for NGO expenditures on health during FY89-92. The upper bound of the estimates assume that health-related expenditures by NGOs may be up to 50% greater than reported to MOSA.

Table 2.23: Expenditures of NGOs on health-related activities, FY89-92 (Estimated)

	FY89	*FY90*	*FY91*	*FY92*
Total expenditures (LE millions)	**28 - 50**	**34 - 62**	**42 - 76**	**46 - 85**
Funding by MOSA (LE millions)	4 - 8	5 - 9	6 - 11	7 - 12
Funding by households and other sources	24 - 42	29 - 53	36 - 65	39 - 73

Note: These are estimates based on very limited data.
CAPMAS has reported total expenditures by and government subsidies to officially registered MCH, FP and multipurpose societies for FY85-87. These figures were taken and then extrapolated to FY89-92 assuming a constant share of GDP to give the lower bound of the estimates reported above. It was also assumed that 50% of expenditures by multipurpose societies were health-related. The resulting estimates were cross-checked with data collected by LaTowsky et al., (1994). The study by LaTowsky et al. is of NGOs in three governorates, but includes estimates of total NGO expenditures throughout Egypt, which are consistent with these estimates for health-related activities by NGOs.

Uses of funds

NGOs are not a primary source of financing in the health care system. They receive most of their funds directly from households, mostly in the form of user fees for services provided. Only a small proportion of their funding is derived from government sources or donations (LaTowsky et al., 1994). The largest share of NGO health activities are probably in the provision of clinic services, most of which are run on a full-cost recovery basis. Very few of their activities are devoted to provision of hospital care.

Household expenditures

Household expenditures clearly comprise the largest and most important source of financing in Egypt's healthcare system. However, it is not easy to obtain an accurate estimate of the actual level of spending. Total household spending on health care services could be estimated either from the revenues of health care providers or from surveys of households themselves. However, as in most countries there are no reliable data available in Egypt on the income of private providers. Therefore, estimates of household expenditures must be based on household survey data.

Data on household health expenditures are available from three surveys conducted in recent years. These are the CAPMAS 1990/91 household budget survey, a survey reported by Kemprecos and Oldham (1992), and the provisional results of the Harvard/DOP survey. Of these the CAPMAS and Harvard surveys are both national surveys, with the CAPMAS survey having been carried out throughout a twelve month period during 1990/91, and the Harvard survey in two rounds during 1994/95. The Kemprecos and Oldham survey was carried out in one district of urban Giza during 1992. Table 2.24 summarizes the level of expenditures reported in each of these three surveys.

Table 2.24: Recent survey estimates of household health expenditures

	CAPMAS	*Kemprecos et al.*	*Harvard/DOP*
Sample	National	Urban district of Giza	National
Time period	1990/91	1992	1994/95
Annual expenditure by urban households (nominal LE)	243	375	744
Annual expenditure by rural households (nominal LE)	148	na	400
Annual national per capita expenditure (nominal LE)	33	73	108
Annual national per capita expenditure (constant FY90 LE)	33	39	63

Note: The figures for per capita expenditures given in constant FY90 LE are based on an estimate of the GDP deflators for calendar year 1992 and FY94.

As can be seen, there is a wide variation in the levels of expenditures reported in different surveys. It is possible that there have been actual changes in the pattern of household expenditures during 1990-1995, but these are unlikely to explain the large discrepancies observed. However, experience would suggest that the Harvard/DOP survey, which was specially designed to measure national household health expenditures, is more likely to be accurate than the CAPMAS survey which was designed to obtain data on overall household expenditures. In practice, one would expect therefore the CAPMAS survey to have underestimated household health expenditures. It is possible to obtain an estimate of the level of underestimation by examining other information on household health expenditures in FY90, principally data on pharmacy sales and user fees at government and public facilities. Data on the level of pharmacy sales are reviewed in the following section on pharmaceutical expenditures.

Pharmaceutical Expenditures

Pharmaceuticals account for a large proportion of overall health care expenditures in Egypt. Egypt is also one of the largest producers of drugs among low and lower-middle income developing countries. Most of this production actually consists of reformulation and repackaging of imported ingredients. The bulk of drugs consumed in Egypt are distributed through private pharmacies, and they also account for a large proportion of total household spending on health.

Until the mid-1990s, the sale of drugs in Egypt was very tightly regulated. The larger share of the domestic pharmaceutical industry was publicly owned and wholesale distribution was in the hands of a government parastatal. In addition, there has long been a system of retail price controls, which unlike in many other countries appears to be adhered to. All drugs sold in the Egyptian market require a license, and these licenses normally stipulate the price at which they must be sold. An organized system of reporting existed, and relatively good statistics have been available on the production, importation, exportation and retail sales volume of drugs. This system of information has apparently suffered in recent years as a result of the ongoing liberalization and partial privatization of the Egyptian pharmaceutical industry.

Table 2.25 provides official MOH estimates of total drug sales in Egypt at retail prices, based on data supplied to the regulatory authorities.

Table 2.25: Drug sales, FY85 - 92

Fiscal year	*Retail value (LE millions)*	*Volume (units)*	*Change in retail value (%)*	*Change in volume (%)*	*Per capita consumption (LE)*
FY85	778.1	705.0	na	na	16.5
FY86	954.0	773.9	23	10	19.8
FY87	1,094.2	821.4	33	6	22.1
FY88	1,217.8	840.7	11	23	24.8
FY89	1,395.1	822.8	15	-2	27.3
FY90	1,766.6	844.5	27	3	33.7
FY91	1,988.5	771.8	13	-9	36.9
FY92	2,270.7	859.1	14	11	41.0

Source: MOH estimates of the retail value of total drug consumption in Egypt.

Data on the distribution of sales by purchasing sector are available from a survey conducted by DOP of the 25 largest pharmaceutical companies (Table 2.26). Sales were categorized by government, other public sector and private sector. It is not exactly clear what the companies understood by government, but examination of the numbers indicated that they could not include University Hospitals, HIO and the CCOs, since their drug purchasing is known to be much greater. Therefore, government probably refers only MOH, and possibly some other ministries, which are direct purchasers of drugs.

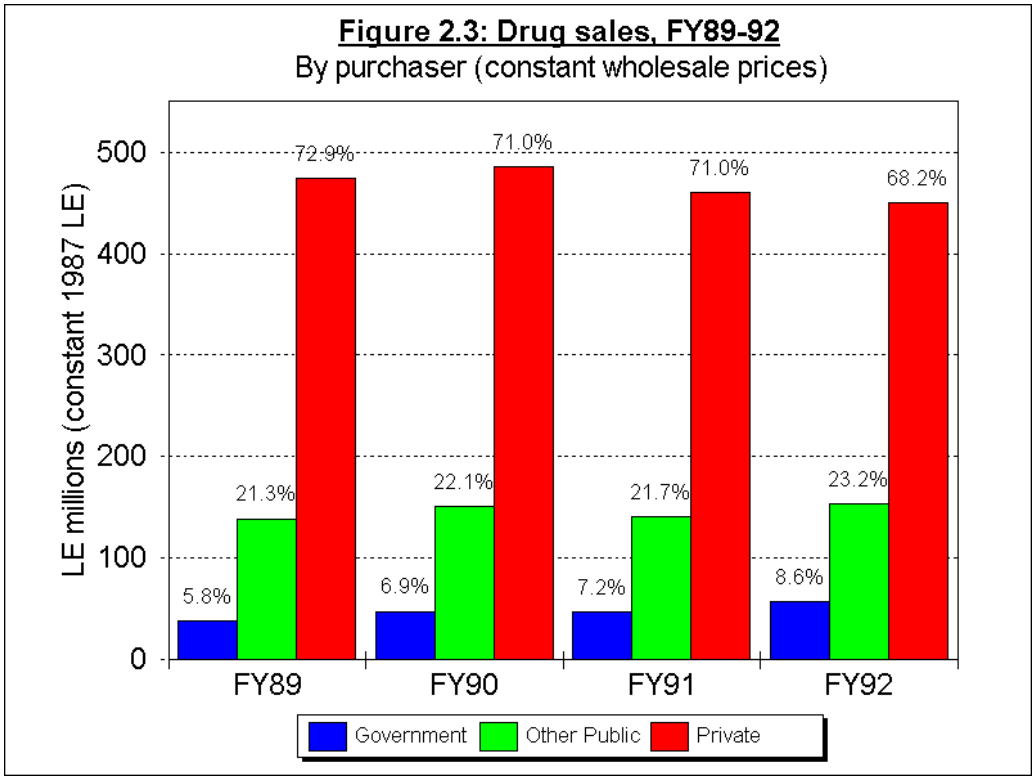
Table 2.26: Distribution of pharmaceutical sales by purchasing sector, FY89 - 92

	Sales by purchasing sector (LE millions)		*Ratio of total retail*

Fiscal year	*Government*	*Other Public*	*Private*	*TOTAL*	*to wholesale sales*
FY89	55.2	203.8	696.8	955.8	1.46
FY90	83.6	265.7	855.2	1,204.5	1.46
FY91	100.0	300.2	981.2	1,381.4	1.44
FY92	138.0	373.4	1,097.3	1,608.7	1.41

Note: Based on data collected by DOP from 25 pharmaceutical companies. The last column gives the ratio between total sales at wholesale prices reported by these companies and total retail sales as given in Table 2.25.

Retail sales as given in Table 2.25 are greater than wholesale sales given in Table 2.26 because there is a difference between the wholesale price of drugs and the retail price, and because several pharmaceutical companies and importers were not included in DOP's survey. The ratio given in the last column of Table 2.26 is therefore a function of the retail mark up on drugs (which varies between 10 and 25%), and the share of sales accounted for by companies not included in the survey. During the period FY89-92 there was a small decline in real terms in drug sales at wholesale prices (Figure 2.3). Private sector purchases fell in both percentage and value terms. Nevertheless, the private sector remained the predominant distributor of drugs, with its share declining slightly from 73% to 68% of the total during FY89-92. The government, principally MOH, increased purchases during this time, with its share of the total increasing from 5.8% of sales in FY89 to 8.6% in FY92. However, note that these figures overestimate the share of MOH in sales volume to the extent that MOH may be buying drugs at a greater discount to the retail price than other purchasers, and to the extent that the other smaller firms not surveyed are probably selling a larger proportion of their products to the private sector.



The bulk of the drugs sold to the private sector eventually are sold in the retail market by pharmacies. Doctors in Egypt are not allowed to sell or dispense drugs, and the quantities they use in their practice must be relatively small. The only other major consumer of drugs is the private hospital sector, but again it is unlikely that this is a major user. If we assume that the pharmacy share of retail sales is similar to private sector share of drug purchases, then the following estimates of total pharmacy retail drug sales can be derived (Table 2.27).

Table 2.27: Retail sales of drugs by pharmacies (Estimated)

	Total drug consumption	*Estimated sales by pharmacies*	*Per capita drug purchases from pharmacies*	
Fiscal year	*(LE millions)*	*(LE millions)*	*Nominal LE*	*Constant 1987 LE*
FY89	1,395	1,017	19.9	13.5
FY90	1,767	1,254	23.9	13.6
FY91	1,988	1,412	26.2	12.3
FY92	2,271	1,549	27.9	11.4

Note: See text for details of estimation. The price deflator used is the general price deflator, and so does not accurately reflect changes in pharmaceutical prices during this period.

As can be seen, estimated drug purchases from pharmacies amounted to LE 28 per capita in FY92. While this represented an increase in nominal terms, there was in fact a 16% decline in per capita consumption when measured in real terms.

Comparison of pharmaceutical data with CAPMAS survey results

The 1990/91 CAPMAS household budget survey was a national household survey which attempted to measure total household consumption on all items of expenditure. The survey instrument contained several schedules, of which one was for health related expenditures. The list of items for which expenditures were recorded are given in Table 2.28.

Table 2.28: Measurement of household health expenditures in CAPMAS 1990/91 survey

Item Number	*Item of Expenditure*	*Recall Period*	*Per capita expenditures (Annual LE)*
1	Regular medications	1 month	9.30
2	Irregular medications	3 months	9.78
3	Doctors' fees - general investigations	3 months	5.59
4	Medical tests	3 months	1.49
5	X-Rays / Radiological investigations	1 year	0.58
6	Endoscopy / Catheterization	1 year	0.06
7	ECG / EKG fees	1 year	0.16
8	Medical aids / lenses / etc.	1 year	0.60
9	Dialysis (Renal) fees	1 year	0.33
10	Medical supplies- Syringes/cotton/ etc.	3 months	0.88
11	Dentists' fees	1 year	0.45
12	Hospital fees (Government hospitals)	1 year	0.83
13	Hospital fees (Investment hospitals)	1 year	2.00
14	Hospital fees (HIO)	1 year	0.18
15	Dayas' fees	1 year	0.19
16	Other medical services	1 year	0.62
17	Health insurance premiums	1 month	3.13

Notes: Taken from Schedule 7 of the published questionnaire. Translation by DDM.

According to the survey results, the per capita expenditure on drugs was LE 19.08. This is equivalent to LE 1,000.6 millions at a national level. This can be directly compared with the estimate of total pharmacy sales derived from sales figures reported to MOH, which is LE 1,254 millions. The following table compares the figures reported in the CAPMAS survey and the previous estimates of pharmacy sales and hospital user fees.

Table 2.29: Comparison of expenditures reported in CAPMAS survey with other estimates

Item of expenditure	*CAPMAS estimate (LE millions)*	*Other estimate (LE millions)*	*Ratio of CAPMAS to other estimate*
Drug purchases	1,001	1,254	0.80
Fees to government hospitals	43	63	0.68

Notes:

1. All estimates are for FY90.
2. Fees to government hospitals are estimated by summing patient revenues estimated for MOH facilities, and university and teaching hospitals.
3. Alternative estimate of doctors fees is based on analysis of the first round of the DDM Household Health Survey.

These results indicate that the general level of underestimation in the health expenditures schedule of the CAPMAS household survey was in the range of 20 - 30%. In practice, the degree of underestimation (or overestimation) would vary for each item on the schedule. The most reasonable assumption to make is that the underestimate for drug expenditures is the least because of the short recall period used in the questionnaire, and the fact that individuals tend to more easily remember purchases of commodities than purchases of services. However, there is insufficient data to investigate this, and the most conservative assumption to take is that all expenditures were equally underestimated by 20%. This assumption would support a minimum adjustment of all the CAPMAS estimates upwards by 20%, as indicated in Table 2.30.

Table 2.30: Adjusted estimates of household health expenditures based on the CAPMAS survey

Item Number	*Item of Expenditure*	*Unadjusted estimate (LE millions)*	*Adjusted estimate of national spending (LE millions)*
1	Regular medications	488	610
2	Irregular medications	513	641
3	Doctors' fees - general investigations	293	366
4	Medical tests	78	98
5	X-Rays / Radiological investigations	30	38
6	Endoscopy / Catheterization	3	4
7	ECG / EKG fees	8	10
8	Medical aids / lenses / etc.	31	39
9	Dialysis (Renal) fees	17	22
10	Medical Supplies -Syringes/cotton/ etc.	46	58
11	Dentists' fees	24	29
12	Hospital fees (Government hospitals)	44	54
13	Hospital fees (Investment hospitals)	105	131
14	Hospital fees (HIO)	9	12
15	Dayas' fees	10	12
16	Other medical services	33	41
17	Health insurance premiums	164	205
	Total Household Health Expenditures	1,896	2,370
	Total Household Health Expenditures excluding insurance premiums	1,732	2,165

Notes: See text for discussion.

Final estimates of household health expenditures

The adjusted estimate of household health expenditures given above can be further revised in order to achieve internal consistency with the data on other items of health expenditure and with the provisional results from the first round of the 1994 Harvard/DOP household health survey. This indicated that total household health expenditures amounted to LE 605 per household in 1994.[1] Adjusting for inflation, this is considerably greater than that recorded in the CAPMAS survey. However, as explained, it is likely that part of this difference is due to relatively greater underreporting in the CAPMAS survey. The extent of underreporting would have been expected to be least for purchases of drugs, and the figures give some support to this. The CAPMAS survey reported that approximately 57.8% of spending was for drug purchases, while the Harvard/DOP survey found the share to be 50.6%.

If the midpoint of these two estimates is taken as the actual share, i.e., 54.2%, and it is assumed that the estimate of drug purchases is correct, then it is necessary to adjust the non-drug expenditures upwards by another 15%. If this is done, the final estimate of total household health expenditures will be LE 2,302 millions, of which drug purchases amount to 54%. This was equivalent to LE 44 per capita in total.

[1] The discussion in this section refers to household health expenditures excluding insurance premiums.

Using the results of the first round of the Harvard/DOP survey as a guide, it is then possible to disaggregate these expenditures into expenditures on drugs, inpatient care and outpatient care. This yields the final estimates given in Table 2.31. [1]

Table 2.31: Final estimates of household health expenditures, FY90

Item	*Amount*	*Percentage (%)*
Drug purchases	LE 1,251 millions	54 %
Outpatient care	LE 821 millions	36 %
Inpatient care	LE 230 millions	10 %
Total expenditures	**LE 2,302 millions**	**100 %**

Source: See text.

These estimates were then used to guide the allocation of household spending across all provider types, taking into account all other information that was available about household financing of the various providers. The final estimates are given in Table 1.2, and these represent best guesses of the detailed distribution of household spending.

[1] The provisional results of the first round of the Harvard/DOP Household Health Utilization and Expenditure Survey have been used in making these estimates. Results from both rounds are now available, which indicate a higher level of health expenditures than recorded in the first round. However, there is an indication that the results from the two rounds may be an overestimate of total health spending. For this reason, these more recent results have not been used, until the reasons for the discrepancies are better understood.

Final Notes

Egypt's health care system is pluralistic and complex. The quantity of information available about the system and its financing is limited, and the quality is often questionable. Traditionally, health care policy has been formulated on the basis of what is known about the public sector, and the private sector contribution has either been ignored or obscure. In this way, Egypt does not differ greatly from most other developing countries. Nevertheless, it has been possible to compile a reasonably accurate and detailed set of national health accounts for Egypt with limited investment of time, human and financial resources. These accounts provide an overview not only of the role of public financing, but also of private financing and provision. These accounts can certainly be improved both in terms of reliability and detail, but it is unlikely that the overall picture obtained of the financing system will change.

Existence of a set of national health accounts should assist attempts to describe and understand the problems of the Egyptian health care system, and should also assist in developing potential reforms. For example, policy makers in recent years have spent much effort attempting to find solutions to the problem of what is perceived as a low level of financial resources entering the health care system, and in particular a low level of contributions by households for their own health care. However, the national health accounts indicate a relatively high level of financial resources entering the health care system, and a relatively high level of spending by households. This might suggest that the crucial problems in the system are of a different nature.

Health systems are not static; they change over time. Ideally, a set of national health accounts would be compiled every year. However, technical and financial resources are limited, and so annual repetition of the exercise involved in compiling these estimates each year is not feasible or likely. Much of the data utilized is generated on a regular basis by various government agencies. It would therefore be possible to update these accounts on a yearly basis, particularly in the case of government health expenditures. This would of course require the setting up of an institutional capacity within MOH to repeat this work on regular basis. Presently, this is unlikely to happen. Revision of estimates of private expenditures on an annual basis is not possible, since survey data on household spending becomes available only infrequently. In spite of that, it should be noted that a detailed set of data on household expenditures on health is now available for 1994/95 from the Harvard Household Health Utilization and Expenditure Survey. It will therefore be possible to bring these national health accounts up to date relatively easily.

This report has only provided estimates of health spending by source and use on a national basis. Additional data that are available also permit disaggregation of spending on a geographical basis, as well as according to socioeconomic groups. It is hoped to release such estimates in the near future.

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Statistical Annex

1. General Background Information

Table A1.1: Basic macroeconomic data for Egypt

Year	*Population (millions)*	*GDP at market prices (LE billions)*	*GDP per capita (nominal LE)*	*Exchange rate (LE per US$)*
1985	46.511	33.1	712	0.955
1986	47.694	38.4	804	1.069
1987	48.879	45.3	926	1.273
1988	50.064	54.6	1,090	1.761
1989	51.246	65.6	1,280	1.937
1990	52.426	78.9	1,505	2.229
1991	53.571	98.7	1,842	3.009
1992	54.679	118.2	2,161	3.323

Source: World Bank (1994b).

Table A1.2: Social indicators for Egypt

Year	*Infant mortality rate*	*Life expectancy at birth*	*Total fertility rate*	*Primary school enrollment rate*
1985				91.0
1986				88.0
1987	86.0	59.1	4.3	96.0
1988				96.0
1989				98.0
1990				101.0
1991				101.0
1992	57.0	61.6	3.8	

Source: World Bank (1994b).

Table A1.3: Price deflators for Egypt, 1985-1993

Calendar Year	*Fiscal Year*	*GDP deflator (1987=100)*	*Derived fiscal year GDP deflator (1987=100)*
1985		77.1	
	FY85		82.0
1986		86.9	
	FY86		93.4
1987		100.0	
	FY87		108.0
1988		116.0	
	FY88		125.7
1989		135.4	
	FY89		147.2
1990		158.9	
	FY90		176.6
1991		194.3	
	FY91		213.1
1992		232.0	
	FY92		244.0
1993		256.0	

Note: The GDP deflator series given is from World Bank (1994b), and is equivalent to the implicit GDP deflator. This series is constructed on a calendar year basis, and so cannot be immediately applied to fiscal year data, as was done in Kemprecos (1994). The derived fiscal year deflator given is estimated as the arithmetical average of the numbers for the corresponding years in the first series, with the index set to 100 at the beginning of 1987.

2. MOH Expenditures

Table A2.1: MOH expenditures per capita, FY89-92 (actual in constant 1987 LE)

	Fiscal Year				*Change FY*
Level	*FY89*	*FY90*	*FY91*	*FY92*	*89-92*
MOH Headquarters	0.93	0.99	1.82	2.15	133%
Cairo	7.30	6.68	5.84	5.33	-26%
Alexandria	9.46	8.74	7.36	7.85	-16%
Suez	13.48	11.08	11.25	10.93	-18%
Port Said	16.22	14.89	14.86	14.41	-10%
Ismailia	9.84	10.72	13.12	11.23	15%
Daqahlia	7.23	6.64	7.21	6.26	-13%
Gharbia	8.87	8.64	8.04	7.56	-14%
Qalyoubia	6.94	6.17	5.86	5.54	-19%
Damietta	12.80	13.45	12.48	10.41	-18%
Sharqia	6.11	6.60	6.64	5.04	-17%
Beheira	6.62	6.02	6.17	4.69	-29%
Menoufia	7.21	6.44	6.54	6.17	-14%
Kafr El Sheikh	6.81	6.25	6.75	6.27	-7%
Giza	5.40	4.96	5.17	4.82	-10%
Fayoum	6.88	6.31	5.80	5.34	-22%
Assiut	7.32	6.85	7.29	6.50	-10%
Beni Suef	9.19	8.31	9.96	6.92	-24%
Aswan	14.13	12.66	12.45	12.78	8%
Luxor	na	na	na	na	na
Sohag	5.59	5.14	5.07	5.05	-9%
Minya	6.74	5.91	10.96	10.93	64%
Qena	5.94	4.10	5.01	4.89	-17%
Matrouh	14.42	11.64	11.49	10.66	-26%
Red Sea	26.74	20.84	22.11	33.02	25%
North Sinai	22.36	20.73	15.60	13.93	-37%
South Sinai	52.17	48.31	43.41	44.46	-14%
New Valley	32.60	30.39	30.23	50.45	56%
Total	8.57	8.08	9.11	8.90	+5%

Source: MOF and DOP. All figures are for actual expenditures. Luxor is a new governorate created by dividing Aswan into Aswan and Luxor. DOP was unable to supply information on the separate populations of each governorate, so no per capita estimates are given for Luxor. The Aswan figures are for the original area of Aswan, including Luxor.

Table A2.2: Distribution of MOH expenditures by budget chapter, FY92 (actual in nominal LE)

	Chapters					*Per*
Unit	*1*	*2*	*3*	*4*	*Total*	*capita*
MOH Headquarters	13,053,441	161,685,563	118,466,000	0	293,205,004	5.3
Cairo	60,271,287	23,786,011	3,086,996	1,041,916	88,186,210	13.1
Alexandria	40,469,757	13,684,240	7,742,804	2,517,734	64,414,535	19.3
Suez	5,855,984	3,366,441	1,039,176	3,992	10,265,593	26.9
Port Said	10,812,550	3,869,663	1,259,050	173,705	16,114,968	35.4
Ismailia	8,927,488	2,560,067	4,604,522	1,641,464	17,733,541	27.6
Daqahlia	42,886,697	8,814,475	9,313,819	466,313	61,481,304	15.4
Gharbia	42,371,295	12,289,473	6,092,309	271,201	61,024,278	18.6
Qalyoubia	27,586,493	9,199,049	3,072,981	20	39,858,543	13.6
Damietta	11,499,875	6,596,667	3,110,915	482,602	21,690,059	25.6
Sharqia	36,794,282	6,997,769	4,514,374	768,557	49,074,982	12.4
Beheira	26,888,775	11,175,567	5,606,946	0	43,671,288	11.5
Menoufia	27,614,769	7,256,319	4,074,984	0	38,946,072	15.2
Kafr El Sheikh	20,917,184	6,093,017	5,039,739	42,154	32,092,094	15.4
Giza	32,420,674	14,646,945	3,154,083	21,966	50,243,668	11.9
Fayoum	17,838,903	4,934,190	1,321,380	35,101	24,129,574	13.1
Assiut	31,098,382	6,053,062	3,899,782	0	41,051,226	16.0
Beni Suef	22,042,117	4,833,661	1,141,471	589,178	28,606,427	17.0
Aswan	14,601,239	7,082,550	6,747,236	1,078,370	29,509,395	42.2
Luxor	3,169,753	1,820,272	2,040,076	3,046,949	10,077,050	na
Sohag	24,243,539	6,662,523	3,899,782	0	34,805,844	12.4
Minya	33,710,514	40,784,394	7,050,447	352,100	81,897,455	26.9
Qena	20,521,798	7,409,701	3,770,155	0	31,701,654	12.0
Matrouh	2,897,809	1,630,668	621,836	0	5,150,313	26.1
Red Sea	2,651,529	1,996,511	2,697,242	1,996,273	9,341,555	81.2
North Sinai	5,013,418	1,791,166	1,078,987	0	7,883,571	34.3
South Sinai	2,007,423	1,007,476	1,435,720	306,501	4,757,120	108.1
New Valley	5,148,216	3,041,543	5,148,216	3,041,543	16,379,518	124.1
Total	593,315,191	381,068,983	221,031,028	17,877,639	1,213,292,841	21.9

Source: MOF and DOP. All figures are for actual expenditures in nominal LE.

Note: Estimated total population of Luxor was not available to DOP at the time of writing, and so no figure for per capita spending in that governorate is given. The figure for Aswan refers to Luxor and Aswan combined.

Table A2.3: Distribution of MOH expenditures by budget chapter, FY92 (percentage of total)

	Chapters					*LE per*
Unit	*1*	*2*	*3*	*4*	*Total*	*capita*
MOH Headquarters	4.5	55.1	40.4	0.0	100.0	5.3
Cairo	68.3	27.0	3.5	1.2	100.0	13.1
Alexandria	62.8	21.2	12.0	3.9	100.0	19.3
Suez	57.0	32.8	10.1	0.0	100.0	26.9
Port Said	67.1	24.0	7.8	1.1	100.0	35.4
Ismailia	50.3	14.4	26.0	9.3	100.0	27.6
Daqahlia	69.8	14.3	15.1	0.8	100.0	15.4
Gharbia	69.4	20.1	10.0	0.4	100.0	18.6
Qalyoubia	69.2	23.1	7.7	0.0	100.0	13.6
Damietta	53.0	30.4	14.3	2.2	100.0	25.6
Sharqia	75.0	14.3	9.2	1.6	100.0	12.4
Beheira	61.6	25.6	12.8	0.0	100.0	11.5
Menoufia	70.9	18.6	10.5	0.0	100.0	15.2
Kafr El Sheikh	65.2	19.0	15.7	0.1	100.0	15.4
Giza	64.5	29.2	6.3	0.0	100.0	11.9
Fayoum	73.9	20.4	5.5	0.1	100.0	13.1
Assiut	75.8	14.7	9.5	0.0	100.0	16.0
Beni Suef	77.1	16.9	4.0	2.1	100.0	17.0
Aswan	49.5	24.0	22.9	3.7	100.0	42.2
Luxor	31.5	18.1	20.2	30.2	100.0	na
Sohag	69.7	19.1	11.2	0.0	100.0	12.4
Minya	41.2	49.8	8.6	0.4	100.0	26.9
Qena	64.7	23.4	11.9	0.0	100.0	12.0
Matrouh	56.3	31.7	12.1	0.0	100.0	26.1
Red Sea	28.4	21.4	28.9	21.4	100.0	81.2
North Sinai	63.6	22.7	13.7	0.0	100.0	34.3
South Sinai	42.2	21.2	30.2	6.4	100.0	108.1
New Valley	31.4	18.6	31.4	18.6	100.0	124.1
Total	48.9	31.4	18.2	1.5	100.0	21.9

Source: MOF and DOP. All figures are for actual expenditures in nominal LE.

Note: Estimated total population of Luxor was not available to DOP at the time of writing, and so no figure for per capita spending in that governorate is given. The figure for Aswan refers to Luxor and Aswan combined.

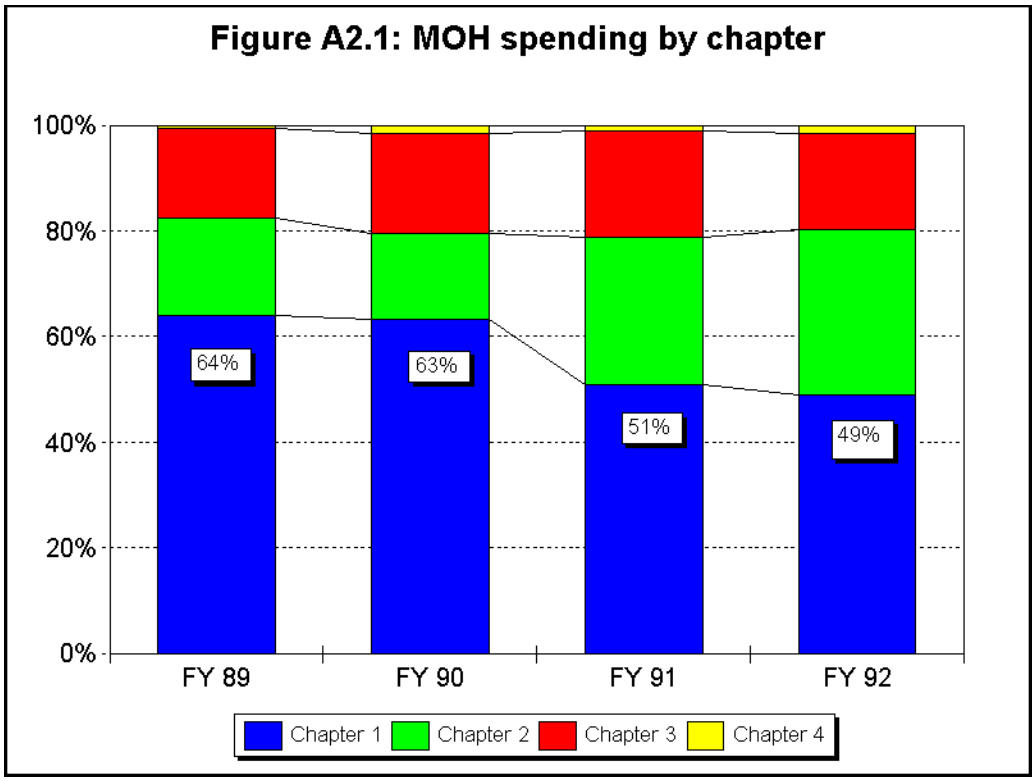
Figure A2.1: MOH spending by chapter
100%
80%
60%
40%
20%
0%
64%
63%
51%
49%
FY 89
FY 90
FY 91
FY 92
Chapter 1
Chapter 2
Chapter 3
Chapter 4

Table A2.4: Distribution of MOH expenditures by budget chapter, FY89 (actual in nominal LE)

	Chapters					*Per*
Unit	*1*	*2*	*3*	*4*	*Total*	*capita*
MOH Headquarters	9,539,070	.	60,447,000	.	69,986,070	1.4
Cairo	41,816,621	17,337,792	7,459,001	601,889	67,215,303	10.7
Alexandria	27,321,632	10,024,709	5,183,583	15,572	42,545,496	13.9
Suez	4,761,311	1,764,783	757,521	900	7,284,515	19.8
Port Said	7,756,487	2,290,993	368,065	0	10,415,545	23.9
Ismailia	6,402,615	1,589,264	0	598,765	8,590,644	14.5
Daqahlia	28,480,338	5,902,499	4,848,814	0	39,231,651	10.6
Gharbia	28,488,767	6,539,611	4,176,737	6,973	39,212,088	13.1
Qalyoubia	19,272,071	6,764,477	1,665,063	156,606	27,858,217	10.2
Damietta	7,397,780	3,668,538	3,426,569	175,762	14,668,649	18.8
Sharqia	27,358,556	5,021,562	0	159,186	32,539,304	9.0
Beheira	25,279,178	6,227,377	1,977,782	207,637	33,691,974	9.7
Menoufia	19,070,669	4,462,284	1,443,100	0	24,976,053	10.6
Kafr El Sheikh	13,872,468	3,661,722	1,460,332	0	18,994,522	10.0
Giza	21,504,238	7,951,037	2,663,645	38,115	32,157,035	7.9
Fayoum	12,397,310	3,380,635	895,223	14,548	16,687,716	10.1
Assiut	20,239,096	4,292,746	824,858	43,888	25,400,588	10.8
Beni Suef	15,619,897	3,345,748	1,645,654	0	20,611,299	13.5
Aswan	10,324,486	4,460,548	2,229,099	651,888	17,666,021	23.6
Luxor	2,121,126	305,718	0	0	2,426,844	na
Sohag	16,346,840	3,874,755	1,074,037	0	21,295,632	8.2
Minya	19,887,915	5,212,893	2,719,828	1,542	27,822,178	9.9
Qena	14,125,977	5,210,086	1,547,112	24,710	20,907,885	8.7
Matrouh	2,213,448	986,898	486,380	0	3,686,726	21.2
Red Sea	2,020,188	1,106,088	861,081	13,107	4,000,464	39.2
North Sinai	4,149,971	1,047,703	839,829	68,669	6,106,172	32.8
South Sinai	1,490,171	474,037	408,082	52,316	2,424,606	75.8
New Valley	3,490,442	1,402,710	882,729	0	5,775,881	48.1
Total	412,748,668	118,307,213	110,291,124	2,832,073	644,179,078	12.6

Source: MOF and DOP. All figures are for actual expenditures in nominal LE.

Note: Estimated total population of Luxor was not available to DOP at the time of writing, and so no figure for per capita spending in that governorate is given. The figure for Aswan refers to Luxor and Aswan combined.

Table A2.5: Distribution of MOH expenditures by budget chapter, FY89 (percentage of total)

	Chapters					*LE per*
Unit	*1*	*2*	*3*	*4*	*Total*	*capita*
MOH Headquarters	na	na	na	na	100.0	5.3
Cairo	62.2	25.8	11.1	0.9	100.0	13.1
Alexandria	64.2	23.6	12.2	0.0	100.0	19.3
Suez	65.4	24.2	10.4	0.0	100.0	26.9
Port Said	74.5	22.0	3.5	0.0	100.0	35.4
Ismailia	74.5	18.5	0.0	7.0	100.0	27.6
Daqahlia	72.6	15.0	12.4	0.0	100.0	15.4
Gharbia	72.7	16.7	10.7	0.0	100.0	18.6
Qalyoubia	69.2	24.3	6.0	0.6	100.0	13.6
Damietta	50.4	25.0	23.4	1.2	100.0	25.6
Sharqia	84.1	15.4	0.0	0.5	100.0	12.4
Beheira	75.0	18.5	5.9	0.6	100.0	11.5
Menoufia	76.4	17.9	5.8	0.0	100.0	15.2
Kafr El Sheikh	73.0	19.3	7.7	0.0	100.0	15.4
Giza	66.9	24.7	8.3	0.1	100.0	11.9
Fayoum	74.3	20.3	5.4	0.1	100.0	13.1
Assiut	79.7	16.9	3.2	0.2	100.0	16.0
Beni Suef	75.8	16.2	8.0	0.0	100.0	17.0
Aswan	58.4	25.2	12.6	3.7	100.0	31.4
Luxor	87.4	12.6	0.0	0.0	100.0	na
Sohag	76.8	18.2	5.0	0.0	100.0	12.4
Minya	71.5	18.7	9.8	0.0	100.0	26.9
Qena	67.6	24.9	7.4	0.1	100.0	12.0
Matrouh	60.0	26.8	13.2	0.0	100.0	26.1
Red Sea	50.5	27.6	21.5	0.3	100.0	81.2
North Sinai	68.0	17.2	13.8	1.1	100.0	34.3
South Sinai	61.5	19.6	16.8	2.2	100.0	108.1
New Valley	60.4	24.3	15.3	0.0	100.0	124.1
Total	64.1	18.4	17.1	0.4	100.0	21.9

Source: MOF and DOP. All figures are for actual expenditures in nominal LE.

Note: Data for MOH headquarters are of questionable reliability, and so no breakdown is given for this year. Estimated total population of Luxor was not available to DOP at the time of writing, and so no figure for per capita spending in that governorate is given. The figure for Aswan refers to Luxor and Aswan combined.

Table A2.6: Distribution of MOH expenditures by budget chapter, FY90 (actual in nominal LE)

	Chapters					*Per*
Unit	*1*	*2*	*3*	*4*	*Total*	*capita*
MOH Headquarters	11,211,315	na	80,059,000	na	91,270,315	1.7
Cairo	47,672,207	17,230,322	6,806,235	4,131,962	75,840,726	11.8
Alexandria	31,382,664	10,708,004	6,362,187	0	48,452,855	15.4
Suez	5,119,929	1,700,914	558,675	0	7,379,518	19.6
Port Said	8,946,030	2,325,403	428,639	81,875	11,781,947	26.3
Ismailia	7,174,723	1,666,051	1,819,648	869,808	11,530,230	18.9
Daqahlia	33,376,687	6,435,302	4,321,832	273,946	44,407,767	11.7
Gharbia	32,971,695	8,011,385	5,960,096	163,541	47,106,717	15.3
Qalyoubia	21,867,986	6,551,264	1,851,712	280,501	30,551,463	10.9
Damietta	8,640,392	4,541,783	2,848,356	2,974,279	19,004,810	23.8
Sharqia	31,309,064	5,397,114	6,523,543	83,946	43,313,667	11.7
Beheira	29,805,839	5,984,100	1,935,931	0	37,725,870	10.6
Menoufia	21,735,390	4,602,830	1,180,248	0	27,518,468	11.4
Kafr El Sheikh	16,041,940	4,094,002	1,351,185	0	21,487,127	11.0
Giza	24,947,833	9,301,774	2,137,688	9,018	36,396,313	8.8
Fayoum	14,200,995	3,232,906	1,385,003	34,043	18,852,947	11.1
Assiut	23,767,404	4,318,908	958,647	273,385	29,318,344	12.1
Beni Suef	17,968,582	3,414,894	1,602,221	8,763	22,994,460	14.7
Aswan	11,549,683	4,467,756	1,995,492	1,493,339	19,506,270	31.6
Luxor	2,467,801	1,136,885	4,459,187	0	8,063,873	na
Sohag	18,513,153	3,984,359	1,084,711	570,460	24,152,683	9.1
Minya	22,441,991	5,434,988	2,004,380	213,175	30,094,534	10.4
Qena	16,377,342	540,794	884,201	0	17,802,337	7.2
Matrouh	2,423,028	989,139	222,531	24,510	3,659,208	20.6
Red Sea	2,224,736	1,049,066	570,947	600	3,845,349	36.8
North Sinai	4,702,353	1,114,884	1,097,070	61,097	6,975,404	36.6
South Sinai	1,652,240	574,414	495,358	50,699	2,772,711	85.3
New Valley	3,908,995	1,767,549	964,900	13,000	6,654,444	53.7
Total	474,401,997	120,576,790	141,869,623	11,611,947	748,460,357	14.3

Source: MOF and DOP. All figures are for actual expenditures in nominal LE.

Note: Estimated total population of Luxor was not available to DOP at the time of writing, and so no figure for per capita spending in that governorate is given. The figure for Aswan refers to Luxor and Aswan combined.

Table A2.7: Distribution of MOH expenditures by budget chapter, FY90 (percentage of total)

	Chapters					*LE per*
Unit	*1*	*2*	*3*	*4*	*Total*	*capita*
MOH Headquarters	na	na	na	na	100.0	1.7
Cairo	62.9	22.7	9.0	5.4	100.0	11.8
Alexandria	64.8	22.1	13.1	0.0	100.0	15.4
Suez	69.4	23.0	7.6	0.0	100.0	19.6
Port Said	75.9	19.7	3.6	0.7	100.0	26.3
Ismailia	62.2	14.4	15.8	7.5	100.0	18.9
Daqahlia	75.2	14.5	9.7	0.6	100.0	11.7
Gharbia	70.0	17.0	12.7	0.3	100.0	15.3
Qalyoubia	71.6	21.4	6.1	0.9	100.0	10.9
Damietta	45.5	23.9	15.0	15.7	100.0	23.8
Sharqia	72.3	12.5	15.1	0.2	100.0	11.7
Beheira	79.0	15.9	5.1	0.0	100.0	10.6
Menoufia	79.0	16.7	4.3	0.0	100.0	11.4
Kafr El Sheikh	74.7	19.1	6.3	0.0	100.0	11.0
Giza	68.5	25.6	5.9	0.0	100.0	8.8
Fayoum	75.3	17.1	7.3	0.2	100.0	11.1
Assiut	81.1	14.7	3.3	0.9	100.0	12.1
Beni Suef	78.1	14.9	7.0	0.0	100.0	14.7
Aswan	59.2	22.9	10.2	7.7	100.0	31.6
Luxor	30.6	14.1	55.3	0.0	100.0	na
Sohag	76.7	16.5	4.5	2.4	100.0	9.1
Minya	74.6	18.1	6.7	0.7	100.0	10.4
Qena	92.0	3.0	5.0	0.0	100.0	7.2
Matrouh	66.2	27.0	6.1	0.7	100.0	20.6
Red Sea	57.9	27.3	14.8	0.0	100.0	36.8
North Sinai	67.4	16.0	15.7	0.9	100.0	36.6
South Sinai	59.6	20.7	17.9	1.8	100.0	85.3
New Valley	58.7	26.6	14.5	0.2	100.0	53.7
Total	63.4	16.1	19.0	1.6	100.0	14.3

Source: MOF and DOP. All figures are for actual expenditures in nominal LE.

Note: Data for MOH headquarters are of questionable reliability, and so no breakdown is given for this year. Estimated total population of Luxor was not available to DOP at the time of writing, and so no figure for per capita spending in that governorate is given. The figure for Aswan refers to Luxor and Aswan combined.

Table A2.8: Distribution of MOH expenditures by budget chapter, FY91 (actual in nominal LE)

	Chapters					*Per*
Unit	*1*	*2*	*3*	*4*	*Total*	*capita*
MOH Headquarters	12,585,052	78,121,912	118,826,000	0	209,532,964	3.9
Cairo	52,685,819	23,035,711	5,980,382	323,339	82,025,251	12.5
Alexandria	34,912,797	8,398,730	7,490,700	15,523	50,817,750	15.7
Suez	5,582,122	2,534,528	826,642	139,813	9,083,105	24.0
Port Said	9,756,846	3,980,792	560,491	0	14,298,129	31.7
Ismailia	7,776,543	2,719,297	6,826,727	143,000	17,465,567	28.0
Daqahlia	37,653,685	10,724,754	10,476,548	909,435	59,764,422	15.4
Gharbia	36,517,612	14,353,058	3,701,787	6,072	54,578,529	17.1
Qalyoubia	24,321,430	8,708,626	2,558,170	150,644	35,738,870	12.5
Damietta	9,629,689	6,672,851	5,516,250	81,505	21,900,295	26.6
Sharqia	33,878,598	7,843,518	6,192,552	6,345,981	54,260,649	14.2
Beheira	32,956,046	10,602,149	4,501,404	138,858	48,198,457	13.2
Menoufia	24,216,130	6,634,784	3,857,226	0	34,708,140	13.9
Kafr El Sheikh	18,381,385	9,247,746	1,345,160	0	28,974,291	14.4
Giza	28,199,744	15,221,734	2,654,714	153,395	46,229,587	11.0
Fayoum	15,789,100	4,517,265	1,388,760	43,185	21,738,310	12.4
Assiut	27,953,207	9,274,036	1,136,899	395,136	38,759,278	15.5
Beni Suef	19,861,038	5,630,388	8,702,196	253,004	34,446,626	21.2
Aswan	12,731,914	7,607,100	2,246,416	1,413,136	23,998,566	34.0
Luxor	2,676,324	1,512,787	2,466,709	128,333	6,784,153	na
Sohag	21,458,375	5,757,047	2,249,805	0	29,465,227	10.8
Minya	29,698,255	33,070,079	6,387,450	4,086	69,159,870	23.4
Qena	18,575,043	7,048,130	1,571,015	0	27,194,188	10.7
Matrouh	2,496,226	1,570,372	499,051	0	4,565,649	24.5
Red Sea	2,357,299	1,198,835	1,577,184	2,430	5,135,748	47.1
North Sinai	4,673,053	1,776,689	464,998	0	6,914,740	33.2
South Sinai	1,845,085	853,829	308,896	415,578	3,423,388	92.5
New Valley	4,514,029	2,720,354	1,013,436	0	8,247,819	64.4
Total	533,682,446	291,337,101	211,327,568	11,062,453	1,047,409,568	19.4

Source: MOF and DOP. All figures are for actual expenditures in nominal LE.

Note: Estimated total population of Luxor was not available to DOP at the time of writing, and so no figure for per capita spending in that governorate is given. The figure for Aswan refers to Luxor and Aswan combined.

Table A2.9: Distribution of MOH expenditures by budget chapter, FY91 (percentage of total)

	Chapters					*LE per*
Unit	*1*	*2*	*3*	*4*	*Total*	*capita*
MOH Headquarters	6.0	37.3	56.7	0.0	100.0	3.9
Cairo	64.2	28.1	7.3	0.4	100.0	12.5
Alexandria	68.7	16.5	14.7	0.0	100.0	15.7
Suez	61.5	27.9	9.1	1.5	100.0	24.0
Port Said	68.2	27.8	3.9	0.0	100.0	31.7
Ismailia	44.5	15.6	39.1	0.8	100.0	28.0
Daqahlia	63.0	17.9	17.5	1.5	100.0	15.4
Gharbia	66.9	26.3	6.8	0.0	100.0	17.1
Qalyoubia	68.1	24.4	7.2	0.4	100.0	12.5
Damietta	44.0	30.5	25.2	0.4	100.0	26.6
Sharqia	62.4	14.5	11.4	11.7	100.0	14.2
Beheira	68.4	22.0	9.3	0.3	100.0	13.2
Menoufia	69.8	19.1	11.1	0.0	100.0	13.9
Kafr El Sheikh	63.4	31.9	4.6	0.0	100.0	14.4
Giza	61.0	32.9	5.7	0.3	100.0	11.0
Fayoum	72.6	20.8	6.4	0.2	100.0	12.4
Assiut	72.1	23.9	2.9	1.0	100.0	15.5
Beni Suef	57.7	16.3	25.3	0.7	100.0	21.2
Aswan	53.1	31.7	9.4	5.9	100.0	34.0
Luxor	39.4	22.3	36.4	1.9	100.0	na
Sohag	72.8	19.5	7.6	0.0	100.0	10.8
Minya	42.9	47.8	9.2	0.0	100.0	23.4
Qena	68.3	25.9	5.8	0.0	100.0	10.7
Matrouh	54.7	34.4	10.9	0.0	100.0	24.5
Red Sea	45.9	23.3	30.7	0.0	100.0	47.1
North Sinai	67.6	25.7	6.7	0.0	100.0	33.2
South Sinai	53.9	24.9	9.0	12.1	100.0	92.5
New Valley	54.7	33.0	12.3	0.0	100.0	64.4
Total	51.0	27.8	20.2	1.1	100.0	19.4

Source: MOF and DOP. All figures are for actual expenditures in nominal LE.

Note: Estimated total population of Luxor was not available to DOP at the time of writing, and so no figure for per capita spending in that governorate is given. The figure for Aswan refers to Luxor and Aswan combined.

3. Notes on construction of NHA estimates for FY90

MOH expenditures

MOH expenditures were reported as LE 748.5 millions in FY90. To this must be added any user fees earned by MOH facilities which were not reported to MOF or included in facility accounts. Total user fees were conservatively estimated at LE 11 million using reported data. To this was added a small amount of LE 4 millions, which is an arbitrary, but conservative, amount of user fee income not reported by facilities.

The largest recipient of aid is MOH. As explained in the section reviewing expenditures by MOH, it is difficult to accurately ascertain the total amount of assistance received by MOH. For the purpose of these NHA estimates, it was assumed that approximately three-quarters of official donor assistance (75% of the total or LE 135 millions) is given to support MOH and its activities. This is reasonably consistent with the limited information available on some donors' aid programs. Thus, it should be noted that a significant proportion of the official MOH budget is accounted for assistance given by official donors. This includes both assistance in the form of direct grants and loans, as well as assistance in kind, since MOF accounting practices includes both forms. However, it is not clear that MOF necessarily values all assistance in kind at the actual cost to the foreign donor, and it is likely that some forms of assistance are undervalued in the MOH budget. In addition, it is also the case that some aid meant to support MOH programs do not appear in MOH accounts as it is used to directly procure services from third party suppliers. Since it is difficult to quantify each of these problems, it is assumed for the purpose of these NHA estimates that one third (33%) of all foreign assistance meant to be given to MOH is not counted by MOF as part of the MOH budget.

Based on the above assumptions, total MOH expenditures are estimated at LE 798 millions. This includes both officially recorded expenditures, as well as a significant amount of expenditures not recorded in the accounts. The following table gives a breakdown of the various sources of MOH expenditures, as assumed for the purpose of estimating NHA.

Table A3.1: Estimation of MOH expenditures for NHA, FY90

Item	*Amount (LE millions)*
MOF transfer to MOH*	647
Donor support for MOH included in accounts*	90
User fee income at MOH facilities recorded in accounts	11
Total MOH expenditures recorded in MOF accounts	748
Donor support for MOH not included in accounts*	45
User fee income for MOH not recorded in accounts*	4
Total MOH expenditures not recorded in MOF accounts*	49
Total estimated MOH expenditures	**797**

Note: Items marked with an asterisk * are estimates.

Teaching hospitals

Teaching hospitals' income was reported as LE 66 millions in FY90 by MOF, of which LE 4 millions was in the form of patient fees. Most of this was derived from MOF itself, but some teaching hospitals did receive support from foreign donors. A reasonable estimate of this foreign support would be LE 3 millions, and it is assumed for the purpose of the NHA estimates that only two-thirds of this was accounted for by the accounts given to MOF.

University hospitals

Total expenditures of university hospitals were estimated at LE 334 millions in FY90. However, university hospitals reporting data indicated that 5% of their income was from sources other than patients and MOF. Available information from foreign donors indicate that university hospitals do receive significant support from the donors, perhaps in the range of LE 20-30 millions. Making the assumption that one-third of donor assistance is not accounted for in the accounts of the university hospitals, and that the 5% of additional income reported above was primarily from donors, it is possible to arrive at the following estimates of income at university hospitals.

Table A3.2: Estimation of university hospital income for NHA, FY90

Item	*Amount (LE millions)*
MOE transfer to university hospitals*	270
Donor support included in accounts*	16
Patient revenues recorded in accounts	48
Total income recorded in hospital accounts	334
Donor support not included in accounts*	8
Total income not recorded in MOF accounts*	8
Total estimated income	**342**

Note: Items marked with an asterisk * are estimates.