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Egypt National Health Accounts 1994–1995

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Abstract

National Health Accounts (NHA) are designed to give a comprehensive description of resource flows in a health care system, showing where resources come from, and how they are used. Although previous health care expenditure studies had been carried out in Egypt, none had used the integrating framework of National Health Accounts to organize and compile the data. The first set of National Health Accounts were released in 1993, and provided estimates of national health expenditures in FY91. This second round of NHA estimates also benefits considerably from new data that became available from the survey of household health utilization and expenditure conducted by the Harvard School of Public Health and the Egyptian Ministry of Health and Population in 1994/95.

Total national health spending is estimated at LE 7,516 millions in FY95, equivalent to 3.7 percent of GDP, or US$ 38 per capita. Total expenditures may have increased from 3.4 percent of GDP in 1991. Public financing accounted for 44 percent of total spending, with most of the rest accounted for by household spending out-of-pocket. Social insurance expenditures including students insurance have increased their share of total public spending. Donor expenditures amount to less than 4 percent of total spending, and private insurance is negligible.

Substantial progress has been made in institutionalising NHA capacity at the Ministry of Health and Population during the process of making the Egypt National Health Accounts (ENHA) 1995 estimates. Nevertheless, given a difficult institutional environment, continued participation by other local researchers and some limited external technical assistance will be required in the medium term to sustain local capacity.

The following report presents the results of the 1994/95 NHAs, provides details on the data collected to construct the estimations, and gives details of the data estimation procedures used. It is structured in two parts. This first part provides an overview of the results and their implications. The second part is organized according to major institutional groupings, and gives technical details of where data were collected from. The third part provides additional information on how the collected data was adjusted to construct the final NHA matrices. A fourth part provides some information on differences between the estimation procedures and assumptions used in ENHA 1995 and ENHA 1991, and the possible impact on the final results. A statistical annex contains general socioeconomic data for Egypt, and several years of Ministry budgetary expenditures data.

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Preface

National Health Accounts (NHAs) 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 (GOE), 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 NHAs 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 many different public and private providers and financing agents. 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 the GOE. The major health care providers in the government sector are the Ministry of Health (MOH), teaching hospitals, university hospitals, the Health Insurance Organization, the Ministry of Interior, and the Ministry of Defense. The public sector is owned by the government but consists of organizations that are financially autonomous from the GOE; it comprises mainly government-owned companies and commercial organizations. The private sector consists of both non-profit, non-governmental organization providers, as well as for-profit providers such as private medical clinics, private hospitals, and pharmacies.

Many departments and ministries within the GOE spend considerable effort collecting and compiling data on various aspects of the health care system, which might make estimation of a set of NHAs relatively straightforward. However, in practice, much of this data is not widely disseminated or accessible to either private individuals or government officials themselves. Even 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.

During the first round of NHA estimates in 1994 to 1995, considerable efforts were made to identify relevant data sources and collect the necessary information. This process naturally involved a large amount of trial and error. In the second round of NHA estimates, the NHA team was able to learn from this experience and identify more efficient and more accurate methods of obtaining the necessary data, as well as clarifying many inconsistencies or errors in the first estimates. The results presented in this second NHA report represent, therefore, an advance not only in the accuracy and comprehensiveness of the estimates, but a considerable improvement in the speed of the process.

The first NHA estimates took two years to prepare and were released in draft form four years after the end of the fiscal year to which they referred. This second set of estimates for Fiscal Year 1995 (FY95) took only 10 months to prepare and were available in draft form 24 months after the end of the relevant fiscal year. It should be feasible to prepare the next set of estimates for FY96 in a period of six to eight months and to release them within 20 months of the end of FY96. A reasonable estimate is that future NHA estimates can be produced within 12 to 18 months of the end of the fiscal year concerned, since there is an approximate 12- to 18-month timelag in official financial data becoming available. Producing a set of reliable and complete

NHAs on a more timely basis than this is desirable but will require improvements in the GOE's financial information and accounting systems.

This report represents the most comprehensive and accurate description of health-sector financing in Egypt that the MOH-Harvard team could compile from the data available to them. The data provide a firm benchmark for future NHA estimates for Egypt that may be conducted in the next five to 10 years, as well as additional NHA-based analyses looking at the distribution of health care spending or linking the NHA results to simulations of potential policy changes.

It is hoped that this second set of NHA estimates for Egypt will encourage further research by others into the functioning and financing of Egypt's health care system and lead to a better understanding of not only the problems within the system but also of potential solutions.

Acronyms

CAOA	Central Agency for Organization and Administration
CAPMAS	Central Agency for Public Mobilization and Statistics
CCO	Curative Care Organization
DDM	Data for Decision Making Project
DOP	Directorate of Planning
DPPC	Drug Policy and Planning Center
EISA	Egyptian Insurance Supervisory Authority
ENHA	Egyptian National Health Account
FY	Fiscal Year
GDP	Gross Domestic Product
GOE	Government of Egypt
HIO	Health Insurance Organization
IMF	International Monetary Fund
IMR	Infant Mortality Rate
LE	Egyptian Pound
MENA	Middle East and North Africa
MOE	Ministry of Education
MOF	Ministry of Finance
MOH	Ministry of Health
MOHP	Ministry of Health and Population
MOSA	Ministry of Social Affairs
NCMC	National Child and Motherhood Council
NGO	Non-governmental Organization
NHA	National Health Account
NHE	National Health Expenditure
NHHEUS	National Household Health Expenditure and Utilization Survey
NIB	National Investment Bank
NODCAR	National Organization for Drugs Control and Regulation
NPC	National Population Council

OECD	Organization of Economic Cooperation and Development
PHR	Partnerships for Health Reform Project
PIO	Pensions and Insurance Organization
SFD	Social Fund for Development
SHIP	Student Health Insurance Program
SIO	Social Insurance Organization
THIO	Teaching Hospitals and Institutes Organization
UNFPA	United Nations Fund for Population
UNDP	United Nations Development Program
USAID	United States Agency for International Development

Acknowledgments

The figures and estimates presented in this report are based primarily on data collected by the staff and officials of the Ministry of Health and Population (MOHP) and the Ministry of Finance. Additional data was made available by a number of other public- and private-sector organizations, representatives of the various international donor organizations working in Egypt, as well as colleagues at Harvard University. Final revisions and maps were prepared with the assistance of Dananjanee Senagama of the Institute of Policy Studies Health Policy Program.

National Health Accounts (NHA) activities at the Directorate of Planning have benefitted throughout the years from the constant support provided by, first, Dr. Moushira El Shafei as Director of Planning, Ministry of Health, and later by Dr. Magdha Sherbini as first Undersecretary for Curative Care, MOHP. The authors are grateful for the assistance and continuing support provided by representatives of the United States Agency for International Development (USAID) for, in particular, Dr. Sameh El Gayyar, as well as the other staff at the Harvard/Data for Decision Making Project, including Dr. A. K. Nandakumar and Dr. Hassan Salah. Dr. Peter Berman of Harvard University provided useful comments on the original draft report, for which the authors are grateful.

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Estimation of NHAs is a process that must constantly be improved or modified as circumstances and needs change. Comments and questions about this report, its contents and methodology, and suggestions for improvement are always welcome. Any correspondence should be addressed to either of the following:

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Executive Summary

National Health Accounts (NHA) are designed to give a comprehensive description of resource flows in a health care system, showing where resources come from, and how they are used. Although previous health care expenditure studies had been carried out in Egypt, none had used the integrating framework of National Health Accounts to organize and compile the data. The first set of National Health Accounts were released in 1993, and provided estimates of national health expenditures in FY91. This first effort at compiling NHA took two years, and involved considerable efforts, as sources of data were identified and sifted through, and data estimation methods developed. This second set of NHA estimates published here provides figures for health expenditures in FY95. It extends the previous work carried out for the first set of estimates, and builds on them by improving the quality of the data used, replacing assumptions and guesstimates in several places by data-based estimations, and improving overall consistency and accuracy. This second round of NHA estimates also benefits considerably from new data that became available from the survey of household health utilization and expenditure conducted by the Harvard School of Public Health and the Egyptian /Ministry of Health and Population (MOHP) in 1994/95.

The following report presents the results of the 1994/95 NHAs, provides details on the data collected to construct the estimations and gives details of the data estimation procedures used. It is structured in two parts. This first part provides an overview of the results and their implications. The second part is organized according to major institutional groupings, and gives technical details of where data were collected from. The third part provides additional information on how the collected data was adjusted to construct the final NHA matrices. A fourth part provides some information on differences between the estimation procedures and assumptions used in Egypt National Health Accounts (ENHA)95 and ENHA91, and the possible impact on the final results. A statistical annex contains general socioeconomic data for Egypt, and several years of MOHP budgetary expenditures data.

Structure of NHA Results

The objective of the Egypt National Health Accounts is to describe in a comprehensive manner the flow of all health expenditures within Egypt's health care system, including both public and private funding, and for modern and traditional forms of health services. The ENHA describe these expenditures in the form of a matrix structure, which distinguishes between the source and final use of funds. The matrix structure consists of two interlinked matrices to reflect that many expenditure flows do not pass directly from the ultimate funding sources to the final providers of services. A large proportion of overall health care resources are passed from one institutional entity to another before being used finally for the provision of services. For example, individuals and firms pay premiums to both public and social insurance schemes, which in turn pay for the provision of medical services to the covered individuals by different medical providers. This passage of funds through intermediary entities is shown by constructing the ENHA in the form of two interlinked matrices.

In the first matrix, financial flows from the original source of all funds, which by convention are taken as consisting of the government, households, firms and the rest of the world, to financial intermediaries are shown in one part. The second part of the first matrix indicates the quantity of resources which are not transferred through financial intermediaries, which is equivalent to the remaining share of health expenditures. The second matrix describes the funding of the actual health services delivered by providers by the immediate source of the funds involved. In this second matrix, funding sources consist of financial

intermediaries as well as the original ultimate funding sources, in the case of funds which do not first pass through financial intermediaries.

The ENHA are concerned primarily with the flow of resources between institutional and economic entities. For this reason the emphasis in the accounts is in tracing the flow of funds to the providers (or producers) of health services. In this sense the focus when describing the use of funds is on those who are responsible for providing them.

Egypt's Health Care Spending, 1994/1995

Total Spending

Total health care spending in Egypt is estimated to have been LE 7,516 millions in FY95, which was the period from July 1, 1994 to June 30, 1995. This was equivalent to 3.7 percent of gross domestic product (GDP), or LE 127 per capita (US$ 38 per capita). This estimate is considered accurate to within 0.3 percent of GDP. Actual total spending is unlikely to have been more than the equivalent of 4.0 percent of GDP in FY95.

Social insurance involves mandatory payments of premiums by employers and employees. Since these payments are not voluntary, and since the contributors have no control over the allocation of the money collected, social insurance can be regarded as a form of hypothecated tax for health services, which differs from general revenue funding of health services only to the extent that eligibility for use of Health Insurance Organization (HIO) facilities is restricted. The element of general revenue subsidy that Egypt's HIO receives is not unusual. Most, if not all, social health insurance schemes in advanced economies receive such government transfers. However, these transfers in other countries are generally used to extend or subsidize health insurance coverage to sections of the population who are outside the formal employment sector, and formal sector workers in the final analysis generally cross-subsidize other beneficiaries.

The significant contribution of general revenue resources to Egypt's social insurance schemes gives HIO the characteristics more of a subsidized public financing scheme than of a true insurance scheme. From this perspective, Egypt can be regarded as having a plural public financing system for health care. Government resources, which are derived from taxation of firms and individuals, are used to pay for five major publicly organized and operated provider systems: MOH facilities, university hospitals, defense ministry hospitals, and HIO services. Each of these are supplemented by other sources of funding to various degrees, principally user fees in the case of MOH and university facilities, and insurance taxes in the case of HIO. Access to each of these is variable, with MOH services available to all, HIO services only to the formal sector workers, university hospitals to those able to pay the user charges, and defense ministry services to the armed forces personnel and other well-connected individuals.

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 percent of total financing received. More than 90 percent of household funding passes directly to private sector health care providers, without any financial intermediation. These private sector providers consist of non-governmental organizations (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.

Trends in Health Care Spending in the 1990s

The ENHA95 estimates are the second set of NHA estimates for Egypt. Although ENHA95 is based on the ENHA91 study, the results in the two studies are not strictly comparable, because of differences in the estimation procedures and data sources used. The overall results in ENHA91 are overstated in comparison with ENHA95. Details of these differences are given in Part 4 of this report. In general, the ENHA95 results are more accurate and reliable than those given in ENHA91, but no attempt is made in this report to readjust the ENHA91 results in the light of the information gained during ENHA95.

Nevertheless, Part 4 presents some tentative revisions of the ENHA91 results in the absence of any formal recasting of the FY91 results. These revised estimates in conjunction with the time series data that were collected for ENHA95 do provide some tentative indications of trends in health care spending in Egypt in the first half of the 1990s.

Trends in NHE

Nominal health expenditures almost doubled between FY91 and FY95. However, this was a period of considerable price inflation in the Egyptian economy, and so this considerably overstates actual changes in real spending levels. Total national health expenditures grew moderately during 1991-95, with a modest increase in real per capita levels, as well as a percentage of GDP. Total NHE may have increased by as much as 0.3 percent of GDP during this time period, from approximately 3.4 percent of GDP to 3.7 percent of GDP.

In terms of the structure of health care spending, there appears to be have been no substantial change. Both private and public spending increased during this time, and existing patterns remained largely unaltered. The only change of note was the establishment of Student Health Insurance Program (SHIP), which represented a significant increase in public health spending, but it must be noted that SHIP accounts for less than 5 percent of overall health spending in FY95. What is most remarkable is that despite several years of substantial economic changes in Egypt, there has been very little change in the overall financing of health care in Egypt, and in the public sector's role.

Trends in Public Expenditures

This increase in health expenditures was due partly to an increase in private expenditures, but mostly to a substantial increase in public expenditures. Both MOH and HIO spending grew in real terms in the 1990s, with HIO spending expanding substantially. These increases resulted in the share of total national health expenditures accounted for by public financing increasing from 42 percent of the total to 44 percent. However, as noted above, this is still insufficient to prevent Egypt having one of the lowest shares of national health expenditures funded from public financing in the Middle East and North Africa region.

The expansion in MOH spending was distributed equally between MOH headquarters and the governorate-level health directorates. Given that much of MOH headquarters' budget is accounted for by its two national patient treatment programs, it is uncertain whether this observed increase in real spending levels at MOH would have resulted in any significant changes in resource availability at the MOH facilities used by most Egyptians. The two special patient treatment programs administered by MOH Headquarters benefits only a small number of individuals.

HIO's spending increase was wholly accounted for by the rapid expansion of SHIP. FY91 was the year previous to the initial establishment of SHIP, and so the ENHA91 results do not reflect any SHIP activity. In

FY95, SHIP accounts for about one third of total HIO expenditures, and this explains HIO's overall expenditure increase. Real spending levels per beneficiary in HIO's main Law 32 and Law 79 programs were more than 10 percent lower in FY95 than in FY91. The overall increase in HIO spending levels were sufficient to increase its share of total public health expenditures from 20 percent to almost 35 percent.

Spending trends in the other publicly financed health services are uncertain, owing to the lack of complete time series data in the case of university hospitals, and any data in the case of Defense and Interior Ministry facilities. Expenditure trends in the Curative Care Organizations (CCOs) are also difficult to evaluate, since the period under review was marked by significant investments in new CCO facilities, several of which changed ownership during FY95, thus complicating considerable interpretation of the available expenditure data.

Trends in Private Expenditures

Trends in private expenditures are difficult to assess with confidence, given that they are mostly derived as residuals in the NHA estimations, and since they rely predominantly on single data points. Nevertheless, household spending does appear to have increased at least in line with nominal GDP growth during this time, but there is little evidence of any more substantial increase.

Available data on the small private insurance schemes shows that there was very little growth in this sector at all, with some companies reporting reduced revenues from this type of business. Data are insufficient to make any meaningful assessment of trends in expenditures at private hospitals, private clinics and NGOs, or by firms on behalf of their employees.

Trends in Donor Assistance

Donor assistance to the health and population sectors remained relatively unchanged in nominal terms, increasing modestly from LE 180 millions in FY91 to LE 215 millions in FY95. Given price inflation, this represented a decline of almost a half in real spending levels. Examination of the disaggregated data indicates that real declines occurred for virtually all donors (Japan was a singular exception). The decline in real spending levels was greatest for bilateral donors, whose share overall of external assistance fell from more than 90 percent to 76 percent. This decline in bilateral donor assistance was accounted for mostly by the European countries. Multilateral assistance did increase significantly in nominal local currency terms, but the World Bank remained conspicuous by its continuing absence in the health and population sectors. This apparent decline in donor assistance may reflect a completion of previously agreed donor projects, and continuing difficulties that most donors face in developing worthwhile projects in the health sector.

Lessons Learned and Implications

Institutionalization

The second round of Egypt NHA estimates released in this report demonstrate that estimation of accurate and comprehensive NHAs is feasible in the most demanding institutional environment that is found in Egypt. Despite the difficulties in obtaining access to data from official sources, the general reluctance of most government officials to share data even with others within the same ministry, and the many problems in the quality of officially compiled data, ENHA95 was compiled with significant less effort and in less time than was required for ENHA91. This partly reflects the experience gained from the first effort by team members, as well as the increasing use of NHA data by senior Egyptian policy makers.

Although significant external technical assistance was provided to MOHP in constructing the ENHA91 estimates, less was required for ENHA95. However, MOHP is still far from being able to independently construct or estimate NHA. Nevertheless, MOHP and Egypt will shortly be able to achieve full technical competence in this activity through a combination of MOHP and MOF staff and other academic researchers based in local institutions. This combination would allow MOHP to balance its constraints in being unable to provide adequate compensation to appropriately qualified technical experts with the institutional advantages that flow from basing NHA activity in MOHP. It is hoped that continued interest on the part of senior MOHP decision-makers will permit the gradual strengthening of NHA capabilities in MOHP.

Policy Impact

Although there have been few if any major policy changes in Egypt’s health sector in the first half of the 1990s, the results of ENHA91 have become significant elements in the ongoing discussions and debate about the need for and potential options for health sector reform. They have helped policy makers understand the relative contributions of the different institutional sectors in providing and financing health care, and have provided reliable data which would dispel several myths about the functioning and performance of Egypt’s health care system. They establish beyond any doubt that Egypt is a low health care spender, that households bear a considerably higher than average share of the financing burden, and that government financing is too little and too divided to have a substantial effectiveness.

The second round of NHA results illustrate that in the absence of any significant meaningful reform, the health system is unlikely to experience any substantial changes for the better, and existing trends will merely continue. The uncoordinated and divided nature of government’s interventions in the financing of health care in Egypt was noted in ENHA91, and this aspect has if anything become more pronounced in the past few years.

The gradual establishment of NHA capability in MOHP and other local institutions creates the ability to use NHA in future as a tool to monitor and evaluate the impact of any future reforms. ENHA95 clearly shows the impact of SHIP on increased public health expenditures, but it together with other related analyses, shows the limitations of SHIP’s impact.

Looking beyond the simple macro perspective that ENHA91 and ENHA95 provide, the NHA database that has been created over several years provides a strong and reliable basis upon which to support additional and further analyses of health care spending. As part of related work, Harvard University will shortly release an analysis of the distribution of health care spending in Egypt based on the ENHA95 results. This will examine in considerable detail the equity or lack of it in the health financing system. Other analyses such as these are now possible, and it is hoped that MOHP will make the data available in the NHA database as widely available as possible in order to allow other researchers to extend the utility of NHA work in Egypt.

Definitions and Data Notes

Health Expenditures

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. Health includes both the health of individuals as well as of populations. There are many activities that 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. There is no internationally accepted definition of what constitutes health expenditures, but this definition is comparable to that which is conventionally used in other NHA and national health expenditure studies.

National Health Expenditures

These are defined as all health expenditures for the benefit of individuals residing in Egypt. Expenditures for the benefit of Egyptians living abroad are excluded, although expenditures in foreign countries for the benefit of residents of Egypt are included, as well as expenditures for the benefit of foreign citizens resident in Egypt.

Time Period

The fiscal year of the government of Egypt (GOE) runs from July 1 through June 30. Since the bulk of the data collected pertained to the GOE's fiscal year and since planning in the Ministry of Health is based on the fiscal year, the NHAs presented here are organized on that basis. "FY" is used to denote "fiscal year" when appropriate, as in FY95, which refers to Fiscal Year 1994/95, i.e., July 1, 1994, to June 30, 1995. Note that this convention differs from that used previously in Egypt's NHAs for 1990/91. Calendar years are referred to without such annotation so that 1989 refers to calendar year 1989.

The estimates presented are mostly for FY90 to FY95. 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 NHAs presented are for FY95, because this was the only year for which a relatively complete data set could be compiled and since a set of comprehensive, accurate household survey data was also available for this year.

Prices and Currencies

All amounts are given in the relevant currency, typically Egyptian pounds (LE). Where foreign currencies are involved, they have been converted into Egyptian pounds using the average market exchange rate for the relevant calendar year as published by the International Monetary Fund (IMF) in its International Financial Statistics yearbook. When the relevant period is the fiscal year, the mean of the average rates for the two adjacent calendar years has been used. Health expenditures have been estimated for each year in nominal terms. Where noted, estimates have been converted into real terms using the implicit gross domestic product deflator measured in 1989/90 prices, as given in the IMF yearbook (1996).

1. Overview

1.1 The Egyptian Context

Egypt is the largest and most populous country in the Middle East and North Africa (MENA) region. In the 1970s and 1980s, it enjoyed rapid economic growth, benefitting from the effects of the oil boom in the region, generally, and rising revenues from the Suez Canal operations. However, in the late 1980s, resulting economic imbalances and reduced growth in neighboring oil economies led to a substantial deterioration in economic performance. Since the early 1990s, it has been engaged in a gradual program of economic adjustment, designed to restore fiscal balance, reorient both external and internal prices to more realistic levels, and liberalize economic controls. This continuing program has been successful in that Egypt has returned to a path of sustained economic growth in the mid-1990s.

During this period of major economic adjustment there has been continuing concern with the government's policies in the social sectors. The cost of existing social policies has been of concern from a fiscal perspective, and the effectiveness of the existing policy framework in meeting other important public goals, such as poverty alleviation and health improvement, has also been of issue. There has been some recognition that performance in the health sector both before and during adjustment has been less than adequate. There is a general consensus that the quality of health care services available, in particular at government facilities, is poor. Although Egypt did achieve some substantial reductions in child mortality during the 1980s, its overall health performance was and remains poor in comparison with other countries at its income level, and there is little doubt that the rapid improvements of the 1980s have given way to a stagnation in health conditions during the 1990s.

While the government of Egypt (GOE) has yet to develop concrete options for reforming the health sector, private and non-governmental organizations (NGO) have attempted to fill the perceived gap in provision of quality health services. This trend has been of some concern to national policy makers, as it raises doubts in the minds of the population as a whole about the commitment of government leaders to improvements in social conditions. The GOE and its international cooperation partners are currently working to develop a new policy framework and possibly a reform strategy for the health sector.

In assessing the current situation and performance of the health sector, a most basic requirement is a comprehensive understanding of the financing of health services. The structure and operation of the financing system has significant influence on the overall behavior and effectiveness of the health care system as a whole. In Egypt's case the need for this information is greater than elsewhere since the Ministry of Health and Population (MOHP), the chief government health agency, plays a much less substantial role in the health care provision system than in many other developing countries. If problems exist in a health care system they are more than likely to be related to defects in the financing system, and any solutions to the problems of a health care system similarly will probably involve changes to the financing of health services.

The pluralism of the health care system in Egypt demands that planners have accurate and reliable information on the activities and performance of the health care system as a whole. As in many developing countries, Egyptian health planners, based primarily in the Department of Planning at the Ministry of Health (MOH), did not, historically, have such information. They were used to planning on the basis of data limited to the budgetary data of the MOH, and planning was essentially regarded as only a determination of the next

year's capital investment program and little more. Information did not exist in a useful manner for health planners to evaluate actual needs of the population or to assess in any systematic way the performance of the health system. In the absence of any other mechanisms, such as popular representation, to convey public wishes planners were largely creating and implementing activities in the total absence of any feedback or evaluation of results.

1.2 Development of Egypt's National Health Accounts

In this vacuum of essential planning data, the MOHP with the United States Agency for International Development (USAID) support launched an intensive program of research and data collection in collaboration with Harvard School of Public Health's Data for Decision Making (DDM) Project. This program of activities, which started in late 1993, was designed to develop an information base to support more informed policy making in the health sector by helping to assess existing problems and identify potential solutions. Several activities have been carried out under this program of collaborative research and analysis, including a national household survey of health care and utilization, a national survey of health care providers, detailed cost studies of government health facilities, establishment of a budget tracking system to track MOHP expenditures by function at the governorate level, and development of National Health Accounts (NHAs).

NHAs are designed to give a comprehensive description of resource flows in a health care system, showing where resources come from and how they are used. Although previous health care expenditure studies have been carried out in Egypt, none had used the integrating framework of NHAs to organize and compile the data. The first set of NHAs was released in 1993 and provided estimates of national health expenditures (NHE) in Fiscal Year 1991 (FY91). This first effort at compiling NHAs took two years and involved considerable efforts as sources of data were identified and sifted through and data estimation methods were developed. The second set of NHA estimates published here provides figures for health expenditures in FY95. It extends the previous work carried out for the first set of estimates and builds on them by improving the quality of the data used, replacing assumptions and guesstimates in several places by data-based estimations, and improving overall consistency and accuracy. This second round of NHA estimates also benefits considerably from new data that became available from the survey of household health utilization and expenditure conducted by Harvard/MOHP in 1994/95.

These estimations are the responsibility of a team led by Dr. Ravi P. Rannan-Eliya from Harvard University and including representatives of the MOHP, Ministry of Finance (MOF), and Cairo University. Although a wide range of data sources were used, greater emphasis was placed in this second effort in using the audited financial accounts data of the MOF. The experience gained in the second round was that the MOF data were the most reliable and accurate information for government and public-sector expenditures.

The following report presents the results of the 1994/95 NHAs, provides details on the data collected to construct the estimations, and gives details of the data estimation procedures used. It is structured in four parts. This first part provides an overview of the results and their implications. The second part is organized according to major institutional groupings and gives technical details of where data were collected. The third part provides additional information on how the collected data were adjusted to construct the final NHA matrices. A fourth part provides some information on differences between the estimation procedures and assumptions used in the Egyptian National Health Accounts (ENHA) 1991 and ENHA95 and the possible impact on the final results. A statistical annex contains general socioeconomic data for Egypt and several years of MOHP budgetary expenditures data.

1.3 Structure of National Health Account Results

The objective of the Egyptian National Health Accounts is to describe in a comprehensive manner the flow of all health expenditures within Egypt's health care system, including both public and private funding, and for modern and traditional forms of health services. The ENHAs describe these expenditures in the form of a matrix structure, which distinguishes between the source and final use of funds. The matrix structure consists of two interlinked matrices to reflect that many expenditure flows do not pass directly from the ultimate funding sources to the final providers of services. A large proportion of overall health care resources are passed from one institutional entity to another before being used finally for the provision of services. For example, individuals and firms pay premiums to both public and social insurance schemes, which in turn pay for the provision of medical services to the covered individuals by different medical providers. This passage of funds through intermediary entities is shown by constructing the ENHAs in the form of two interlinked matrices.

In the first matrix, financial flows from the original source of all funds, which by convention are taken as consisting of the government, households, firms and the rest of the world, to financial intermediaries are shown in one part. The second part of the first matrix indicates the quantity of resources that are not transferred through financial intermediaries, which is equivalent to the remaining share of health expenditures. The second matrix describes the funding of the actual health services delivered by providers by the immediate source of the funds involved. In this second matrix, funding sources consist of financial intermediaries as well as the original ultimate funding sources, in the case of funds that do not first pass through financial intermediaries.

The ENHAs are concerned primarily with the flow of resources between institutional and economic entities. For this reason the emphasis in the accounts is in tracing the flow of funds to the providers (or producers) of health services. In this sense the focus when describing the use of funds is on those who are responsible for providing them. However, NHAs can also examine the use of funds along other dimensions, such as the types of services produced (e.g., inpatient, outpatient, and collective services), or according to the identity of the beneficiaries of services (e.g., geographic regions, socioeconomic and demographic groups, etc.). The ENHAs can support such additional forms of analysis, but they are not the objective of this report.

1.4 Egypt's Health Care Spending, 1994–1995

1.4.1 Total Spending

Total health care spending in Egypt is estimated to have been 7,516 million Egyptian pounds (LE) in FY95, which was the period from July 1, 1994, to June 30, 1995. This was equivalent to 3.7 percent of gross domestic product (GDP) or LE 127 per capita (US $38 per capita). This estimate is considered accurate to within 0.3 percent of GDP. Actual total spending is unlikely to have been more than the equivalent of 4.0 percent of GDP in FY95. The two basic matrices of the ENHAs are shown in Tables 1.1 and 1.2.

Table 1.1 Financing Flows, Egypt FY94/95—Sources to Financing Intermediaries (LE millions)							
	Sources						
	MOF/NIB	SIO	Donors	Firms	Syndicates	Households	Total
Transferred to intermediaries							
MOH	1,337		142				1,479
THIO	97						97
MOE	517						517
MOSA	6						6
Other ministries	190						190
HIO	434	448	12			39	933
Firm schemes				364			364
Syndicate schemes					26		26
Private insurers				17			17
SUBTOTAL	2,581	448	154	381	26	39	3,629
Not transferred to intermediaries							
MOF/NIB	46						46
SIO		0					0
Donors			61				61
Firms				0			0
Syndicates					0		0
Households						3,780	3,780
SUBTOTAL	46	0	61	0	0	3,780	3,887
TOTAL	2,627	448	215	381	26	3,819	7,516

Note: NIB=National Investment Bank. SIO=Social Insurance Organization. THIO=Teaching Hospitals and Institutes Organization. MOE=Ministry of Education. MOSA=Ministry of Social Affairs. HIO=Health Insurance Organization.

Table 1.2 Financing Flows, Egypt FY94/95—Financing Intermediaries to Providers (LE millions)													
	Public Financing							Donors	Private Financing				Total
	MOH	THIO	MOF	MOE	MOSA	Others	HIO	Foreign Donors	Firms	Syndi-cates	Private insurers	House-holds	
MOH facilities	1,305						17					80	1,402
Teaching hospitals	14	97					3	2	2			1	119
University hospitals	30			517			30	26	1		1	2	607
NPC			20					5				2	27
NCMC			1									1	2
NODCAR			5										5
Vacsera			5										5
Other public	4					190	6						200
HIO	1						530					49	580
CCOs (1)	11		5				28	3	72			16	135
CCOs (2)			10						149			33	192
Private hospitals	42						71		23	20	5	120	281
Private clinics									57	5	5	670	737
Pharmacies	17						237		60	1	5	2,396	2,716
NGOs	3				6		6	25				70	110
Traditional												8	8
Others												332	332
Foreign providers	52						5						57
Administration of private insurance											1		1
TOTAL	1,479	97	46	517	6	190	933	61	364	26	17	3,780	7,516

Note: NPC=National Population Council. NCMC=National Child and Motherhood Council. NODCAR=National Organization for Drug Control and Regulation. CCO=Curative Care Organizations.

This level of spending is on the lower side of what is seen in most developing countries and about what one might expect at Egypt's income level. In comparative terms Egypt is neither an extremely low spender nor an extremely high spender (Table 1.3). However, it does spend less as a percentage of GDP than the majority of other countries in the MENA region, including Algeria, Tunisia, Jordan, Lebanon, Bahrain, and Israel (Rafeh and Maeda 1997).

Table 1.3 Health Expenditures as a Percentage of GDP in International Comparison

Country/Region	Per Capita Gross National Product, 1995	Health Expenditures	Health Expenditures as Percentage of GDP (early 1990s)		
	(US$)	(per capita US$)	Total	Public Sources	Private Sources
Yemen	260	6	2.6	1.1	1.5
Sri Lanka	700	26	3.7	1.7	2.0
Egypt	790	38	3.7	1.6	2.1
Morocco	1,110	38	3.4	1.6	1.8
Jordan	1,510	118	7.9	3.7	4.2
Turkey	2,780	105	3.8	1.4	2.4
Middle East and North Africa	1,780	54	4.8	2.6	2.2
East Asia and Pacific	800	28	3.5	1.5	2.0
OECD	24,930	2,470	9.9	6.0	3.9

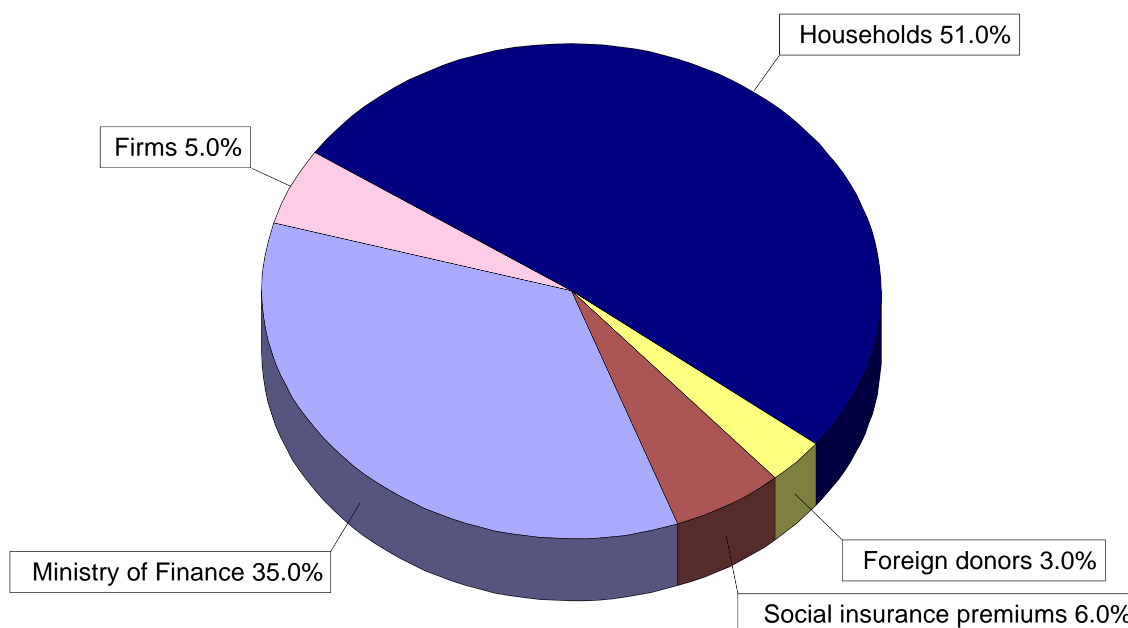
Source: Rafeh and Maeda (1997), World Bank (1993, 1997) and authors' estimates.
Note: Public expenditures in this table includes foreign assistance to countries.

1.5 The Funding of Egypt's Health Care System

Egypt has a mixed economy in health care financing. The government intervenes in the financing of health care through the provision of subsidized health services paid for through general revenues and by the administration of a social health insurance system (the Health Insurance Organization [HIO]). Both public and private sources of funding play important roles in its health care system, with the value of private funds being somewhat greater than from all public sources. Total public financing is 1.6 percent of GDP, while private financing contributes 2.1 percent of GDP. Public sources include 0.1 percent of GDP provided through foreign assistance.

Figure 1.1 shows the relative roles of each of the major funding sources in Egypt's health care system. At LE 7,516 million, health care spending was equivalent to LE 127 per capita (US$ 38). The bulk of the money coming from private sources is out-of-pocket spending by households. The data for private insurance and employer expenditures are less reliable than the other data, but it is certain that they account for only a small share of total health funding.

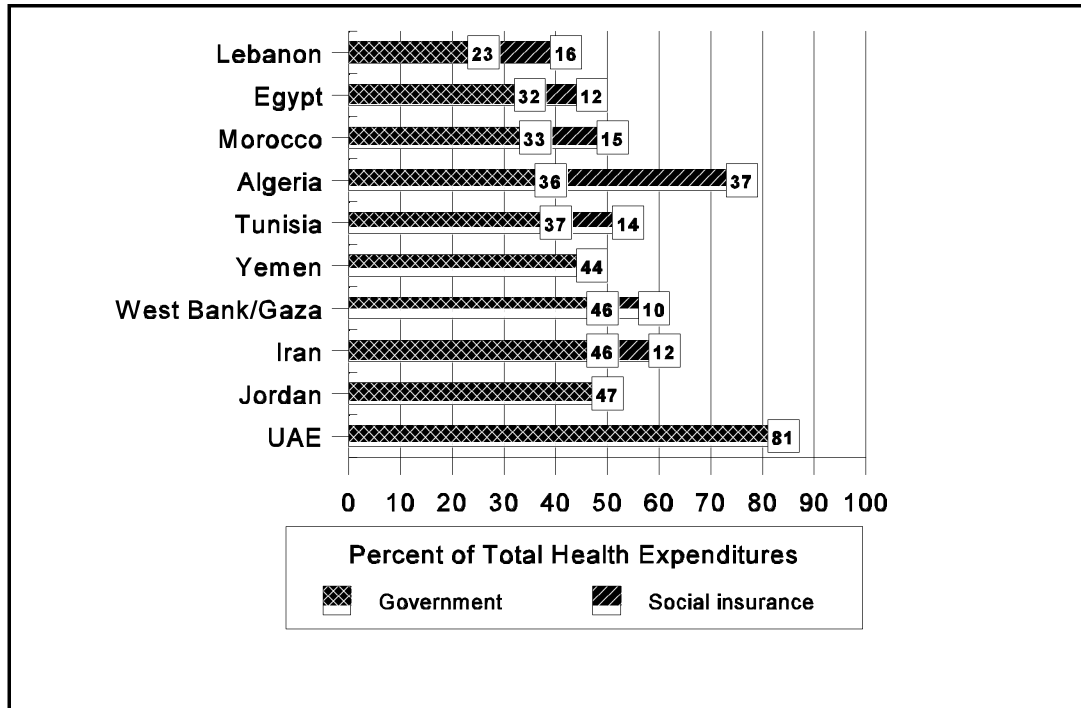
Figure 1.1 The Egyptian Health Pound—Where It Comes From



Overall public funding accounts for only 44 percent of total health financing. This is lower than average for the region, although as a poor country one would not expect Egypt to have as much reliance on public sources as many others in the region. Of this public funding, 17 percent (of NHE) is accounted for by expenditures from the main government budget, and 18 percent by social insurance expenditures. If government budgetary health expenditures are an indicator of governments' commitments to health financing, then Egypt's government displays relatively low commitment in comparison with other countries in the regions (Figure 1.2). Most of its regional comparators have greater governmental health budgets.

In terms of the ultimate sources of funds, public financing and donor support accounted for 44 percent of all funding for the health system. The rest consisted of private funding, of which five percent was from firms, private insurance, syndicates, and other private sources, and 51 percent from households. In comparison with other countries in the MENA region, Egypt relies more than most on direct spending by households. The burden on households of out-of-pocket spending on health care does appear on the basis of available data to be relatively high in Egypt and probably greater than in any other country in the region, with the exception of Yemen (Figure 1.3).

Figure 1.2 Public Sources of Health Financing in MENA Countries, 1990-95



Source: ENHA, Rafeh and Maeda, 1997

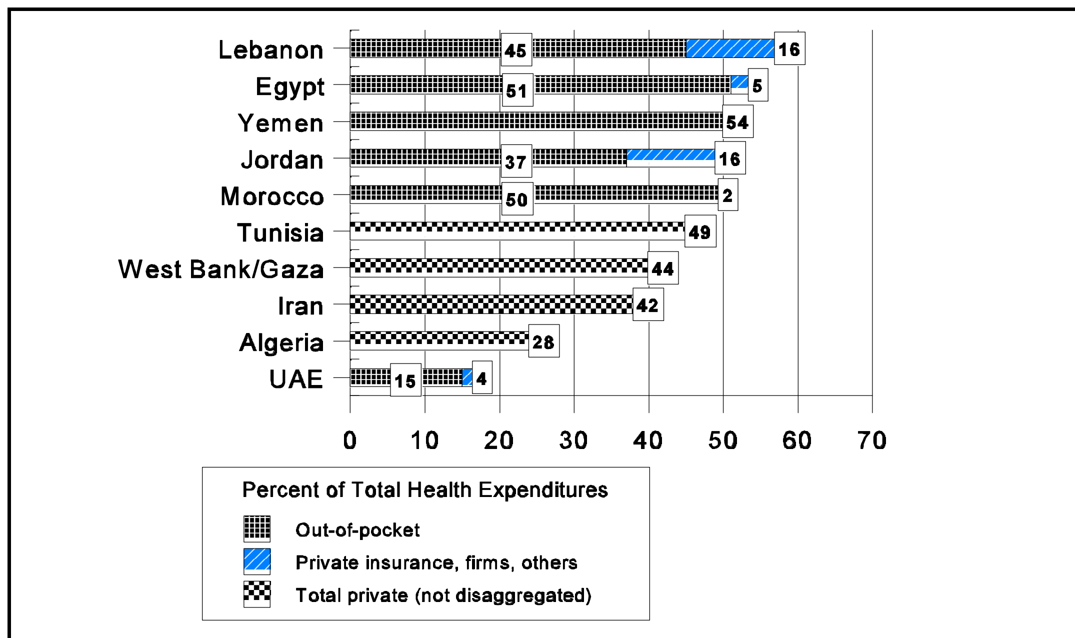


Figure 1.3 Private Sources of Health Care Expenditures in MENA Countries, 1990-95

Source: ENHA, Rafeh and Maeda, 1997

1.5.1 Flow of Funds

The LE 7,516 million mobilized in the health sector did not just pass directly from the ultimate sources to their final uses. Approximately half 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 Table 1.1 and Figure 1.4. The major intermediaries in the flow of funds are the MOH, the Ministry of Education (MOE), the Ministry of Social Affairs (MOSA) and other ministries, the HIO, and private insurance schemes. However, syndicates and households pass much of their funding, if not most of it, directly to the ultimate providers of care.

Three major channels of financing can be observed:

- From MOF to MOH facilities through the MOH budget.
- From the Social Insurance Organization (SIO) and the MOF to the HIO
- From households through out-of-pocket spending directly to pharmacies and private providers.

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, except for some limited transfers from the HIO to private hospitals, pharmacies, and MOH facilities, and MOH transfers to university hospitals and other private providers.

The first pathway consists of MOF funding, which is ultimately derived from general revenue taxation. This funding channel principally benefits government ministries that operate health care facilities. Donor funding shows a similar pattern, although a larger proportion of it goes to the MOH. MOF resources are divided between the MOH and other ministries, in particular the MOE and the security agencies. Only a small proportion of the MOF and donor funding is transferred to the various insurance intermediaries, and virtually none ultimately passes to private-sector providers. Together general revenue financing and donor support account for approximately one-third of total health-sector resources.

The second major pathway consists of social insurance. The bulk of funding from firms and a small proportion of household funds pass to the SIO and the Pensions and Insurance Organization (PIO), which in turn fund the HIO together with a large operating subsidy from the MOF. The HIO acts essentially as a combined provider and financier, using half its revenues to finance services provided by itself and the rest to purchase services and goods from private and other public providers. Just under one-seventh of total health-sector funding passes through this social insurance mechanism.

Social insurance involves mandatory payments of premiums by employers and employees. Since these payments are not voluntary and since the contributors have no control over the allocation of the money collected, social insurance can be regarded as a form of hypothecated tax for health services, which differs from general revenue funding of health services only to the extent that eligibility for use of HIO facilities is restricted. The element of general revenue subsidy that Egypt's HIO receives is not unusual. Most, if not all, social health insurance schemes in advanced economies receive such government transfers. However, these transfers in other countries are generally used to extend or subsidize health insurance coverage to sections of

the population that are outside the formal employment sector, and formal-sector workers in the final analysis generally cross-subsidize other beneficiaries.

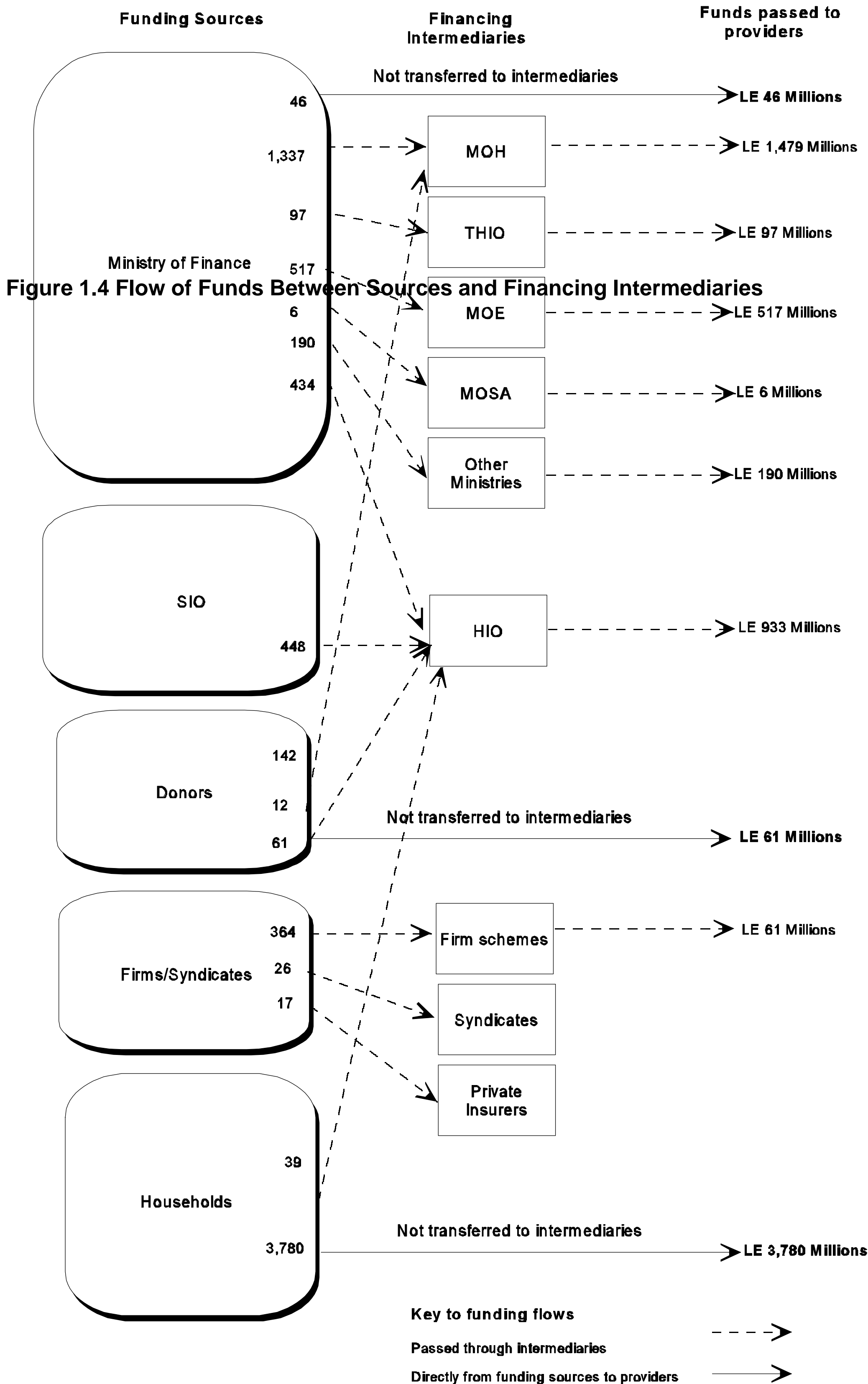


Figure 1.4 Flow of Funds Between Sources and Financing Intermediaries

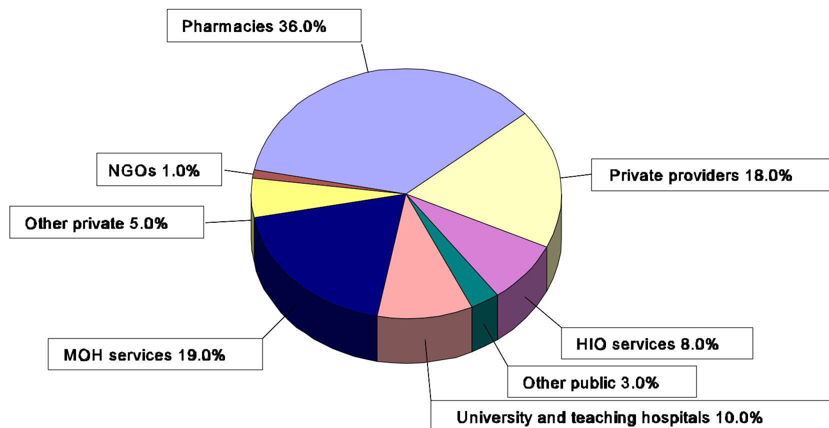
The significant contribution of general revenue resources to Egypt's social insurance schemes gives the HIO the characteristics more of a subsidized public financing scheme than of a true insurance scheme. From this perspective, Egypt can be regarded as having a plural public financing system for health care. Government resources, which are derived from taxation of firms and individuals, are used to pay for five major publicly organized and operated provider systems: MOH facilities, university hospitals, defense ministry hospitals, and HIO services. Each of these are supplemented by other sources of funding to various degrees, principally user fees in the case of the MOH and university facilities and insurance taxes in the case of the HIO. Access to each of these is variable, with MOH services available to all, HIO services only to the formal-sector workers, university hospitals to those able to pay the user charges, and defense ministry services to the armed forces personnel and other well connected individuals.

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 five percent of total financing received. More than 90 percent of household funding passes directly to private-sector health care providers without any financial intermediation. These private-sector providers consist of NGO, 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.

1.5.2 Use of Funds at Providers

Of the less than one-third of total funding which comes from the MOF, less than 60 percent actually is spent in MOH facilities (Figure 1.5). More than 40 percent is transferred to other institutions and agencies such as the teaching hospitals, the MOE (which funds the university hospitals), the HIO, Curative Care Organizations (CCO), and other facilities run by other ministries. MOH facilities in total receive only 19 percent 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 dominant position within the health sector from a financing perspective. At 0.7 percent of GDP the amount of its general revenue funding that GOE gives to the MOH is low in comparison to other developing countries.

Figure 1.5 The Egyptian Health Pound—Where It Goes



The modest role of the MOH is further confirmed when one examines the final uses of the money entering the health sector. While only 19 percent of total health financing is spent in MOH facilities, approximately 20 percent of health spending is in other public or governmental health facilities. This occurs because the other public providers of care, such as university hospitals, the HIO, etc., have a much more diversified financial base than the 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 greater than for MOH facilities. University hospitals and the HIO are major recipients of health-sector spending. They account for about eight percent and 12 percent, respectively, of total health spending. The other non-MOH government providers are relatively insignificant.

Over half of total health spending (56 percent) 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 percent) is used to purchase inpatient care. This relative level and pattern of private spending appears to have changed little during 1990–1995. Overall, a large share of health-sector financing continues to be used to purchase drugs (over 35 percent) and mostly from private-sector pharmacies.

1.6 Trends in Health Care Spending in the 1990s

The ENHA95 estimates are the second set of NHA estimates for Egypt. Although ENHA95 is based on the ENHA91 study, the results in the two studies are not strictly comparable because of differences in the estimation procedures and data sources used. The overall results in ENHA91 are overstated in comparison with ENHA95. Details of these differences are given in Part 4 of this report. In general, the ENHA95 results are more accurate and reliable than those given in ENHA91, but no attempt is made in this report to readjust the ENHA91 results in the light of the information gained during ENHA95.

Nevertheless, Part 4 presents some tentative revisions of the ENHA91 results in the absence of any formal recasting of the FY91 results. These revised estimates in conjunction with the time series data that were collected for ENHA95 do provide some tentative indications of trends in health care spending in Egypt in the first half of the 1990s.

1.6.1 Trends in National Health Expenditures

Nominal health expenditures almost doubled between FY91 and FY95. However, this was a period of considerable price inflation in the Egyptian economy, and so this considerably overstates actual changes in real spending levels. Total NHEs grew moderately during 1991 to 1995, with a modest increase in real per capita levels, as well as a percentage of GDP. Total NHE may have increased by as much as 0.3 percent of GDP during this time period, from approximately 3.4 percent of GDP to 3.7 percent of GDP.

In terms of the structure of health care spending, there appears to be have been no substantial change. Both private and public spending increased during this time, and existing patterns remained largely unaltered. The only change of note was the establishment of the Student Health Insurance Program (SHIP), which represented a significant increase in public health spending, but it must be noted that SHIP accounts for less than five percent of overall health spending in FY95. What is most remarkable is that despite several years of substantial economic changes in Egypt, there has been very little change in the overall financing of health care in Egypt and in the public-sector's role.

1.6.2 Trends in Public Expenditures

This increase in health expenditures was due partly to an increase in private expenditures, but mostly to a substantial increase in public expenditures. Both MOH and HIO spending grew in real terms in the 1990s, with HIO spending expanding substantially. These increases resulted in the share of total NHE accounted for by public financing increasing from 42 percent of the total to 44 percent. However, as noted above, this is still insufficient to prevent Egypt from having one of the lowest shares of NHEs funded from public financing in the MENA region.

The expansion in MOH spending was distributed equally between MOH headquarters and the governorate-level health directorates. Given that much of MOH headquarters budget is accounted for by its two national patient treatment programs, it is uncertain whether this observed increase in real spending levels at the MOH would have resulted in any significant changes in resource availability at the MOH facilities used by most Egyptians. The two special patient treatment programs administered by MOH headquarters benefits only a small number of individuals.

The HIO spending increase was wholly accounted for by the rapid expansion of SHIP. FY91 was the year previous to the initial establishment of SHIP, and so the ENHA91 results do not reflect any SHIP activity. In FY95, SHIP accounts for about one-third of total HIO expenditures, and this explains the HIO overall expenditure increase. Real spending levels per beneficiary in the HIO's main Law 32 and Law 79 programs were more than 10 percent lower in FY95 than in FY91. The overall increase in HIO spending levels were sufficient to increase its share of total public health expenditures from 20 percent to almost 35 percent.

Spending trends in the other publicly financed health services are uncertain, owing to the lack of complete time series data in the case of university hospitals, and any data in the case of Defense and Interior Ministry facilities. Expenditure trends in the CCOs are also difficult to evaluate, since the period under review was marked by significant investments in new CCO facilities, several of which changed ownership during FY95, thus complicating considerable interpretation of the available expenditure data.

1.6.3 Trends in Private Expenditures

Trends in private expenditures are difficult to assess with confidence, given that they are mostly derived as residuals in the NHA estimations, and since they rely predominantly on single data points. Nevertheless, household spending does appear to have increased at least in line with nominal GDP growth during this time, but there is little evidence of any more substantial increase.

Available data on the small private insurance schemes shows that there was very little growth in this sector at all, with some companies reporting reduced revenues from this type of business. Data are insufficient to make any meaningful assessment of trends in expenditures at private hospitals, private clinics, and NGOs, or by firms on behalf of their employees.

1.6.4 Trends in Donor Assistance

Donor assistance to the health and population sectors remained relatively unchanged in nominal terms, increasing modestly from LE 180 million in FY91 to LE 215 million in FY95. Given price inflation, this represented a decline of almost a half in real spending levels. Examination of the disaggregated data indicates that real declines occurred for virtually all donors (Japan was a singular exception). The decline in real spending levels was greatest for bilateral donors, whose share overall of external assistance fell from more than 90 percent to 76 percent. This decline in bilateral donor assistance was accounted for mostly by the European countries. Multilateral assistance did increase significantly in nominal local currency terms, but the World Bank remained conspicuous by its continuing absence in the health and population sectors. This apparent decline in donor assistance may reflect a completion of previously agreed donor projects, and continuing difficulties that most donors face in developing worthwhile projects in the health sector.

1.7 Lessons Learned and Implications

1.7.1 Institutionalization

The second round of ENHA estimates released in this report demonstrate that estimation of accurate and comprehensive NHAs is feasible in the most demanding institutional environment that is found in Egypt. Despite the difficulties in obtaining access to data from official sources, the general reluctance of most government officials to share data even with others within the same ministry, and the many problems in the quality of officially compiled data, ENHA95 was compiled with significant less effort and in less time than was required for ENHA91. This partly reflects the experience gained from the first effort by team members, as well as the increasing use of NHA data by senior Egyptian policy makers.

Although significant external technical assistance was provided to MOHP in constructing the ENHA91 estimates, less was required for ENHA95. However, MOHP is still far from being able to independently construct or estimate NHAs. Nevertheless, the MOHP and Egypt will shortly be able to achieve full technical competence in this activity through a combination of MOHP and MOF staff and other academic researchers based in local institutions. This combination would allow MOHP to balance its constraints in being unable to provide adequate compensation to appropriately qualified technical experts with the institutional advantages that flow from basing NHA activity in the MOHP. It is hoped that continued interest on the part of senior MOHP decision makers will permit the gradual strengthening of NHA capabilities in the MOHP.

1.7.2 Policy Impact

Although there have been few if any major policy changes in Egypt’s health sector in the first half of the 1990s, the results of ENHA91 have become significant elements in the ongoing discussions and debate about the need for and potential options for health-sector reform. They have helped policy makers understand the relative contributions of the different institutional sectors in providing and financing health care and have provided reliable data which would dispel several myths about the functioning and performance of Egypt’s health care system. They establish beyond any doubt that Egypt is a low health care spender, that households bear a considerably higher than average share of the financing burden, and that government financing is too little and too divided to have a substantial effectiveness.

The second round of NHA results illustrate that in the absence of any significant meaningful reform, the health system is unlikely to experience any substantial changes for the better and existing trends will merely continue. The uncoordinated and divided nature of government's interventions in the financing of health care in Egypt was noted in ENHA91, and this aspect has, if anything, become more pronounced in the past few years.

The gradual establishment of NHA capability in the MOHP and other local institutions creates the ability to use NHAs in the future as a tool to monitor and evaluate the impact of any future reforms. ENHA95 clearly shows the impact of SHIP on increased public health expenditures but, together with other related analyses, it shows the limitations of SHIP's impact.

Looking beyond the simple macro perspective that ENHA91 and ENHA95 provide, the NHA database that has been created over several years provides a strong and reliable basis upon which to support additional and further analyses of health care spending. As part of related work, Harvard University will shortly release an analysis of the distribution of health care spending in Egypt based on the ENHA95 results. This will examine in considerable detail the equity or lack of it in the health financing system. Other analyses such as these are now possible, and it is hoped that the MOHP will make the data available in the NHA database as widely available as possible in order to allow other researchers to extend the utility of NHA work in Egypt.

2. Review of Health Financing by Sources and Uses

2.1 Ministry of Health

The MOH is the largest single institutional financier and provider of health care services in Egypt. It utilizes approximately 60 percent of the total health budget authorized by the 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 the 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 salary scales and numbers of authorized staff, are predetermined in Cairo.

2.2 Organization of Health Ministry Budgeting

The money allocated to MOH headquarters is used to pay for the general overhead costs of running the MOH 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. In addition to support provided to individual governorates, the headquarters budget is used to pay for two national patient treatment programs, which pay for the expenses of selected patients who cannot receive their required treatments from MOH facilities.

There are a number of agencies and organizations that receive part of their funds through the official government health budget, such as the Teaching Hospitals and Institutes Organization (THIO) and the CCOs, 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 MOH.

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.” Bab One comprises all salaries and wages, benefits, and allowances for government employees. Bab Two

[1]In the official accounts of the MOF, the transfers to organizations such as the THIO and the CCOs 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 that are under the administrative supervision of the Minister of Health, but which are otherwise autonomous from the MOH, are treated as being separate from the MOH budget.

comprises non-salary recurrent expenditures, such as on commodities, materials, spare parts, expendable supplies, subsidy payments, transfers for utility services, other operations, and maintenance functions. Bab Three consists of capital purchases and investments, as reflected in the approved Five-Year Plan and the Annual Update, prepared by the Ministry of Planning; it includes foreign exchange costs associated with construction, renovation, rehabilitation and repair of facilities, procurement of equipment, etc., as well as incidental costs arising from analyzing the feasibility of projects and designing and supervising of project implementation. Bab Four includes the installments on capital transfers for debt service and costs of capital projects implemented by government entities.

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. Bab One expenditures are largely predetermined by the number of personnel and their positions. The oversight responsibility for position classification and salary levels rests principally with the Central Agency for Organization and Administration (CAOA), and guidelines for expenditures in this Bab are set by Ministry of the Public Sector, the Minister of State for Administrative Development, and the CAOA. The MOF is responsible for controlling and providing all expenditures under Bab Two. Bab Three expenditures are supervised by the Ministry of Planning and the National Investment Bank (NIB), and Bab Four is under the administrative authority of the Ministry of Economy and the Central Bank of Egypt (Mayfield 1996).

Comprehensive and detailed accounts of actual total expenditures by the MOH at the central and local levels are not available within MOH headquarters, at least within the Directorate of Planning (DOP).[2] Data on budget allocations are more widely available, but in recent years there have been considerable discrepancies between budgeted and actual expenditures. The DOP attempted to survey governorates to determine expenditures at the governorate level during compilation of the first NHA estimates for FY91. 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, and the MOF audited accounts alone have been used in the estimation of the FY95 NHA.

While some attempt has been made to computerize the financial accounts of ministries at the MOF, it would also appear that detailed and disaggregated expenditure accounts for the MOH are not readily available at the MOF. In order to determine the actual expenditures, it was necessary to manually review the paper records kept for each governorate at the MOF in Cairo, separately identifying and collating those expenditures that were related to health. As of early 1997, audited and corrected accounts for the governorates were only available up to FY95 and, therefore, this report only provides data up to FY95.

The accounts kept by the MOF include donor-related expenditures. When international donors provide direct assistance to the MOH, it is MOF practice to include these expenditures in the MOH accounts. Where donations are given in kind, the MOF will value these at cost and then include them also. However, while it was possible to determine total expenditures by the 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 the MOF. Comparison of data on donor-funded projects available at the MOH with data available at the donors themselves indicates that some donor assistance to the MOH is not included at full cost in the

[2]The DOP's major responsibility within the 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 the 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 the MOH.

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 for the benefit of the MOH, without making any transfer to the MOH itself. Also, some donor assistance that benefits the MOH may come from donor programs that were not negotiated directly with the 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 the MOF. It should be noted that a considerable proportion of such income-generation by individual facilities may not be reported to the MOF, according to sources within the MOH. However, it is believed by the MOF that the accuracy of the data on user fees has improved substantially during FY91 to FY95, since a Presidential decree was issued mandating full reporting of such income.

Because of these problems, the audited MOF accounts do not reflect the true level of resources 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 NHEs in the final NHA matrices, these numbers are adjusted upwards to take into account unaccounted donor support to the MOH and unreported user fees at governorate level (see discussion in Chapter 3).[3]

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

2.2.1 Analysis of Ministry of Health Expenditures

As shown in Table 2.1, overall MOH expenditures increased in nominal terms during FY90 to FY95 from LE 644 million to LE 1,501 million. However, this represented only a 29 percent increase in real terms equivalent to a 15 percent increase in real per capita funding. During this time period the governorate share of actual MOH expenditures declined from 89 percent to 80 percent, 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 many governorates fell.

Annex Tables A2.1 to A2.9 provide more details on the breakdown of actual expenditures by MOH headquarters and governorates for FY90–95, with a disaggregation by chapter headings for FY95. Tables A2.1 and A2.9 show the trends in real per capita spending for FY90–95 and the percentage breakdown of spending in FY93. These figures indicate that there was only a modest change in per capita funding levels during FY90–95. More detailed information for other years is provided in the other Annex tables.

[3]In reality, the income data for the MOH were taken and adjusted. There was a small discrepancy of less than LE 2 million between the income and expenditure figures provided by the MOF for the MOH. It is not clear what the reason for this was, but the income figures were used in estimating the NHA, although the expenditure figures are shown in the governorate breakdowns.

As will be observed there is considerable variation between governorates in the level of MOH expenditures. This is illustrated in Map 2.1, which shows per capita expenditure levels, excluding headquarters programs.

The relative constant level of per capita spending over the six 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 percent of the total in FY89 to 51 percent in FY95 (Table A2.1). There has been a corresponding increase in spending in Chapter 3. During the period covered, Chapter 2 expenditures increased as a share of total from 18 percent to 29 percent. However, this increase was mostly due to an increase at headquarters level, and there was essentially no change in the proportion of Chapter 2 expenditures at the governorate level.

Given that pharmaceutical prices increased following devaluation of the Egyptian pound in 1991, this suggests that the ability to purchase drugs and supplies would have decreased in most governorates. It should be noted, though, that during the period covered, one significant change occurred in that the now-defunct Ministry of Population merged with the MOH to form the new MOHP, and the exact impact of this on the structure of budgetary expenditures is unclear.

2.2.2 Self-Funding

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." Income from these non-budgetary sources is classified as "self-funding." Self-funding includes not only income from user fees, but also income from contracts to provide services to other organizations including the HIO. The audited income accounts of the MOF contain what is believed to be accurate data on the level of self-funding in each governorate. However, MOF accounts do not indicate the exact sources of income from self-funding, although it is likely that the bulk of self-funding in governorates consists of user fees paid by individual patients.

The DOP in its survey of governorates during the first round of NHA estimates did request 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. Since it was expected that another survey would not produce more credible figures, a survey of governorates was not attempted on this occasion.

The MOF data indicate that governorates obtain a significant proportion of their overall income from self-funding. Nationally, self-funding contributed LE 97 million in FY95, which was eight percent of total income at the governorate level and six percent for the whole ministry. MOH headquarters did not receive any funds from this source.

Table 2.1 Overall Trends in MOH Expenditures, FY90–95						
Level	Fiscal Year					
	FY90	FY91	FY92	FY93	FY94	FY95
Expenditures (nominal LE)						
MOH headquarters	69,986,070	91,270,315	209,532,964	293,205,004		303,469,270
Governorates	574,193,008	657,190,042	837,876,604	920,087,837		1,198,418,379
Total	644,179,078	748,460,357	1,047,409,568	1,213,292,841		1,501,887,649
Percent change during FY90–95						1.33
Expenditures (constant 1990 LE)						
MOH headquarters	69,986,070	79,725,992	152,809,922	194,536,229		167,922,349
Governorates	574,193,008	574,065,376	611,053,533	610,461,675		663,135,447
Total	644,179,078	653,791,367	763,863,454	804,997,904		831,057,796
Percent change during FY90–95						0.29
Expenditures per capita (constant 1990 LE)						
MOH headquarters	1.33	1.48	2.76	3.44		2.85
Governorates	10.95	10.65	11.02	10.79		11.24
Total	12.28	12.13	13.78	14.23		14.09
Percent change during FY90–95						15.0
Expenditures (percentage allocation)						
MOH headquarters	10.9%	12.2%	20.0%	24.2%		20.2%
Governorates	89.1%	87.8%	80.0%	75.8%		79.8%
Total	100.0%	100.0%	100.0%	100.0%		100.0%

Source: Based on data collected from the MOF by the 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-1990, i.e., the beginning of FY90.
Note: Totals may not sum correctly due to rounding up.

Table 2.2 Total MOH Expenditures, FY90–93 and FY95 (actual in nominal LE)					
Level	Fiscal Year				
	FY90	FY91	FY92	FY93	FY95
MOH headquarters	69,986,070	91,270,315	209,532,964	293,205,004	303,469,270
Cairo	67,215,303	75,840,726	82,025,251	88,186,210	112,931,471
Alexandria	42,545,496	48,452,855	50,817,750	64,414,535	83,362,155
Suez	7,284,515	7,379,518	9,083,105	10,265,593	14,895,027
Port Said	10,415,545	11,781,947	14,298,129	16,114,968	22,392,586
Ismailia	8,590,644	11,530,230	17,465,567	17,733,541	22,591,085
Dakahlia	39,231,651	44,407,767	59,764,422	61,481,304	85,034,365
Gharbia	39,212,088	47,106,717	54,578,529	61,024,278	85,927,859
Kalyubia	27,858,217	30,551,463	35,738,870	39,858,543	49,798,264
Damietta	14,668,649	19,004,810	21,900,295	21,690,059	33,472,940
Sharkia	32,539,304	43,313,667	54,260,649	49,074,982	73,166,576
Behera	33,691,974	37,725,870	48,198,457	43,671,288	70,576,077
Menoufia	24,976,053	27,518,468	34,708,140	38,946,072	51,226,231
Kafr El-Sheikh	18,994,522	21,487,127	28,974,291	32,092,094	39,980,485
Giza	32,157,035	36,396,313	46,229,587	50,243,668	73,233,323
Fayoum	16,687,716	18,852,947	21,738,310	24,129,574	31,691,927
Assiut	25,400,588	29,318,344	38,759,278	41,051,226	57,747,173
Beni Suef	20,611,299	22,994,460	34,446,626	28,606,427	35,422,299
Aswan	17,666,021	19,506,270	23,998,566	29,509,395	35,586,729
Luxor	2,426,844	8,063,873	6,784,153	10,077,050	14,106,585
Sohag	21,295,632	24,152,683	29,465,227	34,805,844	47,858,257
Menia	27,822,178	30,094,534	69,159,870	81,897,455	52,108,222
Qena	20,907,885	17,802,337	27,194,188	31,701,654	44,246,649
Matrouh	3,686,726	3,659,208	4,565,649	5,150,313	9,273,204
Red Sea	4,000,464	3,845,349	5,135,748	9,341,555	8,821,594
North Sinai	6,106,172	6,975,404	6,914,740	7,883,571	15,383,501
South Sinai	2,424,606	2,772,711	3,423,388	4,757,120	11,572,623
New Valley	5,775,881	6,654,444	8,247,819	16,379,518	16,011,172
Total	**644,179,078**	**748,460,357**	**1,047,409,568**	**1,213,292,841**	**1,501,887,649**

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

Map 2.1: Per Capita Distribution of MOH Expenditures by Governorate, FY95

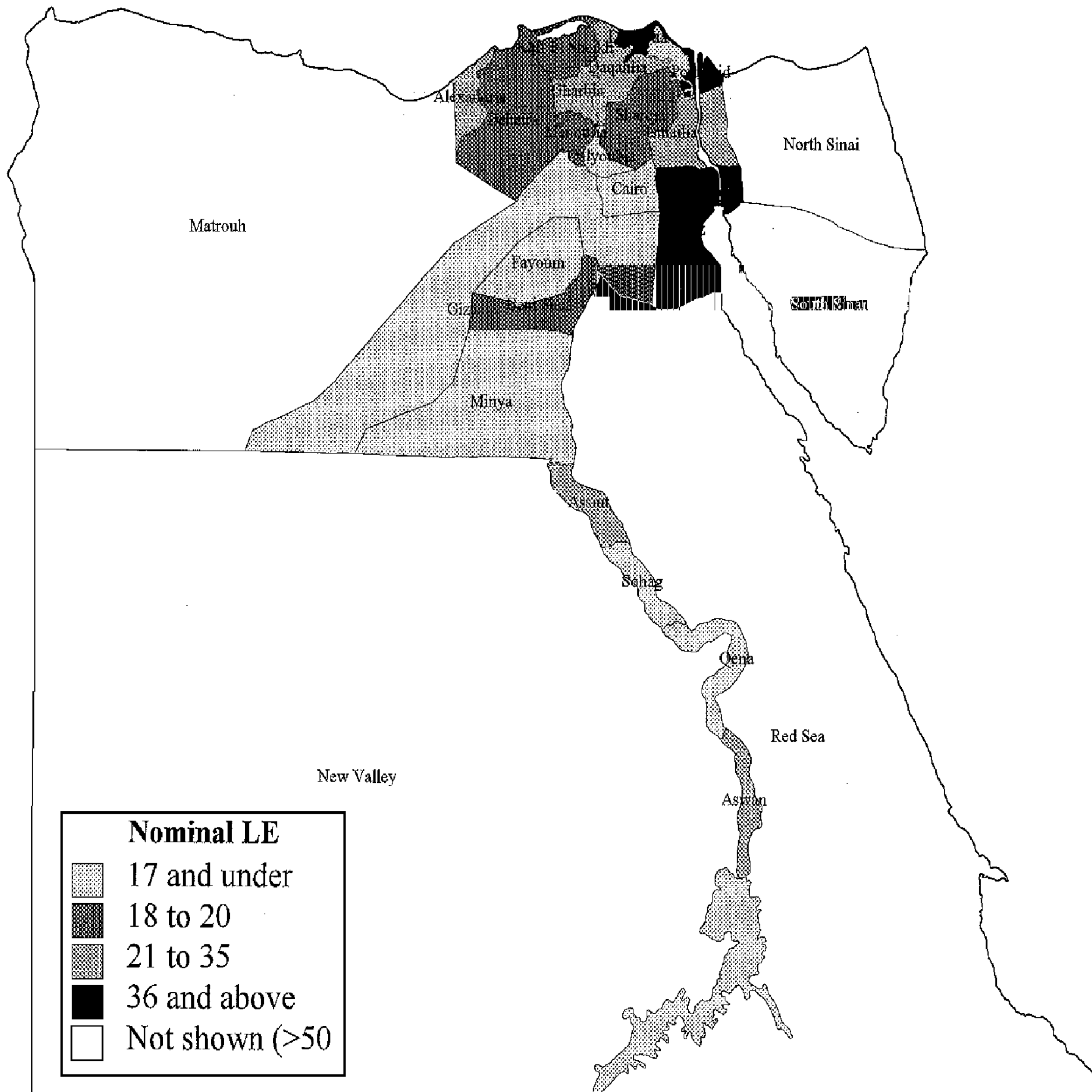


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Table 2.3 Distribution of MOH Expenditures by Budget Chapter, FY95 (actual in nominal LE)						
Unit	Chapters				Total	Per capita
	1	2	3	4		
MOH headquarters	18,970,324	177,357,366	97,151,970	9,989,610	303,469,270	**5.1**
Cairo	71,625,753	29,654,231	11,651,487	0	112,931,471	**16.3**
Alexandria	52,473,411	15,018,340	15,567,604	302,800	83,362,155	**24.4**
Port Said	13,599,091	6,185,271	2,608,224	0	22,392,586	**48.2**
Suez	8,066,995	3,767,592	3,060,440	0	14,895,027	**36.4**
Damietta	16,108,632	7,590,783	7,804,625	1,968,900	33,472,940	**37.3**
Dakahlia	53,226,526	13,600,101	14,896,483	3,311,255	85,034,365	**20.2**
Sharkia	49,168,165	11,919,112	10,876,867	1,202,432	73,166,576	**17.3**
Kalyubia	34,303,362	10,718,445	4,776,457	0	49,798,264	**16.4**
Kafr El Sheikh	26,568,389	7,776,517	5,635,579	0	39,980,485	**17.6**
Gharbia	56,343,356	18,817,628	10,766,875	0	85,927,859	**25.1**
Menoufia	35,096,008	10,170,025	5,960,198	0	51,226,231	**19.2**
Behera	49,528,161	12,794,761	8,253,155	0	70,576,077	**17.8**
Ismailia	10,706,952	4,844,784	7,039,349	0	22,591,085	**33.1**
Giza	43,260,716	19,258,700	10,713,907	0	73,233,323	**16.1**
Beni Suef	26,740,120	6,052,473	2,629,706	0	35,422,299	**19.2**
Fayoum	21,397,678	6,451,337	3,842,912	0	31,691,927	**15.8**
Menia	34,554,139	11,835,107	5,718,976	0	52,108,222	**15.4**
Assiut	40,280,664	10,090,665	7,375,844	0	57,747,173	**20.2**
Sohag	29,086,844	11,252,480	7,518,933	0	47,858,257	**15.6**
Qena	24,255,530	13,778,718	6,212,401	0	44,246,649	**15.9**
Luxor	4,451,007	3,037,169	4,008,596	2,609,813	14,106,585	**88.9**
Aswan	17,529,992	10,661,326	7,395,411	0	35,586,729	**34.2**
Matrouh	3,620,830	2,817,833	2,834,541	0	9,273,204	**48.8**
Red Sea	3,436,692	2,442,313	2,942,589	0	8,821,594	**75.7**
North Sinai	7,941,446	3,406,732	3,868,578	166,745	15,383,501	**69.8**
South Sinai	2,762,987	1,721,564	7,088,072	0	11,572,623	**328.3**
New Valley	7,264,318	5,301,186	3,445,668	0	16,011,172	**117.6**
Total	**762,368,088**	**438,322,559**	**281,645,447**	**19,551,555**	**1,501,887,649**	**25.5**

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

Table 2.4 Distribution of MOH Expenditures by Budget Chapter, FY95 (percentage of total)						
Unit	Chapters				Total	Per capita
	1	2	3	4		
MOH headquarters	6.25	58.4	32.0	3.3	100.0	**5.1**
Cairo	63.4	26.3	10.3	0.0	100.0	**16.3**
Alexandria	62.9	18.0	18.7	0.4	100.0	**24.4**
Suez	54.2	25.3	20.5	0.0	100.0	**48.2**
Port Said	60.7	27.6	11.6	0.0	100.0	**36.4**
Ismailia	47.4	21.4	31.2	0.0	100.0	**37.3**
Dakahlia	62.6	16.0	17.5	3.9	100.0	**20.2**
Gharbia	65.6	21.9	12.5	0.0	100.0	**17.3**
Kalyubia	68.9	21.5	9.6	0.0	100.0	**16.4**
Damietta	48.1	22.7	23.3	5.9	100.0	**17.6**
Sharkia	67.2	16.3	14.9	1.6	100.0	**25.1**
Behera	70.2	18.1	11.7	0.0	100.0	**19.2**
Menoufia	68.5	19.9	11.6	0.0	100.0	**17.8**
Kafr El Sheikh	66.4	19.4	14.1	0.0	100.0	**33.1**
Giza	52.6	23.4	13.0	11.0	100.0	**16.1**
Fayoum	67.5	20.4	12.1	0.0	100.0	**19.2**
Assiut	69.7	17.5	12.8	0.0	100.0	**15.8**
Beni Suef	75.5	17.1	7.4	0.0	100.0	**15.4**
Aswan	49.3	30.0	20.8	0.0	100.0	**20.2**
Luxor	31.5	21.5	28.4	18.5	100.0	**15.6**
Sohag	60.8	23.5	15.7	0.0	100.0	**15.9**
Menia	66.3	22.7	11.0	0.0	100.0	**88.9**
Qena	54.8	31.1	14.0	0.0	100.0	**34.2**
Matrouh	39.1	30.4	30.6	0.0	100.0	**48.8**
Red Sea	39.0	27.7	33.4	0.0	100.0	**75.7**
North Sinai	51.6	22.1	25.1	1.1	100.0	**69.8**
South Sinai	23.9	14.9	61.2	0.0	100.0	**328.3**
New Valley	45.4	33.1	21.5	0.0	100.0	**117.6**
Total	**50.8**	**29.2**	**18.8**	**1.3**	**100.0%**	**25.5**
Source: MOF. All figures are for actual expenditures in nominal LE.						

2.2.3 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. Virtually all (> 99 percent) governorate funds are used to finance their own facilities. At headquarters level, the MOH does expend significant funds on financing services by other providers through the two programs for providing treatment within Egypt and abroad for individual patients (see following section).

Drug expenditures by the MOH are comparatively low. It is difficult to give an exact figure, but Chapter 2 expenditures have ranged from 15 percent to 30 percent of the total in recent years. Chapter 2 is used to pay for drugs, supplies, and other non-salary recurrent costs such as utilities. The drugs are thought to comprise 70 percent of the raw material and supplies line item within Chapter 2. This line item itself comprises

approximately 60 percent of total Chapter 2 expenditures. Thus it is likely that overall drug expenditures have averaged 40 to 45 percent of Chapter 2 expenditures in recent years, or six to 15 percent of total MOH expenditures.

Disaggregation of MOH expenditures into hospital and non-hospital services is not possible using budgetary data. However, information available from the first stage of the DOP/DDM Budget Tracking System indicates that approximately half of MOH expenditures are used to provide hospital services, and the remaining 50 percent is used to provide ambulatory care services from clinics and other facilities as well as running other health activities.

2.2.4 Special Patient Treatment Programs

MOH headquarters runs two special programs to pay for the treatment expenses of individual patients. Under these programs individual patients may apply for financial assistance in event that relevant treatment is not available at their MOH hospital. Selection and approval of such expenditures is done centrally in Cairo. One of these programs pays for treatment abroad at government expense. The second, which is larger, pays for selected patients to receive treatment within Egypt at both public-sector and private-sector facilities; in some cases, this may include providing additional funds to MOH facilities to provide the necessary treatments. The domestic program includes a significant component for payment of renal dialysis services, which are normally provided by specially established renal dialysis centers in governorate hospitals.

Financial details of the operations of these two schemes were not readily available. The program for treatment of patients abroad disbursed LE 52 million in FY95. The second program for treatment of patients within Egypt cost LE 139 million in FY95. The breakdown of expenditures under this second program by type of provider utilized is not available for FY95, but Table 2.5 gives details of the breakdown of expenditures for patients from the Cairo governorate in the second quarter of 1996 (April 1 to June 30, 1996). It should be noted that patients from the Cairo governorate are estimated to account for one-third of all expenditures under this second program.

Table 2.5 Use of Service Providers under Special Patient Treatment Program According to Share of Total of Actual Expenditures, Cairo Governorate, April 1–June 30, 1997

Service Providers	Percentage of Expenditures (%)
MOH hospitals	11.6
THIO	10.0
Cairo CCO	8.0
HIO	0.2
University hospitals	23.0
Military and Interior Ministry facilities	3.0
Private providers	30.0
NGOs	2.0
Pharmaceutical providers	12.2
Total	**100.0**

Source: MOF.
Note: Program pays for purchase of drugs by patients, and this is included under the category "Pharmaceutical providers."

2.3 Teaching Hospitals and Institutes Organization

The Teaching Hospitals and Institutes Organization (THIO) is a separate body under the authority of the 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 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 four percent of the reported total (Kemprecos 1994).

THIO facilities are financed mostly through transfers from the MOF, as well as some occasional grants from international donors. They raise some revenues from self-funding, and in practice they recover approximately five to 20 percent of their total costs through patient fees and other forms of self-funding. Other than fees paid by individual patients, they receive revenues from contracts with the MOH, the HIO, and private firms.

Table 2.6 gives an estimate of total expenditures and income by source for the teaching hospitals organization for FY90–95. Estimates of expenditures on salaries and drugs are also given. The teaching hospitals have greater financial and managerial autonomy than other hospital facilities in the MOH. They are also generally regarded as providing higher quality care than other MOH facilities, and this probably explains their higher level of self-funding.

2.4 Health Insurance Organization

The HIO is an independent governmental organization under the supervision of the Minister of Health and Population. It 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 enacted in 1975); (ii) government[4] and public- and private-sector employees (Law 79 enacted in 1975); and (iii) widows and pensioners (law enacted in 1975). The number of beneficiaries increased from 140,000 in 1965 to 5,851,549 by the end of June 1995 (Table 2.7). With the exception of the Alexandria governorate, benefits are restricted to the enrolled beneficiary. Dependents are not covered under HIO main schemes.

Recently, the HIO has taken responsibility for extending insurance coverage to school children under a separate program, which began enrollment in 1993. SHIP had enrolled 14,819,205 students by the end of June 1995, thus achieving a 100 percent coverage of school children.[5]

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

[5]According to HIO Annual Report 1995.

Table 2.6 Expenditures of Teaching Hospitals and Institutes Organization (LE millions)						
Total Expenditures	FY90	FY91	FY92	FY93	FY94	FY95
	47,491	65,863	77,882	77,086	n.d.	118,335
Expenditures on salaries	n.a.	17,340	19,412	23,077	n.d.	33,896
Expenditures on drugs	n.a.	6,273	14,951	9,020	n.d.	n.a.
Expenditures on salaries (% of total)	n.a.	26%	25%	30%	n.d.	29%
Expenditures on drugs (% of total)	n.a.	10%	19%	12%	n.d.	n.a.
Total Income	47,491	65,863	77,882	77,086	n.d.	118,335
MOF, NIB, and other sources						97,185
Donors and loans						1,855
Self-funding	n.a.	4,020	5,550	5,693	n.d.	19,295
Self-funding (% of total expenditures)	n.a.	6%	7%	7%	n.d.	16%
Estimated expenditure per bed (LE)	10,204	14,152	16,734	16,563	n.d.	

Note: Numbers based on data supplied to the DOP by teaching hospitals and the MOF audited income and expenditure accounts for FY95. It is not clear whether the sudden increase in drug expenditures in FY92 is a real change or is an error in the data reported to the DOP. The expenditures per bed given are based on the number of beds in FY93 and so are an underestimate for earlier years. The DOP is unable to obtain official data on the number of beds in previous years.

Table 2.7 Number of HIO Beneficiaries ('000s), 1965–1995										
Number of Beneficiaries	1965	1970	1975	1980	1985	1990	1992	1993	1994	1995
Law 32 and 79, pensioners/widows	140	318	602	1,651	3,225	4,606	4,895	n.d.	5,508	5,851
SHIP	0	0	0	0	0	0	0	n.d.	10,106	14,819

Source: HIO Annual Reports, 1994–1995.

The HIO is organized into eight regional branches, which are all supervised by a central headquarters based in Cairo (Tables 2.7, 2.8). The extent of coverage within the regions varies considerably from 16.7 percent of the total population in Northwest Delta to 6.7 percent in the Assiut and Middle Upper Egypt branch (Table 2.8). This is because of differences in the size and composition of formal-sector employment across the country. SHIP is run separately from these branches and constitutes the newest component of HIO.

The regional branches run a network of hospitals (27 in FY95), clinics, and pharmacies that provide services to beneficiaries. In addition, HIO contracts with a large number of doctors and other facilities to provide services to its insured population. Contracted providers include the MOH, the CCOs, and private hospitals.

The role of contracting has increased under SHIP. Beneficiaries must all enroll with an HIO-designated general practitioner, who can provide treatment or refer patients to HIO specialists. Consultation with a specialist without a referral from a general practitioner is not permitted. The HIO employed approximately 4,108 full-time physicians, 282 dentists, 291 high nurses, and 839 pharmacists in mid-1995.

HIO facilities contained 4,829 beds in FY95,[6] which is a 1.5 percent decline from the 4,900 beds that were available in FY94. However, this decline is more than compensated for by efficiency gains. The average length of stay declined from 5.6 days to 5.1 days per episode during this time. Overall occupied bed-days declined by five percent from 1,082,549 bed-days in FY94 to 1,031,436 bed-days in FY95, despite an increase in surgical procedures of eight percent. Overall bed occupancy decreased from 67 percent to 66 percent.

Table 2.8 Distribution of HIO Beneficiaries ('000s) by Branch, June 30, 1995

Regional branch	Beneficiaries				Population	Coverage Rate (%)
	Law 32	Law 79	Pensioners/ Widowers	Total		
Northwest Delta	185	892	189	1,266	7,570	16.7
East Delta	537	244	87	869	11,477	7.6
Canal	229	68	34	332	2,709	12.3
Cairo	262	544	167	972	6,925	14.0
Middle Delta	583	202	87	871	8,368	10.4
Giza and North Upper Egypt	470	303	85	858	11,764	7.3
Assiut and Middle Upper Egypt	314	61	30	406	6,072	6.7
South Upper Egypt	202	59	18	278	4,094	6.8
Total	**2,782**	**2,372**	**697**	**5,851**	**58,978**	**9.9**

Source: DOP, HIO, and CAPMAS.
Note: These figures exclude SHIP beneficiaries.
Note: Totals may not sum due to rounding.

Table 2.9 Governorates Covered by the Regional Branches of HIO

Regional Branch	Governorates
Northwest Delta	Alexandria, Behera, Matrouh
East Delta	Kalyubia, Dakahlia, Sharkia
Canal	Damietta, Ismailia, Port-Said, Suez, North Sinai, South Sinai
Cairo	Cairo
Middle Delta	Gharbia, Menoufia, Kafr El-Sheikh
Giza and North Upper Egypt	Giza, Fayoum, Menia, Beni-Suef
Assiut and Middle Upper Egypt	Assiut, Sohag, New Valley
South Upper Egypt	Aswan, Qena, Red Sea

Source: HIO Annual Report, 1995
Note: Damietta has been transferred to East Delta regional branch since 1995.

[6] 4,829 is the actual number of beds available; however, the capacity of HIO facilities is up to 5,640 beds (Source: HIO Annual Report 1995).

2.4.1 Annual Expenditures

Analysis of HIO expenditures in FY95 is based on information from two different sources: (i) the audited accounts maintained by the MOF and (ii) the accounts kept by the HIO's own accounting department. The latter forms the basis for financial information given in the HIO annual report, which is a public document.

There is a major difference in the income and expenditures presented in the sets of accounts from the two sources. The MOF accounts for FY95 report a total expenditure (and equivalent income) of LE 1,429 million, while the HIO's own accounts report an expenditure of only LE 970 million. Analysis of the two sets of accounts and discussions with HIO and MOF officials reveal that most of this discrepancy is due to differences in accounting formats in the two organizations. Only a small difference of approximately LE 30 million in recurrent expenditures is an actual discrepancy, and this may be due to differences in end-of-year items included in the FY95 accounts.

As additional information, the MOF accounts for the HIO are presented in Table 2.10. These accounts differ in substance from those used within the HIO only in that the section on "Capital Transfers and Sources of Financing It" does not appear in the HIO internal accounts. This omitted section deals only with cash reserves at the beginning and end of each year and can be regarded as being equivalent to a cash flow statement. They are not related to actual cash expenditures by the HIO during the year.

For the purpose of compiling NHA estimates, the expenditures recorded in line 12 are excluded from consideration, as these deal with the annual surplus in the SHIP program, which is carried forward into the next year's accounts. This leaves a net expenditure of LE 1,003 million, which is LE 30 million greater than reported by the HIO in its annual report. The lower figure of LE 970 million is used in the actual NHA estimates, since there was no available information which would allow determination of which is more accurate.

2.4.2 Funding Sources

The HIO is principally funded through a system of premiums and copayments for services rendered. Details of these are outlined in Table 2.11. In addition, the HIO may and often does receive additional transfers from the MOF to cover operating losses. The largest of these transfers is currently under consideration. It would amount to LE 430 million and would be used to wipe out the HIO accumulated deficit, as well as raise standards of services.

Mandated premiums from covered employees and employers are officially collected by the SIO, while the PIO collects premiums from pensioners. Both are supervised by the MOSA. All premiums collected under law 32/79 (two to four percent of base salary) and from pensioners/widows (1 percent of basic pension) are transferred to the HIO according to MOF documents. The one percent labor accident premiums collected from workers are divided equally between the HIO and the SIO as regulated by law. This is because the SIO has obligations toward workers involved in work-related accidents in the form of early retirement pensions.

Table 2.10 Finance Ministry Accounts for HIO FY95

Actual Income and Expenditures, FY95 (LE)							
Line	Recurrent Income			Line	Recurrent Expenditures		
1	Current activities	744,871,453		1	Salaries	197,287,985	
2	Assistance	132,696,542		2	Total salaries	197,287,985	From line 1
3	Current transfers	50,342,405					
4	Total current income/transfers	927,910,400	Sum of lines 4–5	3	Surplus and commodities	454,987,620	
				4	Purchase of services	183,543,776	
				5	Cost of goods for sale	10,609	
5	Deficit on current activities	150,258,153		6	Current transfers	46,042,662	
				7	Specialized current transfers	13,118,218	
				8	Allocated funds	13,118,218	
				9	Total current expenditures/transfers	711,505,820	Sum of lines 3–8
				10	Total recurrent expenditures	908,793,805	Sum of lines 2–9
				11	Additions of reserves for project financing	31,739,805	
				12	Surplus carried forward from SHIP	137,635,743	
				13	Total surplus from current activities	169,374,748	Sum of lines 11–12
6	Total recurrent income/transfers	1,078,168,553	Sum of lines 4–5	14	Total current spending	1,078,168,553	Sum of lines 10–13
Use of Capital and Financing of Capital Expenditures							
	Capital Income				Capital Expenditures		
7	Reserves for project financing	31,739,005		15	Capital expenditures	62,861,749	
8	Other reserves	1,035,803					
9	Cash from depreciation	7,505,445					
10	Total self-financing	40,280,253	Sum of lines 7–9				
11	Foreign donations	0					
12	Increase in credit and credit accounts	21,581,496					
13	Total capital transfers	21,581,496	Sum of lines 11–12				
14	Loans (national)	0					
15	Loans (NIB)	1,000,000					
16	Total capital loans	1,000,000	Sum of lines 14–15				
17	Total of investment financing	62,861,749	Sum of lines 10, 13, and 16	16	Total of capital expenditures	62,861,749	Sum of line 15

Table 2.10 Finance Ministry Accounts for HIO FY95							
Capital Transfers and Sources of Financing Them							
18 19 20	Reserve for increase in price of assets Surplus carried forward Depreciation	1,794,186 137,635,743 24,309,877		17 18	Debt repayments to NIB Increase in cash	462,500 137,635,743	
21	Total self-financing	163,739,806	Sum of lines 18–20				
22	Increase in credit and credit accounts	124,626,202		19	Other capital transfers	9,612	
23	Total increase in credit and credit accounts	124,626,202	Sum of line 22	20	Deficit on current activities (carried forward)	150,258,153	
24	Total capital income and transfers	288,366,008	Sum of lines 21–22	21	Total capital transfers	288,366,008	Sum of lines 17–20
25 26	Total financing of capital transfers Total financing of investments	288,366,008 62,861,749	From line 24 From line 17	22 23	Total capital transfers Total investments	288,366,008 62,861,749	From line 21 From line 16
27	Total capital income	351,227,757	Sum of lines 25–26	24	Total capital expenditures	351,227,757	Sum of lines 22–23
28	Total recurrent income	1,078,166,553	From line 6	25	Total recurrent expenditures	1,078,166,553	From line 14
29	Total final income	1,429,396,310	Sum of lines 27–28	26	Total final expenditures	1,429,396,310	Sum of lines 24–25
Note: Translation and annotations by Khaled Nada and Raviandra Rannan-Eliya.							

In practice, the SIO does not provide information to the HIO on the identities or numbers of beneficiaries enrolled, and so it is not possible for the HIO to check whether all premium money due it has been transferred. Sources within the HIO believe that, in fact, it receives less than their share of premiums actually paid by employees and employers. There is little evidence to support this belief. In fact, the MOF records provide sufficient evidence against such a view. However, the HIO has a valid argument when it complains that the premiums of the pensioners/widows group are less than those collected under law 32/79 despite the fact that these beneficiaries cost them more (Table 2.12).

Table 2.11 Beneficiary Premiums and Copayments

Beneficiary Group	Salary Contributions	Benefits and Copayments
Government - Law 32	Employer - 1.5% Employee - 0.5%	Complete with copayment. General practitioner visit: LE 0.05 Specialist: LE 0.10 Home visit: LE 0.20 Inpatient day: LE 0.25–0.50 Laboratory test: LE 1.0 maximum Clinic service: 25% with LE 1.00 maximum 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	Employer - 1%	Complete coverage
Students	Student – LE 4 Cigarette tax – LE 0.10 per packet MOF – LE 12 per student	Complete with 33% copayment for outpatient drugs. No copayment for inpatient care and chronic diseases.

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

Table 2.12 Premiums Paid and Cost per Beneficiary in LE, FY95

Beneficiary Group	Average Premium Paid	Average Total Cost
Workers Law 32	26.5	77.8
Workers Law 79	83.6	100.5
Pensioners and widows	26.8	172.1
Weighted average (workers, pensioners and widows)	49.6	108.4
SHIP	32.9	21.3

Source: HIO Annual Report 1995.

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 percent employer’s premiums (Kemprecos 1994).

The amount of premiums collected in recent years has been less than the level of actual expenditures, which has led to a continuing deficit in operational expenditures, since at least FY92. In FY95 the annual loss reached approximately LE 150 million. This deficit is financed in any given year by non-payment of suppliers. From time to time, as these debts have accumulated, the HIO has received *ad hoc* grants by the MOF to pay its debt. Repeated deficits have lead policy makers to consider modifying or restructuring the HIO to become more efficient.

While beneficiaries under Laws 32 and 79 are supposed to be paying premiums equivalent to two to four percent 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, the HIO beneficiary base is relatively small, and the majority of workers are not enrolled in the HIO. Many workers are self-employed, and others must be in the informal sector or in very large companies, which are not required to enroll. Nevertheless, if we make a very conservative assumption that HIO beneficiaries earn wages no higher than those workers who are not enrolled, then it would appear that the HIO is receiving the equivalent of less than 1.8 percent of total applicable wages (Table 2.13).

Table 2.13 Analysis of HIO Revenue Base for FY92

	Total
Total employee numbers, all Egypt (millions)	13,812
Law 32/79 beneficiary number (millions)	4,566
Estimated proportion of employees enrolled in the 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 revenue to beneficiary wages	1.8%
Estimated ratio of HIO premium revenue to total wages	0.6%

Source: Based on data from the HIO and the Ministry of Planning, cited in the World Bank (1993). The estimate of beneficiary wages is based on the assumption that beneficiaries earn average wages.

The level of copayments charged for services delivered is extremely low, typically less than LE 1.00, and only small amounts of revenue are raised from this source. In fact, premium levels and copayments have not been changed, since the inception of the programs. In addition to this, HIO earns some income from selling its services to other individuals and companies.

An accurate and reliable description of HIO overall funding sources is not easy. Three different sets of accounts for the HIO for FY95 were obtained during this study. These included the official MOF accounts for the HIO, as well as two different sets of accounts provided by official sources within the HIO. None of these three different accounts are in complete agreement with one another. The reasons for these discrepancies are unclear, although the HIO internal accounting and financial systems are evidently not designed to produce a timely or transparent picture of the true financial status of HIO operations.

Table 2.14 gives a breakdown of HIO revenues by source in FY95, which is based on information supplied by the HIO accounting department to the NHA team.

Table 2.14 Revenue Sources of HIO for FY95		
Revenue Source	Amount (LE millions)	Percentage of Total
Laws 32, 79 and Widows/Pensioners		
Labor Accident	107,766,430	
Law 32	73,487,597	
Law 79	197,103,112	
Widows and pensioners	18,554,337	
Premiums from companies with waivers	11,307,603	
Total premiums	408,219,079	45.7%
Sale of goods	—	
Pre-employment and periodic clinical exams	602,882	
Copayments	1,787,621	
Sale of services	11,312,885	
Other operational revenues	24,021,376	
Total operational revenues	37,724,764	4.2%
Total revenues	445,943,843	49.9%
SHIP	—	
Student premiums under SHIP	64,029,364	
Revenue from cigarette tax	219,009,997	
GOE contribution for students in SHIP	120,996,542	
Student copayments	16,421,643	
Other operational revenues	27,308,169	
Total revenues	447,765,715	50.1%
Total Income	893,709,558	100.0%

Source: HIO.
Note: Copayments for drugs appear as revenues.

2.4.3 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 15.9 percent of its expenditures are used to purchase services from other providers within Egypt, and less than 0.6 percent for treatment abroad. Of total expenditures, a very large proportion is spent on drugs (54.5 percent in FY95). This is a problem recognized by the HIO and is thought to stem from lax prescribing controls and the very low copayments for drug purchases.

Total expenditures are relatively high, and expenditures per beneficiary in the main programs amounted to LE 108.4 in FY95, which compared with MOH expenditures of LE 25.5 per capita for the whole population (FY95 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 13 percent decrease in real funding levels per beneficiary during FY91–95 (Table 2.15).

Table 2.16 gives the breakdown of expenditures by regional branch, which indicates that relative funding levels are lowest in South Upper Egypt and highest in Cairo (see Map 2.2).

Map 2.2: Per Capita Distribution of HIO Expenditures by Governorate, FY95

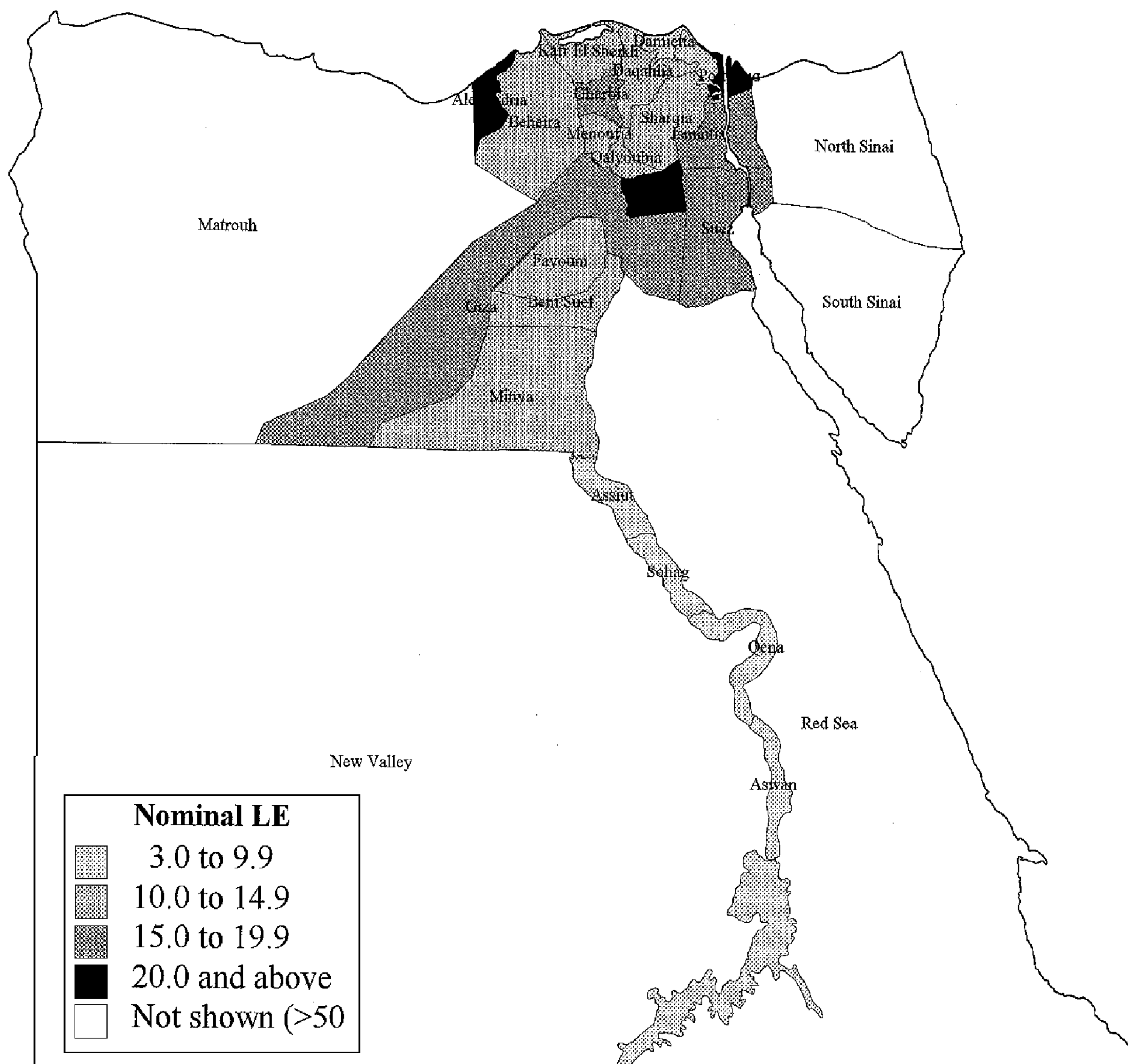

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Table 2.15 Expenditures by HIO, FY91–95					
	FY91	FY92	FY93	FY94	FY95
Total expenditures (LE millions)	363.3	406.3	412.3	n.d.	971.7
Workers	363.3	406.3	n.d.	n.d.	634.5
SHIP	n.a.	n.a.	n.d.	n.d.	337.1
Expenditures on drugs (LE millions)	**159.8**	**221.3**	**217.8**	**n.d.**	**430.3**
Workers	159.8	221.3	n.d.	n.d.	346.0
SHIP	–	–	n.d.	n.d.	84.3
Expenditures on drugs (% of total)	**44%**	**54%**	**53%**	**n.d.**	**44.3%**
Workers	44%	54%	53%	n.d.	54.5%
SHIP			n.d.	n.d.	25.0%
Beneficiary numbers ('000s)					
Law 32	2,343	2,481	2,557	2,662	2,782
Law 79	1,830	1,914	2,009	2,221	2,372
Total number of workers	4,173	4,395	4,566	4,883	5,155
Widows and pensioners	433	500	550	625	697
Total workers, pensioners, and widows	4,606	4,895	5,116	5,508	5,851
SHIP	–	–	n.d.	10,106	14,819
Total beneficiary numbers	4,606	4,895	n.d.	15,614	20,670
Expenditure per beneficiary (nominal LE)					
Workers	78.9	83.0	n.d.	n.d.	108.4
SHIP	0.0	0.0	n.d.	n.d.	22.8
Expenditure per beneficiary (constant FY90 LE)					
Workers	68.9	60.5	n.d.	n.d.	60.0
SHIP	n.a.	n.a.	n.d.	n.d.	12.6
Source: HIO Annual Report 1995.					

Table 2.16. Comparative Expenditure Levels in HIO Regions, FY95						
Region	Law 32/79	Pensioners/ widows	Total	%	Expenditures per beneficiary	Ratio (South Upper Egypt = 1)
Northwest Delta	1,077	189	1,266	21.6	86.1	1.90
East Delta	781	87	868	14.8	109.8	2.43
Canal	297	34	331	5.7	117.1	2.59
Cairo	806	167	973	16.6	149.4	3.30
Middle Delta	785	87	872	14.9	116.3	2.57
Giza and North Upper Egypt	773	85	858	14.7	114.1	2.52
Assiut and Middle Upper Egypt	375	30	405	6.9	84.1	1.86
South Upper Egypt	261	18	279	4.8	45.3	1.00
Total	**5,155**	**697**	**5,852**	**100.0**	**108.4**	**2.40**
Source: HIO and DOP						

2.4.4 Student's Health Insurance Program

In July 1992 the people's assembly of Egypt passed Law 99 expanding health insurance to cover all school children. In order to implement this law, the HIO set up SHIP as a separate program covering school children only. SHIP started operating in February 1993 and 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 12 per child, and a cigarette tax of 10 *piastres* (1 LE = 100 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.

Operation of SHIP was implemented in three stages. The first was in February 1993 with the objective of covering 5.0 million children in large cities. The second was in October 1993, with the objective of covering 5.1 million in rural areas. The third stage started in October 1994, with the objective of achieving universal coverage. By the end of June 1995 a 100 percent coverage was achieved with the enrollment of 14.8 million children.

FY95 total expenditures by SHIP were LE 337.1 million, of which 63.9 percent was for outpatient care, 28 percent for hospital based care, 1.3 percent for supply of prostheses and eye glasses, and 6.9 percent for administrative costs (Table 2.17).

Table 2.17 Expenditures by SHIP, FY94–95

Cost Center	FY94	FY95
General practitioners	34.7	48.8
Specialists	31.7	58.4
Drugs	52.0	84.5
Hospitals	55.5	78.7
Prostheses	n.a.	4.3
Administration	n.a.	23.2
Capital	n.a.	39.2
Total	**n.a.**	**37.2**

Source: HIO Annual Report 1995.

Revenues exceeded expenditures, which led to an LE 169.4 million surplus in FY95. Surpluses were also achieved in previous years. Several factors explain this surplus, especially compared with the main workers programs:

- A higher guaranteed income due to cigarette taxes and the fixed governmental contribution.
- Lower utilization rates.
- Shorter hospitalization per episode for inpatients (3.5 days/episode versus 5.1 days/episode).
- Lower number of staff per beneficiary (Table 2.18).

- Drug prescription is better controlled, with SHIP beneficiaries having to pay one-third of the cost of prescriptions as a copayment. This not only reduces the cost to the program, but also provides less incentive for abuse (copayment is only LE 1 in the workers' program and the average cost of a prescription is LE 14.4).

- Inherent differences between the two programs, e.g., coverage of labor accidents and pensioners, which led to a more expensive insurance program for workers.

All these factors, however, do not necessarily mean that SHIP is more efficient, as quality of both programs is not readily comparable.

Table 2.18 Distribution of Health Care Personnel in Both Programs, FY95

	SHIP		Workers/Pensioners/Widows	
	Number	Number per 100,000 beneficiaries	Number	Number per 100,000 beneficiaries
Physicians	1,527	10.3	4,108	70.3
Dentists	703	4.7	282	4.8
High nurses	0	—	291	4.9
Pharmacists	55	0.4	839	14.4

Source: HIO Annual Report 1995.

Distribution of beneficiaries varies widely from one region to the other with the highest concentration (21 percent of the total) in the East Delta region and the lowest (five percent) in the Canal governorates (Table 2.19). Most outpatient services are provided by SHIP general practitioners and specialists. General practitioners are situated in schools (unless practically impossible), whereas specialists are found in polyclinics. In contrast, inpatient services are provided mostly by contracted providers at a cost of LE 65.3 million in FY95.

Table 2.19 Distribution of SHIP Beneficiaries by Branch, June 30, 1995

Regional Branch	Beneficiaries ('000s)	Percentage of Total (%)
Northwest Delta	1,893	13
East Delta	3,049	21
Canal	771	5
Cairo	1,791	12
Middle Delta	2,263	15
Giza and North Upper Egypt	2,687	18
Assiut and Middle Upper Egypt	1,360	9
South Upper Egypt	1,006	7
Total	**14,820**	**100**

Source: HIO Annual Report 1995.

2.5 Curative Care Organizations

The CCOs 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 CCOs, in Port Said, Kalyubia, Damietta, and Kafr El Sheik, are smaller and only recently have been expanded. The CCOs are each run independently, but they come under the authority of the MOH. All of the CCOs are hospital-based organizations, and they accounted for a total of 4,846 beds in mid-1992 (four percent of all reported beds). Of these beds, Cairo and Alexandria account for over 90 percent.

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. The CCOs all provide some limited free emergency services and maintain a fixed number of free beds for free treatment of poor patients under arrangement with the 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 in each CCO. Table 2.20 gives the breakdown of revenues by item for Cairo CCO in FY95.

Table 2.20 Revenue Sources of Cairo CCO, FY95

Revenues by Source	Amount in LE
Provision of curative services	77,035,401
GOE grants for free and reduced beds	3,025,000
Others	5,361,470
Total	**85,421,871**

Source: Cairo CCO.

The CCOs are essentially self-financing for recurrent costs, earning revenues by providing services to individuals, the HIO, the MOH, and companies on contracts. The bulk of their income is from institutional payers, and less than one-sixth is from individuals paying out-of-pocket. In the case of Cairo CCO, the largest single payer is the HIO, followed by the MOH and private firms. Table 2.21 gives a breakdown of service revenues for Cairo CCO in FY95 by type of customer.

Table 2.21 Composition of Services Revenues by Type of Customer

Customers	Amount in LE	Percentage of Total (%)
HIO	28,092,635	36.5
MOH	5,618,527	7.3
Companies	36,520,425	47.4
Individuals	6,803,814	8.8
Total	**77,035,401**	**100.0**

Source: Cairo CCO.

The MOF 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 amounted to almost LE 200 million during FY89–93 (Table 2.22). Much of these expenditures were for construction of two new hospitals, the Nasr Institute and El Haram Hospital in Cairo. However, after completion of these facilities, a dispute arose between the CCO and the MOF over repayment of loans used for construction. Cairo CCO refused to pay for the capital costs arguing that this was the MOF's responsibility. Subsequently, the MOF took over the two facilities and transferred them to the MOH control on December 13, 1994. This transfer took place in the middle of the fiscal year, so the expenditures reported here for Cairo CCO overstate the underlying level of expenditures, as the figures include the transferred hospitals. Examination of the individual hospital accounts shows that the two facilities accounted for LE 193 million of expenditures in FY95.

Table 2.22 gives an estimate of total expenditures by all CCOs during FY91–93.

Table 2.22 Expenditures by CCOs, FY91–93 (estimated)

	FY91	FY92	FY93	FY95
Total expenditures (LE millions)	108	100	106	336
Operating expenditures (LE millions)	75	98	106	332
Expenditures on drugs (LE millions)	19	25	29	n.a.
Expenditures on drugs (% of total)	25%	26%	27%	n.a.
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.

2.6 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 fall under the responsibility of the MOE. They accounted for 15,375 beds in 1992, which was 14 percent of all known beds (Kemprecos 1994). They are funded principally by the MOF, through the budget of the MOE. They provide care that 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 15 university hospitals in Egypt. These are not distributed equally throughout the country, and most are found in Cairo or other urban areas of Lower Egypt. Their distribution is similar to that of the teaching hospitals, but the overall level of provision is greater.

Table 2.23 Operating Expenditures in Cairo, Alexandria, Port Said, and Damietta CCOs, FY90–95						
	FY90	FY91	FY92	FY93	FY94	FY95
			Cairo CCO			
Total expenditures (LE millions)	215.4	90.6	79.0	84.2		288.6
Recurrent expenditures (LE millions)	49.7	58.1	77.9	84.1		284.6
Salaries						21.3
Expenditures on drugs (LE millions)	12.6	15.2	20.1	23.0		n.a.
Construction expenditures (LE millions)	165.6	32.6	1.1	0.1		4.0
Grant for free beds from the MOF (LE millions)	1.8	2.0	2.2	2.5		3.2
Beds	3,620	3,705	3,566	3,556		
Operating expenditures per bed (LE)	13,742	15,680	21,853	23,656		
			Alexandria CCO			
Total expenditures (LE millions)	8.9	9.9	11.2	11.9		18.3
Recurrent expenditures (LE millions)						18.2
Salaries						6.1
Expenditures on drugs from the MOF (LE millions)	1.8	2.2	2.9	3.4		n.a.
Grant for free beds from the MOF (LE millions)	n.a.	1.2	1.3	1.4		1.9
Beds				939		
Operating expenditures per bed (LE)				12,683		
			Port Said CCO			
Total expenditures (LE millions)						2.3
Grant for free beds from the MOF (LE millions)						0.06
			Damietta CCO			
Total expenditures (LE millions)						-25.0

Note: Based on data supplied to the DOP by the MOF.

Table 2.24 gives estimated expenditures in university hospitals for FY90–95. The figures for FY90–93 are based on information collected in a DOP-conducted survey of the university hospitals during the first round of NHA estimations. Much of the data collected during the first round was incomplete, so total expenditures in university hospitals were estimated. For the second round of NHA estimates, accurate

information on incomes and expenditures was obtained from the MOF accounting records. These records, however, do not include all the facilities covered in the first round. Specifically, several small units attached to university medical faculties for the treatment of students and staff were not included, plus three other specialist facilities, none of which are strictly university hospitals. These missing facilities accounted for approximately LE 50 million of expenditures in FY91 of which 70 percent would have been for services for medical faculty and students and 30 percent from fully self-funding specialist units. These are added to the total given below when estimating the FY95 NHA.

Based on the information provided by the sample of institutions that reported data at that time, it was estimated that 15 to 24 percent of the total revenues of the university hospitals were generated from patient revenues during FY90–93.

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 2.24 also gives the estimated levels of cost recovery based on data from the university hospitals that reported credible data.

Table 2.24 Expenditures in University Hospitals, FY90–93 (Estimated) and FY95

	FY90	FY91	FY92	FY93	FY95
Total expenditures (LE millions)	276.8	334.4	410.1	468.9	535.0
Beds			15, 375		
Expenditures on drugs (LE millions)	46.0	41.5	44.0	72.1	~95.0
Expenditures on drugs (% of total)	17.0	12.0	11.0	15.0	~17.0
Self-funding (LE millions)					48.5
Self-funding (% of total income)					9.0
Expenditure per bed (LE)			~27,000.0		

Note: Figures for FY90–93 are estimates and are not strictly comparable with those for FY95, which are derived from MOF data.

2.7 Comparative Costs and Subsidies

The overall levels of expenditures in university hospitals are high. This includes a significant level of expenditures on drugs—approximately 17 percent 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 MOH hospitals. This is a crude comparison, since the university hospitals are supposed to serve the additional function of supporting teaching and research. 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 2.25).

The estimates given in Table 2.25 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 the HIO). This may provide much of the explanation behind the generally lower level of quality in MOH 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.

Table 2.25 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 the 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.

2.8 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 Ministry of Transport, which operates at least two hospitals for railway employees; and the Ministry of Defense, 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 resourced 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 the Ministry of Interior and railway hospitals facilities amounted to just under one percent of total expenditures in the MOH at that time. In addition, approximately 10 percent of all physicians were reported to be 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.

On the basis of this very limited information, it was estimated for the FY91 NHA estimates that total expenditures by the ministries of interior, transport, and defense were unlikely to be more than 20 percent of total MOH expenditures, i.e., some level less than LE 150 million in FY90. Since overall NHEs have approximately doubled in nominal terms between FY91 and FY95, the FY91 estimate is doubled to give an estimate for FY95 expenditures by health services belonging to these other ministries, i.e., LE 200 million.

2.9 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. Many of the more effective programs in the health sector are donor funded, often because

of the greater incentives and compensation that can be paid to government personnel working on donor-supported projects.

In many countries, inflows from official donors are tracked by the local United Nations Development Program (UNDP) office, but in Egypt this is not the case because of the difficulties involved in compiling the information. 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 the MOH, there is no single office that monitors aid flows, and even the 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 estimates of foreign aid flows to Egypt's health sector prior to the FY91 estimates, both for 1990. One report in 1993 estimated total health-sector aid to Egypt at approximately LE 250 million,[7] while Michaud and Murray (1993) estimated the amount at US $111 million (equivalent to LE 240 million) in 1990. The FY91 NHA estimate was LE 180 million.

The FY95 NHA estimate is based on collection of information directly from the local offices of the official donors known to be providing assistance to the health and population sectors. Where possible, data was collected on actual disbursements and not budgeted assistance. However, in several cases, donors were unable to provide accurate information on actual disbursements during the year, and an estimate had to be made from taking an average of several years data. In most cases, disbursement data was expressed not in Egyptian pounds but in foreign currencies. These figures were converted into Egyptian pounds using the average exchange rate for calendar years 1994 and 1995 as given in the International Monetary Fund (IMF) (1996).

Total official aid to the health sector in FY95 is estimated at LE 215 million (Table 2.26). Of the total official aid, it is estimated that bilateral donors accounted for more than 75 percent in FY95. Of these, the USAID was the most important, accounting for 57 percent of the total foreign assistance received. This was a significant increase, since the 37 percent share recorded in FY91.

Published and unpublished donor records were studied carefully to determine to the greatest extent possible the organizations that benefitted from the donor support. This information was used to prepare an estimate of the distribution of all donor expenditures. Of assistance to the health sector, most is given to the MOH (~66 percent), but substantial amounts are also transferred to the university and teaching hospitals (~13 percent) and NGOs (~12 percent). Table 2.26 gives the estimated distribution of donor assistance for a selected number of donors for whom more complete data is available.

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

Table 2.26 Foreign Assistance to Egypt's Health Sector, FY91 and FY95									
	Total Disbursements (LE millions)		Proportion of Total (percent)		Beneficiary of Funds in FY95 (Estimated percentage of total)				
	FY91	FY95	FY91	FY95	MOH	HIO	Univer-sities	NGOs	Others
USAID	65.0[a]	122.8	37	57	76	10	2	10	2
Japan	1.3	12.2	1	6			100		
Germany	2.2	2.2	1	1	100				
France	23.9[a]	1.8	13	1					
Italy	14.1	14.3	8	7	47		53		
United Kingdom	0.0	0.0	0	0					
Canada	0.3	0.0	0	0					
Denmark	25.9[a]	2.8	15	1	100				
Finland	14.6[a]	2.0	8	1	100				
Netherlands	12.5	3.8	7	2	100				
Norway	n.d.[b]	0.0	n.d.	0					
Sweden	n.d.[b]	0.0	n.d	0					
Kuwait	n.d.[b]	n.d.	0	0					
Saudi Arabia	n.d.[b]	n.d.	0	0					
European Union	5.7	1.0	3	1	11		22	66	
Others	0.0[b]	0.0	0	0					
Subtotal for bilateral donors	165.5	162.9	93	76					
World Health Organization	3.0[a]	19.9	2	9	81		18	1	
World Bank	0.0	0.1	0	0	100				
UNICEF	7.0[a]	9.3	3	4	100				
UNDP	0.0[b]	0.0	0	0					
UNFPA	2.0[a]	2.8	1	1	15			5	80
African Development Bank	2.1[a]	8.5	1	4	100				
SFD	n.d.	11.6	0	5	8			92	
Others	0.0[b]	0.0	0	0					
Subtotal for multilateral donors	14.1	52.1	7	24					
Total from all official sources	179.6	215.0	100	100	~66	~6	~13	~12	~2

Source: Based on data collected from donors by the DOP and Harvard/DDM, budgetary data of MOH, and G. Chellaraj (1994).
Note: a) Estimated based on incomplete data. In most cases, these donors were not able to provide information on actual yearly disbursements.
b) The DOP was unable to obtain data from donor. Actual amounts believed to be insignificant.

2.10 Private Insurance, Employer Schemes, and Occupational Syndicates

2.10.1 Private Insurance Schemes

The HIO is the major type of third-party financing in Egypt. The role of private or voluntary health insurance is small. Probably only five to 10 percent of patients admitted to private hospitals have some form of private insurance (D'Agnes and Picazo 1993). In FY95 there were 11 insurance companies in Egypt,[8] of which only three offered health insurance. In addition, there was one health maintenance organization, Medicare, which provided only health coverage and was, therefore, not considered part of the insurance sector. The three insurance companies that provide health insurance are the largest in Egypt and are all government-owned parastatals (Al Chark, Misr, and Al Ahlyia companies).

The three companies market their health insurance schemes to companies who want to insure their employees; these are mostly large, private companies. None provide insurance for individuals. Medicare is the only one to provide insurance to individuals, but the number is very small (Table 2.27). The insurance companies typically contract a list of providers (hospitals, clinics, diagnostic centers) to provide services to the beneficiaries. Reimbursement of services is usually only for such approved providers and on the basis of copayments with an annual coverage ceiling (Kemprecos 1994).

Table 2.27 Number of Beneficiaries of Private Health Insurance, FY95

Company	Group Contracts	Individuals	Total	% of Individuals
Al Chark	11,184	0	11,184	0
Misr	8,170	0	8,170	0
Al Ahlyia	9,866	0	9,866	0
Medicare	12,000	45	12,045	0.4
Total	41,220	45	41,265	0.1

Source: DOP survey, EISA Annual Report

2.10.2 Data Collection

Postal questionnaires were sent to all insurance companies. This was followed up by interviewer-administered questionnaires and interviews with non-respondents. Data were obtained from all companies providing health insurance, and these were compared with data published in the annual report of the Egyptian Insurance Supervisory Authority (EISA).[9] Data collated included the number of persons covered, total revenues and expenditures, and expenditure on drugs and inpatient services.

[8] Out of the 11 companies, the Egyptian Company for Reinsurance deals only with insurance companies, while two others provide their services only in free trade zones.

[9] EISA is a governmental agency that provides licenses to new insurance companies and supervises activities in the insurance sector. All insurance companies have to provide them, by law, with detailed information on the activities on an annual basis. The report referred to is the 1995/96 report which contains information on activities in FY95 and FY96.

2.10.3 Results

Data obtained revealed that the contribution of private health insurance to NHEs in FY95 is very small (LE 16.6 million out of approximately 8 billion in FY95). It also constitutes a small proportion of insurance-sector activity, raising only 1.2 percent of total premiums in FY95 (EISA 1996).

Private health insurance covered 41,265 beneficiaries in FY95. Almost all of them are covered through contracts with their companies. Al Chark, the largest of the insurance companies, provided health insurance to 11,184 beneficiaries in FY95, of whom 57.4 percent were its own employees; this coverage was higher than previous years according to sources in the company. Thus the estimate provided by Kemprecos (1994) that Al Chark provided coverage to approximately 50,000 employees in the Cairo area in 1992 is clearly an overestimate. The figures for overall private health insurance expenditures presented in this report are therefore a major revision to those published earlier in the first round of NHA estimates.

Private health insurance provides the highest levels of expenditures on health per beneficiary of all the organized health financing mechanisms in Egypt (LE 390 in FY95) (Table 2.28). This is far higher than the HIO (LE 108) and almost 15 times the expenditure per capita of the MOH. Drugs constitute 29 percent of total expenditures, compared to the 54.5 percent spent by HIO workers' programs (which include pensioners and widows). Actual expenditures are LE 111.5 per beneficiary by private insurance schemes, compared to only LE 59.6 per beneficiary by the HIO.

Although private health insurance plays a minor role in the health care sector, expansion may occur in the next few years. Increasing privatization of the economy will increase the demand for insurance schemes. Economic reform and moving toward a market economy should improve the performance of the insurance sector. Changes have already materialized in the last few years and, instead of the three insurance companies suffering losses, one of them is making a profit while the others have reduced their losses.

2.10.4 Employer Health 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.

Table 2.28 Number of Beneficiaries of Private Health Insurance, FY95					
	Al Chark	Misr	Al Ahlyia	Medicare	Total
Income (LE millions)	5.2	3.5	2.9	5.0	16.6
Expenditure (LE millions)	4.0	3.8	3.8	4.4	16.1
Surplus (deficit) (LE millions)	1.2	(0.3)	(0.9)	0.6	0.5
Number of beneficiaries	11,184	8,170	9,866	12,045	41,265
Expenditure/beneficiary (LE)	360	470	390	365	390
Hospital expenditure (LE millions)	1.1	1.2	0.8	2.9	6.0
Hospital expenditure as % of total	27%	31%	21%	67%	38%
Drug expenditure (LE millions)	1.5	0.9	1.9	0.4	4.6
Drug expenditure/beneficiary (LE)	136	104	192.7	28.7	111.5
Drug expenditure as % of total	38%	22%	50%	8%	29%

Source: DOP survey, EISA.

2.10.5 Data Collection

There is no representative survey of businesses that has investigated company expenditures on health services other than those related to health insurance schemes. In the absence of one, the DOP attempted during the first round of NHA estimations to survey a limited number of companies directly, mostly large ones known that have extensive health facilities of their own. The number of returns obtained was small, and so the estimates prepared for the first NHA study were associated with a large degree of potential error.

Nevertheless, no new information was collected in this round of NHA estimations concerning expenditures by employers. In the absence of new information, it was decided to merely adjust the original NHA estimate for FY91 in line with trends in overall NHE during FY91–95. The NHA estimate for FY91 was LE 70 million, so this was doubled to give an estimate of LE 140 million in FY95.

2.10.6 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 outpatient 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.

2.10.7 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 percent) and Alexandria (20 percent). It provides comprehensive benefits, albeit with a relatively low ceiling on total reimbursements, and with copayments. Hospitalizations and major outpatient services are only reimbursed if preapproved 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 inpatient 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 2.29).

Table 2.29 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 substantial schemes are run by the lawyers and agricultural syndicates, and these only started operating in FY93. Expenditures on medical services by these other syndicates are estimated at less than LE 20 million annually during FY89–95.

2.10.8 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 outpatient consultations and drugs. Overall drug expenditures appear to be low, and much less than the 50 percent reported for the HIO and private insurance schemes.

2.11 Non-Governmental Organizations

There is a large number of NGOs in Egypt, but their presence in the social sectors is less than in most countries in Sub-Saharan Africa and Asia (World Bank 1991). 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 the MOSA, and they must register either at the national level or at governorate level depending on the scope of their activities. The financial affairs of the NGOs are subject to regulation, and endowment funds are not permitted. All fundraising activities from the general public must be approved, and only a limited number of fundraising projects are given approval in any year. All foreign support must be reported to and approved by the MOSA. These official rules are generally thought to greatly restrict the private fundraising capacity of the NGOs (World Bank 1991).

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 15 percent (LaTowsky et al. 1994). Since all registered NGOs must report their financial accounts to the 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, the MOSA has stopped publishing routine statistics in recent years, and complete statistics, anyway, are not available centrally in the MOSA, since the records are kept on paper at the governorate level. Recent studies of MOSA records in three governorates by LaTowsky et al. (1994) indicate that the governorate records are credible sources of data on NGO activities and financing. The NGOs have little incentive to misstate their actual financial position and have every reason to provide the MOSA with the required statements on their activities because of close supervision maintained by the MOSA field staff.

It would be very costly to collate information on health activities of all NGOs from the records maintained in all governorates. Instead, the data provided by LaTowsky, et al., based on analysis of all NGO records for FY92 in Giza, Sharkia, and Sohag, are used to prepare an estimate. The data provide the total expenditures and revenues by source of NGOs engaged in health activities in the three governorates. It is believed that the NGOs in the three governorates are reasonably representative of all Egyptian NGOs and that they account for approximately 15 percent of overall national NGO activity, which allows an estimation to be made of total NGO health-related expenditures, as well as sources of income for these activities. Table 2.30 illustrates the estimations.

2.11.1 Uses of Funds

The NGOs are not an ultimate 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 estimated to be derived from government sources (seven percent), donations (three percent) or other grants (five percent) (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 little of their activities is devoted to provision of hospital care.

Table 2.30 Estimated NGO Revenues, FY91–95 (LE millions)

	Number	FY91	FY92	FY93	FY94	FY95
	Health Care Revenues in Three Governorates					
Giza	141		5.13			
Sharkia	78		2.33			
Sohag	51		0.70			
Total			8.15			
User fees (% of total)			84%			
	Estimates for Whole of Egypt					
Local revenues	37	43	54.3	61	68	80
User fees	32	36	45.6	52	57	67

Note: National estimates derived from survey of the NGOs in three governorates (LaTowsky et al. 1994). Figures extrapolated to other years by assuming that NGO revenues grew in parallel with nominal GDP growth. Second column gives number of the NGOs providing health care services in each of the three governorates.

2.12 Household Expenditures

Household expenditures clearly comprise the largest and most important source of financing in Egypt's health care system. However, it is not easy to obtain an accurate estimate of the actual level of spending. Total household spending on health care services can 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 for-profit providers. Nor are household survey data not without their problems; under or overreporting can be significant problems, in addition to other problems associated with sampling and non-sampling errors.

For estimation of household health expenditures for the FY95 NHA, three major sources of information are available: (I) data from the National Health Utilization and Expenditure Survey 1994/95, (ii) information in the NHA database on patient revenues received by some providers, and (iii) data on pharmaceutical sales. The method used in this study was to reconcile the data available from these three separate sources in order to arrive at a set of results, which was most consistent with the known deficiencies with each data source, as well as being internally consistent.

Data on pharmaceutical expenditures are reviewed first, followed by a discussion of the results of NHHEUS 95.

2.12.1 Pharmaceutical Expenditures

Pharmaceuticals account for a large proportion of overall health care expenditures in Egypt. Egypt is 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 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 retail price at which they must be sold. 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.

The Drug Policy and Planning Center (DPPC) of the MOHP has established and maintains a national drug information system, which depends on mandatory reporting of all drug sales by pharmaceutical companies. This system, which has been in existence since 1986, tracks imports, production, and sales of all drugs by company and individual pharmaceutical product. Table 2.31 gives the DPPC estimates of trends in the pharmaceutical market during FY86 to FY96. During this period, total pharmaceutical consumption and prices increased greatly in nominal terms. However, in real terms, there was only a modest increase in actual price levels and sales volumes.

DPPC sales data are for all pharmaceutical products sold legally within the Egyptian domestic market. This includes prescription-only medicines (in Egypt restricted only to opiates and a few other products), as well as over-the-counter products, which comprise the vast bulk of sales. Vaccines are not included, as they are regulated separately. Sales are valued at retail price in the case of sales to pharmacies, and at the actual price paid for sales to institutional purchasers, such as the MOHP, the HIO, and universities. This latter price is typically less than the retail price because of discounts offered to large buyers and for tender contracts.

For NHA purposes, it is necessary to derive an estimate of total pharmaceutical sales to households, but DPPC does not collect data on the market share of the various types of purchasers or the percentage share of each distribution channel. Nonetheless, three different estimates can be made of the percentage of pharmaceuticals distributed through pharmacies to households:

- Using a sample survey approach, IMS[10] estimates that pharmacies accounted for 84 percent of total distribution in 1995 (Lalvani 1996).

- During the first round of NHA estimates, a survey was carried out by the DOP of the 25 largest pharmaceutical companies, and this revealed that approximately 70 percent of total drugs sales at wholesale value were made to the private sector, which is essentially pharmacies. There was a 40 percent discrepancy between these sales figures (at wholesale prices) and those of DPPC, which can be explained by the valuation of pharmacy sales at retail prices in the DPPC data (Rannan-Eliya 1995). If private-sector sales for FY92 are adjusted for this retail margin, then the DOP survey data are consistent with an 80 percent share of distribution being accounted for by pharmacies.

- The MOF audited accounts for governmental and public-sector organizations detail Chapter 2 expenditures by organizations. In the case of the MOHP, the MOF estimates that drug purchases account for 40 to 45 percent of total Chapter 2 expenditures. If it is assumed that other governmental health care organizations have a similar pattern of expenditures, then an estimate can be made of total public-sector purchases of pharmaceuticals. In the case of the HIO, this is not necessary as their annual report contains sufficient information to directly determine its total drug purchases in the wholesale market. Defense ministry facilities typically purchase drugs directly from pharmacies without engaging in tenders or bulk purchases, so it can be ignored in this analysis. Table 2.32 gives the estimates of drug purchases than can be derived from this procedure. It implies that total institutional purchases are in the range of LE 555 million, which would imply that pharmacy sales account for LE 2,579 million, or 82 percent of total sales as recorded by the DPPC.

The three different estimates described above are all consistent in suggesting that pharmacy sales account for 80 to 84 percent of total pharmaceutical sales. This implies that total pharmacy sales in FY95 amounted to LE 2,510 to 2,633 million.

[10] IMS is a trademark.

Table 2.31 Drug Sales, FY86–96							
Fiscal Year	Retail Value (LE millions)	Volume (units)	Average Unit Price (LE)	Average Unit Price (constant FY90 LE)	Change in Retail Value (%)	Change in Volume (%)	Per Capita Consumption (LE)
FY86	778.1	705.0	1.10		–	–	16.5
FY87	954.0	773.9	1.23		23	10	19.8
FY88	1,094.2	821.4	1.33		33	6	22.1
FY89	1,217.8	840.7	1.45	1.71	11	23	24.8
FY90	1,395.1	822.8	1.70	1.70	15	-2	27.3
FY91	1,766.6	844.5	2.09	1.83	27	3	32.8
FY92	1,988.5	771.8	2.58	1.88	13	-9	41.0
FY93	2,270.7	859.1	2.64	1.75	14	11	40.1
FY94	2,738.9	890.3	3.08	1.91	21	4	47.4
FY95	3,134.4	942.2	3.32	1.84	14	6	53.1
FY96	3,479.3	1,010.2	3.44		11	7	57.8

Source: DPPC (MOHP).

Table 2.32 Estimation of Public Sector Drug Purchases in FY95		
Organization	Chapter 2 Expenditures (LE millions)	Estimated Drug Purchases (LE millions)
MOHP	438	186
University hospitals	225	96
THIO	31	13
HIO	n.a.	193
CCOs	~276	117
Total (including vaccines)		605
Total (excluding vaccines)		555

Note: Drug expenditures estimated as 42.5 percent of Chapter 2 expenditures, except in case of the HIO. Figures for the HIO here are only for HIO own-pharmacy purchases; the HIO finances an additional LE 237 million in drug purchases from private pharmacies. Final total is adjusted for inclusion of vaccines in the MOHP drug purchases by subtracting estimated value of vaccine purchases, which is LE 50 million.

2.12.2 Analysis of NHHEUS95 Results

Table 2.33 gives the level of household non-drug-related health expenditures associated with visits to different types of provider as indicated in NHHEUS95, as well as total drug expenditures. The per capita figures reported in the survey have been used to derive estimates for the whole population. The right-hand columns give estimates for several of the provider types, derived from the MOF data on self-funding, plus the estimates of pharmacy sales described above.

Table 2.33 Comparison of Results of NHHEUS 95 with Other Data					
Item of Health Expenditure	Expenditures in NHHEUS (LE per capita)	National Expenditures from NHHEUS (LE millions)	National Expenditures from Alternative Source	Alternative Source	Difference Between Two Sources
Non-drug OP plus IP spending associated with MOH visits	2.9	171	< 97	Self-funding in MOF accounts	76%
University and teaching hospitals	1.1	66	68	Self-funding in MOF accounts	n.a.
OP fees at mosque and church clinics excluding drugs	1.0	57	30	Estimate from LaTowsky et al. (1994)	90%
Drug purchases from pharmacies	63.6	3,749	< 2,396	Derived from DPPC and HIO data	56%

Note: Self-funding at the MOH and the university hospitals includes both user fees paid by individuals and other income from institutional sources. Pharmacy purchases adjusted for HIO purchases of LE 237 million.

OP - Outpatient. IP - Inpatient.

As is evident, NHHEUS 95 generally reports level of household spending that are substantially greater than is known from other data sources. Self-funding at most government organizations consists mostly of income from contracts with other institutions, such as the HIO and private companies, and only a small proportion consists of direct out-of-pocket expenditures by households. The figures given in the table, therefore, underestimate the actual overreporting observed in NHHEUS 95.

For the purpose of estimating the FY95 NHA, it is assumed that NHHEUS has overreported most household health expenditures. As a first adjustment, it was assumed that all expenditures were overestimated by the same extent as drug purchases, i.e., 56 percent, and so the survey figures were multiplied by a ratio of 64 percent. However, it is expected that non-drug purchases might have been less overreported than drug purchases. Supporting this view is the fact that drug purchases are a much greater proportion of household expenditures in NHHEUS 95 (69 percent) than in other available surveys. The 1990/91 Central Agency for Public Mobilization and Statistics (CAPMAS) household budget survey reported drug expenditures to be only 58 percent of total household health expenditures. As a compromise, the adjustment for non-drug spending is modified by a ratio of 80 percent. Applying this adjustment to all expenditures reported in NHHEUS 95 yields several estimates for expenditure categories, for which we have no other data. These are given below in Table 2.34.

Table 2.34 Estimates of Household Expenditures from NHHEUS 95		
Item of Expenditure	Per Capita Expenditure in NHHEUS 95 (LE)	Adjusted Estimate of National Expenditures (LE)
Doctors' fees	14.20	669 million
Payments to traditional providers	0.09	4 million
Inpatient expenditures at CCOs	0.11	5 million
Inpatient expenditures at private and community hospitals	2.53	119 million
Total household health expenditures	92.54	3,760 million

2.12.3 Final Estimates of Household Health Expenditures

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.

3. Estimation of FY95 National Health Accounts

This section describes the steps undertaken to estimate the final NHA for FY95.

3.1 Ministry of Health

MOH expenditures were reported in the MOF accounts as LE 1,501 million in FY95.

The largest recipient of aid is the MOH. As explained in the section reviewing expenditures by the MOH, it is difficult to accurately ascertain the total amount of assistance received by the MOH. However, analysis of available donor data suggests that approximately 67 percent of all donor assistance benefitted the MOH, or approximately LE 142 million in FY95.[11] Since the MOH accounts only reported LE 67 million in donor support, the additional LE 75 million was added to the accounted expenditures of LE 1,501 million to arrive at the final expenditures by the MOH. The reasons why the official accounts of the MOH may not reflect the full total of donor support (53 percent in this case) have been discussed in the chapter on the MOH.

Based on the above assumptions, total MOH expenditures are estimated at LE 1,576 million. Of this, LE 52 million were spent on the program to treat Egyptians overseas in foreign hospitals. A larger amount (LE 139 million) was spent on the domestic equivalent. The use of these expenditures under the domestic program is estimated based on data for expenditures for Cairo patients in FY96. The latter data indicate that approximately LE 16 million were spent at MOH facilities, and this amount is added to the estimate of outflows to MOH own services.

MOH's total inflows and outflows of funds are thus estimated as shown in Table 3.1.

3.2 Teaching Hospitals

THIO income was reported as LE 118 million in FY95 by the MOF. This included LE 1.9 million in donor support and LE 19 million in self-funding. This was not adjusted upwards as with the MOH, as the THIO actually reported more donor support than could be traced in the available donor information. The composition of self-funding revenue at the THIO was based on estimates from the MOH and the HIO, plus an arbitrary estimate of the breakdown of revenues from private companies and individuals, as follows: households 50 percent, firms 50 percent.

Total inflows and outflows of funds at THIO are thus estimated as shown in Table 3.2.

[11] With two exceptions, all organizations reported receiving less donor assistance than reported by the donors themselves. The National Population Council was the major exception, and the discrepancy amounted to LE 2.5 million. The THIO reported receiving LE 1.6 million more than could be identified from donor information. These discrepancies were taken into account when allocating the remaining donor assistance to the health sector.

Table 3.1 Final Estimated Funding Flows through the MOH, FY95

Inflows (LE millions)		Outflows (LE millions)	
MOF/NIB	1,285	Own services	1,402
Self-funding	97	Foreign treatment program	52
Donor assistance	142		
		Local treatment program	
		CCOs	11
		HIO	1
		THIO	14
		University hospitals	30
		Military hospitals	4
		Private providers	42
		NGOs	3
		Pharmaceutical suppliers	17
Total	**1,524**	**Total**	**1,576**

Table 3.2 Final Estimated Funding Flows through the THIO, FY95

Inflows (LE millions)		Outflows (LE millions)	
MOF/NIB	97	Own services	118
Self-funding (MOH)	14		
Self-funding (firms)	1		
Self-funding (HIO)	3		
Self-funding (households)	1		
Donor assistance	2		
Total	**118**	**Total**	**118**

3.3 Public Authority for Vaccines

Total income and expenditures were reported as LE 50 million in FY95 by the MOF. This included LE 0.2 million in donor support and LE 44.6 million in self-funding. No information was available on the composition of self-funding revenues but it is believed to consist of revenues from the sale of vaccines, mostly to the MOH. Since such vaccine purchases are also counted in the expenditures of the MOH, this amount must be ignored when estimating the final NHA for FY95. Table 3.3 reflects the funding flows through the agency before making this adjustment.

Table 3.3 Final Estimated Funding Flows through Public Authority for Vaccines, FY95

Inflows (LE millions)		Outflows (LE millions)	
MOF/NIB	5.3	Own activities	50.2
Self-funding (vaccine sales)	44.6		
Donor assistance	0.2		
Total	**50.2**	**Total**	**50.2**

3.4 National Population Council

Total income and expenditures for the National Population Council (NPC) were reported as LE 19.6 million in FY95 by the MOF. This included LE 5.0 million in donor support, and LE 1.9 million in self-funding. No information was available on the composition of self-funding revenues. Table 3.4 gives the estimated funding flows through the agency.

Table 3.4 Final Estimated Funding Flows through NPC, FY95

Inflows (LE millions)		Outflows (LE millions)	
MOF/NIB	19.6	Own activities	26.6
Self-funding	1.9		
Donor assistance	5.0		
Total	**26.6**	**Total**	**26.6**

3.5 National Child and Motherhood Council

Total income and expenditures for National Child and Motherhood Council (NCMC) the were reported as LE 2.8 million in FY95 by the MOF. This included zero donor support and LE 1.3 million in self-funding. No information was available on the composition of self-funding revenues. Table 3.5 gives the estimated funding flows through the agency.

Table 3.5 Final Estimated Funding Flows through NCMC, FY95

Inflows (LE millions)		Outflows (LE millions)	
MOF/NIB	1.5	Own activities	2.7
Self-funding	1.3		
Donor assistance	0.0		
Total	**2.7**	**Total**	**2.7**

3.6 National Organization for Drugs Control and Regulation

Total income and expenditures for the National Organization for Drugs Control and Regulation (NODCAR) were reported as LE 6.4 million in FY95 by the MOF. This included no significant donor support, and LE 1.6 million in self-funding. No information was available on the composition of self-funding revenues, but it was assumed that this was wholly accounted for by fees paid by pharmaceutical firms. Table 3.6 gives the estimated funding flows through the agency.

Table 3.6 Final Estimated Funding Flows through NODCAR, FY95			
Inflows (LE millions)		Outflows (LE millions)	
MOF/NIB	4.7	Own activities	6.4
Self-funding	1.6		
Donor assistance	0.0		
Total	**6.4**	**Total**	**6.4**

3.7 Curative Care Organizations

Total income and expenditures of all the CCOs were estimated at LE 332 million in FY95. Most of these expenditures were self-funded from operating revenues. No information was available on the composition of revenues at other branches, so information on the composition of Cairo CCO revenues was used to make estimates for all CCOs.

LE 193 million of expenditures in Cairo CCO was accounted for by two hospitals that were taken over by the MOH during the course of the financial year. Since no information was available on their income sources, it was assumed that their sources of income consisted of the MOF, private companies, and households in the same ratio as estimated for the CCOs as a whole.

Table 3.7 Final Estimated Funding Flows through CCOs, FY95			
Inflows (LE millions)		Outflows (LE millions)	
MOF/NIB	15	Own activities	335
HIO	35		
MOH	11		
Private companies	221		
Households	50		
Donor assistance	3		
Total	**335**	**Total**	**335**

3.8 Health Insurance Organization

Total income and expenditures were reported as LE 971 million in FY95 by the MOF. This included zero donor support. However, analysis of information obtained from donors revealed significant support for HIO activities, which in total was estimated as LE 12 million; this was added to the income and expenditures of the HIO. The HIO annual report was analyzed to determine the composition of HIO expenditures, as a substantial part of HIO expenditures involves payment for services provided by other providers. This yielded figures for expenditures on payments to pharmacies, non-HIO hospitals, and treatment abroad.

No information was available on distribution of payments to different non-HIO hospitals, although they are known to include MOH facilities, the THIO, universities, CCOs, and private hospitals. Analysis of the HIO annual report indicates that total payments to local non-HIO providers amounts to LE 45.4 million, excluding pharmacy purchases. An estimate was made of the exact distribution to non-HIO hospitals based on some limited data on contracted expenditures by certain branches in FY95 and FY96 (Table 3.8). The data from the HIO branches gave an estimate of LE 26 million for payments to the CCOs, which compares with

the figure of LE 28 million for HIO income at Cairo CCO; the CCO estimate was, therefore, adjusted upwards by LE 2 million.

Table 3.9 gives the estimated funding flows through the HIO. Note that the recorded income of the HIO includes LE 150 million from an operating deficit. Although this was financed during the year by non-payment of suppliers, it is treated in the NHA as an implicit subsidy from the MOF, as HIO debts are GOE liabilities and have typically been financed in the past by *ad hoc* MOF grants. On the other hand, SHIP operates with a surplus, and this surplus, which is added to reserves, is not included in the NHA matrices.

In addition to the implicit liability which is built up each year through deficit operations, the HIO also receives agreed annual transfers from the MOF for SHIP. These transfers consist of (I) the GOE contribution to the premiums paid by households for their children and (ii) the funds collected from the special cigarette levy. The exact amount of these are uncertain, as the NHA team was provided with two conflicting sets of data from different sources within the HIO accounting department. However, while the two sets of figures are not identical, there is general agreement that the income from the cigarette tax was in the range of LE 219 to 233 million in FY95 and that the GOE contribution to SHIP premiums is in the range of LE 120 is 170 million in FY95.

Since much of these funds would have contributed to the surplus in SHIP which, as explained above, is not included in the NHA estimates for FY95, a prorated portion of these revenues are excluded from the estimated income of the HIO. Taking into account both sets of data supplied by the HIO, it is assumed that only 70 percent of total SHIP revenues were used for expenditures incurred in the same year. This then yields an estimate of LE 163 million for expenditures financed by the cigarette tax in FY95 and LE 118 million for the expenditures financed by the GOE premium contribution.

Table 3.8 Providers of Services to the HIO

	Laws 32, 79 and Pensioners/Widows	SHIP	Weighted Average
MOH	9.2%	18.8%	10%
THIO	1.4%	6.1%	2%
CCO	16.9%	10.7%	16%
University hospitals	21.5%	20.2%	21%
Military	3.0%	1.7%	3%
Private hospitals	43.7%	39.1%	43%
NGOs	4.3%	3.4%	4%
Total	100.0%	100.0%	100%

Source: HIO.
Note: Estimate for main programs based on data from four branches; estimate for SHIP based on three branches.

Table 3.9 Final Estimated Funding Flows through HIO, FY95			
Inflows (LE millions)		Outflows (LE millions)	
Premiums and sale of services	448	Own services	580
SHIP premiums	39	Payments to MOH	17
GOE contribution to SHIP premiums	118	Payments to THIO	3
Cigarette tax levy	166	Payments to universities	30
Household copayments (non-SHIP)	35	Payments to CCOs	28
Household copayments (SHIP)	15	Payments to private hospitals	71
Operating deficit (MOF liability)	150	Payments to military hospitals	6
Donor assistance	12	Payments to NGOs	6
		Payments to pharmacies	237
		Payments to foreign providers	5
Total	**983**	**Total**	**983**
Note: Estimates of outflows adjusted to take into account estimates of HIO income at other providers.			

3.9 University Hospitals

University hospital income was reported as LE 535 million in FY95 in the official MOF accounts. This included LE 4.5 million in donor support and LE 48 million in self-funding. To this must be added LE 21 million in estimated donor support not recorded in the accounts, plus income and expenditures amounting to an estimated LE 50 million for facilities not included in the accounts supplied to the DOP by the MOF. Of the latter LE 50 million, LE 35 million are estimated to involve facilities supported by universities for the benefit of their staff and students and LE 15 million relate to fully self-financing specialist units attached to certain universities. Some information on expenditures at university hospitals by the MOH and the HIO was available. In the absence of any other data, it is assumed that the composition of self-funding income, other than from the MOH and the HIO, at these units was as follows: households 66 percent, firms 33 percent.

Total inflows and outflows of funds at university hospitals are thus estimated as shown in Table 3.10. These estimates take into account data from the MOHP and the HIO about their purchases of services from university hospitals.

Table 3.10 Final Estimated Funding Flows through University Hospitals, FY95			
Inflows (LE millions)		Outflows (LE millions)	
MOE	517	Own services	606
Self-funding (households)	2		
Self-funding (firms)	1		
Self-funding (MOH)	30		
Self-funding (HIO)	30		
Donor assistance	26		
Total	**606**	**Total**	**606**

3.10 Other Ministries

No information was available on expenditures by the Armed Forces and ministries of interior and transport. As explained in the text, an arbitrary estimate of LE 200 million in expenditures was assigned to these providers. Table 3.11 gives the estimated funding flows through these providers.

Table 3.11 Final Estimated Funding Flows through Defense, Interior and Transport Ministries, FY95

Inflows (LE millions)		Outflows (LE million)	
MOF/NIB	190	Own activities	200
MOH	4		
HIO	6		
Other self-funding	0		
Donor assistance	0		
Total	**200**	**Total**	**200**

3.11 Syndicates

Analysis of information supplied by three of the four syndicates allowed the following estimate to be made, assuming that the agricultural syndicate accounted for another estimated LE 3 million.

Table 3.12 Final Estimated Funding Flows through Syndicates, FY95

Inflows (LE millions)		Outflows (LE millions)	
Syndicate subsidies	26	Payments to private hospitals	20.0
		Payments to doctors/clinics	4.5
		Payments for drugs	1.0
Total	**~26.0**	**Total**	**~26.0**

3.12 Private Health Insurance

Analysis of information supplied by the insurance companies themselves, and data reported by the regulatory authority for insurance companies, allowed the following estimate to be made. The available data from the companies indicate that LE 6 million was spent on hospital care. It is assumed that most of this was at private hospitals, but a small amount of LE 1 million has been arbitrarily assigned to university hospitals.

Table 3.13 Final Estimated Funding Flows through Private Insurance Schemes, FY95			
Inflows (LE millions)		Outflows (LE millions)	
Premiums from firms	17	Own administration and profits	1
Premiums from individuals	0	University hospitals	1
		Payments for private hospitals	5
		Payments for private doctors	5
		Payments for drugs	5
Total	**17**	**Total**	**17**

3.13 NGOs

Using survey data from three governorates, it was estimated that national expenditures by NGOs amounted to LE 80 million in FY95, of which grants financed less than 20 percent and user fees accounted for LE 67 million (see Table 3.14). However, analysis of the reports of donors and the Social Fund for Development (SFD) reveals significantly higher donor support, although this appears to be due largely to grants to a few NGOs by the SFD in governorates other than the three surveyed by LaTowsky et al. (1994). NHHEUS 95 as discussed indicates a much higher level of household payments than the LaTowsky data. However, this is consistent with a general overestimation in NHHEUS 95, and so only a small adjustment upwards of LE 2 million is made to take into account the NHHEUS data. Making separate upward adjustments for the additional donor funds and for estimated MOH and HIO contracts at the NGOs, the following estimate of funding flows is arrived at.

Table 3.14 Final Estimated Funding Flows through NGOs, FY95			
Inflows (LE millions)		Outflows (LE millions)	
User fees from households	68	Own services	110
MOSA grants	6		
Foreign donor support	25		
MOH contracts	3		
HIO contracts	6		
Donations	2		
Total	**110**	**Total**	**110**

3.14 Private For-Profit Providers

Very little data are available on the income of the various types of private providers: private hospitals, clinic and doctors, pharmacies, traditional providers, and others. As described in the text, estimates can be derived from NHHEUS 95 for payments to private clinics and hospitals by households. These estimates were used for constructing the final NHA matrices.

In the case of traditional providers, the NHHEUS estimate was doubled, as in the judgment of the analysts, it was thought to be too low in comparison with previous estimates, perhaps because of a reluctance by survey respondents to report such expenditures.

Estimates for private providers were adjusted to ensure that there was internal consistency in the final NHA, especially with the other estimations made above, which were based on better information.

4. Comparison of NHA FY95 Results with NHA FY91

The results presented in this report are not strictly comparable with those published in the first Egypt NHA report for FY91. The FY95 results benefitted significantly from the experience gained during the first round of estimations. There was a better understanding of the weaknesses and strengths of different data sources, more effective facilitation from key government agencies, clarification of several inconsistencies that were known to exist in the data, and the opportunity to concentrate more time on those areas of the NHA database that were known to be weak or problematic in the first round.

With the experience and information gained during the second round of estimations, it should be possible to re-estimate the FY91 accounts in order to improve their accuracy and ensure full comparability with the FY95 results. This has not been done as part of this report, but the following section lists the areas in which there are methodological and data differences with the FY95 results.

4.1 Ministry of Health

- The total of expenditures reported in ENHA91 for the MOH are comparable fully with those reported for FY95, as they are both derived from the same MOF source. However, the ENHA91 report assumed that all MOH headquarters expenditures were utilized in the provision of MOH services and does not account for the two national patient treatment programs run by the MOH, which in FY95 spent LE 19.1 million or a percentage of the total MOH budget. These programs mostly finance services provided by the HIO and university hospitals, and this is not reflected in ENHA95 at all.

- Self-funding revenues at MOH facilities were estimated in ENHA91 from a sample of governorates, who self-reported data on this type of income. The MOF data on self-funding, which was used in ENHA95 and is considered reliable, show that this estimate was a significant underestimate. ENHA95 reports that self-funding at governorate health facilities accounted for 8.1 percent of total income, compared with the 1.7 percent assumed in ENHA91.

- Some of the self-funding at governorate-level MOH facilities consist of patients who are being paid through the national patient treatment program run by MOH headquarters. An adjustment was made in ENHA95 to avoid double-counting these expenditures, which was not done in ENHA91.

4.2 Health Insurance Organization

- ENHA91 assumed incorrectly that 25 percent of total HIO premiums collected by the SIO and the PIO were retained by those organizations as an administrative charge, and a corresponding amount of expenditures was imputed to these. Discussions with the MOH reveal that this is not the case and that all premiums collected are transferred to the HIO. ENHA95 drops the imputed expenditures.

- ENHA95 allocates a large proportion of HIO expenditures to private hospitals, university facilities, private pharmacies, and others. In ENHA91 it was assumed incorrectly that all HIO expenditures were used at HIO facilities.

- ENHA95 fully imputes the implicit operating subsidy provided to the HIO by the MOF. This was not adequately reflected in ENHA91, since details of the HIO accounts were not then available.

4.3 University Hospitals

- ENHA91 relied on self-reported data by a sample of university hospitals to estimate total expenditures in this sector. ENHA95 relies on an almost complete set of audited accounts provided by the MOF. These show that university hospitals earned eight percent of total revenues from self-funding, compared with what was an overestimate of 15 percent in user-fee revenues in ENHA91.

- There was some misclassification of institutions and hospitals in ENHA91, which resulted in some hospitals being incorrectly included in the category of university hospitals.

4.4 Private Insurance Schemes

- Owing to erroneous information reported by previous analysts, ENHA91 considerably overestimates the number of companies offering private health insurance, the number of beneficiaries, and the volume of private insurance expenditures. The actual level of private insurance expenditures in FY91 is likely to have been one-quarter of the level reported.

4.5 Foreign Donor Assistance

- The ENHA95 results are based on an almost complete reporting of expenditure by individual donors. The ENHA91 data were incomplete and relied on considerably more assumptions. It is not possible to retrospectively gauge the potential error in the ENHA91 results using the ENHA95 data, as donor expenditure trends are generally variable from year to year.

4.6 Non-Governmental Organizations

- ENHA91 depended primarily on adjusting official data on the NGOs reported by the MOSA in the mid-1980s, making several assumptions about the reliability of official data and subsequent expenditure trends. More recent survey data collected by LaTowsky et al. (1994) reveal that MOSA data on NGO expenditures can be considered reliable, contrary to previous assumptions, and provided an accurate sample estimate from which national NGO expenditures could be estimated for ENHA95. The ENHA91 estimates for the NGOs may be, therefore, associated with a margin of error of approximately 50 to 100 percent.

4.7 Household Expenditures

- ENHA95 benefitted from both rounds of the NHHEUS95. Only the first round of this survey was available for ENHA91, and this round was associated with a significant upward seasonal bias in expenditures. This would have resulted in some upward bias in the final ENHA91 estimates of household spending.

- Both the ENHA91 and ENHA95 estimations have relied significantly on separate estimations of pharmaceutical retail sales in order to make final estimates of household spending. Experience in the two rounds have shown that these estimates of pharmaceutical sales can be considered reliable. This increased credence placed in their reliability would probably support additional adjustment in the ENHA91 estimate of household spending downwards by possibly as much as 10 to 15 percent.

4.8 Estimation of National Health Expenditures

The above differences in the estimation of individual elements of the NHA matrix would also have a cumulative impact on the construction of the NHA matrix as a whole. The exact effect cannot be predicted without redoing the final estimation procedure. However, a superficial estimate would be that the combined effect of the above and other differences would result in a net reduction in total NHE of LE 350 to 500 million or in the region of eight to 12 percent of the total, if ENHA91 were re-estimated using the same data sources and estimation procedures as ENHA95. A revised estimate of NHE in FY91 would be in the range of LE 3,670 to 3,800 million. This reduction would consist almost equally of reductions in the flow of resources, both from government and private sources, with significant reductions in government spending at the MOH, the HIO, and university hospitals. The net effect is thus unlikely to involve substantial changes, therefore, in the balance of public and private spending within the health care system.

There is a difference in the nominal GDP figures given in ENHA91 and ENHA95. In ENHA91 nominal GDP for the year was taken as LE 96 billion, while the GDP series used in ENHA95 indicate GDP for FY91 as LE 111 billion. This resulted from a misreading of the published GDP data when adjusting from a calendar to fiscal year. This error results in an overestimate of NHE as a percentage of GDP of the order of 15 percent.

If the above differences and discrepancies are taken into account, revised estimates for NHE in FY91 are likely to result in a total of LE 3,670 to 3,800 million, which would be the equivalent of 3.4 percent of GDP. This is less than the final estimate for NHE in FY95, which suggests that there has been some increase in the share of national resources going to health during the first half of the 1990s. Table 4.1 provides some

speculative figures for key quantities that might change if the FY91 estimates were re-estimated as suggested above. These figures are purely speculative, and are provided in the absence of any formal revisions to the FY91 results.

Table 4.1 Potential Impact of Revisions to ENHA91 Results

Item in NHA	Estimate in ENHA91 for FY91	Speculative Revised Estimate for FY91	Estimate in ENHA95 for FY95
Public expenditures excluding HIO (LE millions)	1,370	1,250–1,300	2,371
Social insurance expenditures (LE millions)	390	300	982
Private expenditures (LE millions)	2,404	2,000–2,200	4,187
NHE (LE millions)	4,166	3,670–3,800	7,516
Public expenditures as share of NHE	42%	42%	44%
Private expenditures as share of NHE	58%	58%	56%
NHE (% GDP)	4.7%	3.4%	3.7%
NHE per capita	LE 79	LE 70	LE 127

Note: Public expenditures include foreign donor assistance to public entities.

Statistical Annex

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$)
1988/89	51.05	76,800	1,504	
1989/90	52.44	96,100	1,833	1,100
1990/91	53.92	111,200	2,062	2,000
1991/92	55.44	139,100	2,509	3,332
1992/93	56.59	157,300	2,780	3,339
1993/94	57.78	175,000	3,029	3,372
1994/95	58.98	205,000	3,476	3,391
1995/96	60.24			3,390

Source: IMF (1996), and CAPMAS (1996). Population is mid-year estimate, i.e., January 1, based either on CAPMAS published estimate for that year, or derived by interpolation. GDP is for year ending June 30. Exchange rate is middle of period rate, i.e., on December 31.

Table A1.2 Social Indicators for Egypt

Year	Infant Mortality Rate	Life Expectancy at Birth	Total Fertility Rate	Primary School Enrollment Rate
1985	97			91.0
1986				88.0
1987		59.1	4.4	96.0
1988	82			96.0
1989				98.0
1990				101.0
1991		64.5	4.1	101.0
1992		65.3	3.9	
1993	63			
1994				
1995			3.6	
1996				

Source: IMR estimates from EDHS-95, life expectancy at birth from World Bank (1994b) and Institute of National Planning (1995), and TFR from EDHS-95.

Table A1.3 Price Deflators for Egypt, 1989–1995			
Calendar Year	Fiscal Year	GDP Deflator (1990 = 100)	Consumer Prices (1990 = 100)
1988/89	FY89	84.5	85.6
1989/90	FY90	100.0	100.0
1990/91	FY91	114.5	119.7
1991/92	FY92	137.1	136.1
1992/93	FY93	150.7	152.5
1993/94	FY94	161.3	165.0
1994/95	FY95	180.7	178.7

Source: IMF (1996).

Table A2.1 Total MOH Expenditures Per Capita, FY90–95 (actual in constant FY90 LE)

Level	Fiscal Year						
	FY90	FY91	FY92	FY93	FY94	FY95	FY90-95
MOH headquarters	1.33	1.48	2.76	3.44		2.85	113%
Cairo	10.46	10.06	8.89	8.61		9.02	-14%
Alexandria	13.55	13.07	11.10	12.70		13.52	0%
Port Said	23.25	22.79	22.94	23.34		26.70	15%
Suez	19.32	17.01	17.34	17.53		20.14	4%
Damietta	18.34	20.16	18.86	16.66		20.63	13%
Dakahlia	10.37	9.98	10.92	10.02		11.16	8%
Sharkia	8.75	9.87	10.00	8.05		9.60	10%
Kalyubia	9.94	9.33	8.92	8.94		9.06	-9%
K. El Sheikh	9.76	9.32	10.15	9.93		9.74	0%
Gharbia	12.71	12.93	12.13	12.15		13.87	9%
Menoufia	10.33	9.65	9.86	9.94		10.62	3%
Behera	9.49	8.99	9.28	7.53		9.84	4%
Ismailia	14.11	16.13	19.84	17.99		18.32	30%
Giza	7.73	7.57	7.96	7.73		8.94	16%
Beni Suef	13.16	12.38	14.95	10.96		10.62	-19%
Fayoum	9.87	9.36	8.64	8.47		8.76	-11%
Menia	9.66	8.88	16.56	17.18		8.53	-12%
Assiut	10.49	10.27	11.00	10.23		11.18	7%
Sohag	8.01	7.73	7.68	8.00		8.61	7%
Qena	9.03	6.48	7.97	8.12		8.81	-2%
Luxor	17.21	48.57	33.18	43.93		49.21	186%
Aswan	20.25	18.84	18.64	20.03		18.92	-7%
Matrouh	20.71	17.14	16.94	18.18		27.01	30%
Red Sea	38.28	30.82	32.57	54.61		41.89	9%
North Sinai	32.05	29.29	21.93	23.40		38.64	21%
South Sinai	74.60	65.46	57.39	78.91		181.67	144%
Frontier	46.58	45.41	45.57	81.71		65.10	40%
Total for governorates	10.95	10.65	11.02	10.79		11.24	3%
Total MOH	12.28	12.13	13.78	14.23		14.09	15%

Source: MOF and DOP. Figures for Qena exclude Luxor population. No data for FY94.

Table A2.2 Distribution of MOH Expenditures by Budget Chapter, FY90 (actual in nominal LE)						
Unit	Chapters				Total	Per capita
	1	2	3	4		
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
Dakahlia	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
Kalyubia	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
Sharkia	27,358,556	5,021,562	0	159,186	32,539,304	9.0
Behera	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	n.a.
Sohag	16,346,840	3,874,755	1,074,037	0	21,295,632	8.2
Menia	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 A2.3 Distribution of MOH Expenditures by Budget Chapter, FY90 (percentage of total)

Unit	Chapters				Total	Per capita
	1	2	3	4		
MOH headquarters	n.a.	n.a.	n.a.	n.a.	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
Dakahlia	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
Kalyubia	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
Sharkia	84.1	15.4	0.0	0.5	100.0	12.4
Behera	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	n.a.
Sohag	76.8	18.2	5.0	0.0	100.0	12.4
Menia	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 the 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 A2.4 Distribution of MOH Expenditures by Budget Chapter, FY91 (actual in nominal LE)

Unit	Chapters				Total	Per capita
	1	2	3	4		
MOH headquarters	11,211,315	n.a.	80,059,000	n.a.	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
Dakahlia	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
Kalyubia	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
Sharkia	31,309,064	5,397,114	6,523,543	83,946	43,313,667	11.7
Behera	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	n.a.
Sohag	18,513,153	3,984,359	1,084,711	570,460	24,152,683	9.1
Menia	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 the 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, FY91 (percentage of total)

Unit	Chapter				Total	Per capita
	1	2	3	4		
MOH headquarters	n.a.	n.a.	n.a.	n.a.	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
Dakahlia	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
Kalyubia	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
Sharkia	72.3	12.5	15.1	0.2	100.0	11.7
Behera	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	n.a.
Sohag	76.7	16.5	4.5	2.4	100.0	9.1
Menia	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 the 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 Chapters, FY92 (actual in nominal LE)						
Unit	Chapters				Total	Per capita
	1	2	3	4		
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
Dakahlia	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
Kalyubia	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
Sharkia	33,878,598	7,843,518	6,192,552	6,345,981	54,260,649	14.2
Behera	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	n.a.
Sohag	21,458,375	5,757,047	2,249,805	0	29,465,227	10.8
Menia	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 the 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, FY92 (percentage of total)						
Unit	Chapters				Total	Per capita
	1	2	3	4		
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
Dakahlia	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
Kalyubia	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
Sharkia	62.4	14.5	11.4	11.7	100.0	14.2
Behera	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	n.a.
Sohag	72.8	19.5	7.6	0.0	100.0	10.8
Menia	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 the 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, FY93 (actual in nominal LE)						
Unit	Chapters				Total	Per capita
	1	2	3	4		
MOH headquarters	13,053,441	161,685,563	118,466,000	0	293,205,004	5.2
Cairo	60,271,287	23,786,011	3,086,996	1,041,916	88,186,210	13.0
Alexandria	40,469,757	13,684,240	7,742,804	2,517,734	64,414,535	19.1
Port Said	10,812,550	3,869,663	1,259,050	173,705	16,114,968	35.2
Suez	5,855,984	3,366,441	1,039,176	3,992	10,265,593	26.4
Damietta	11,499,875	6,596,667	3,110,915	482,602	21,690,059	25.1
Dakahlia	42,886,697	8,814,475	9,313,819	466,313	61,481,304	15.1
Sharkia	36,794,282	6,997,769	4,514,374	768,557	49,074,982	12.1
Kalyubia	27,586,493	9,199,049	3,072,981	20	39,858,543	13.5
Kafr El Sheikh	20,917,184	6,093,017	5,039,739	42,154	32,092,094	15.0
Gharbia	42,371,295	12,289,473	6,092,309	271,201	61,024,278	18.3
Menoufia	27,614,769	7,256,319	4,074,984	0	38,946,072	15.0
Behera	26,888,775	11,175,567	5,606,946	0	43,671,288	11.3
Ismailia	8,927,488	2,560,067	4,604,522	1,641,464	17,733,541	27.1
Giza	32,420,674	14,646,945	3,154,083	21,966	50,243,668	11.6
Beni Suef	22,042,117	4,833,661	1,141,471	589,178	28,606,427	16.5
Fayoum	17,838,903	4,934,190	1,321,380	35,101	24,129,574	12.8
Menia	33,710,514	40,784,394	7,050,447	352,100	81,897,455	25.9
Assiut	31,098,382	6,053,062	3,899,782	0	41,051,226	15.4
Sohag	24,243,539	6,662,523	3,899,782	0	34,805,844	12.1
Qena	20,521,798	7,409,701	3,770,155	0	31,701,654	12.2
Luxor	3,169,753	1,820,272	2,040,076	3,046,949	10,077,050	66.2
Aswan	14,601,239	7,082,550	6,747,236	1,078,370	29,509,395	30.2
Matrouh	2,897,809	1,630,668	621,836	0	5,150,313	27.4
Red Sea	2,651,529	1,996,511	2,697,242	1,996,273	9,341,555	82.3
North Sinai	5,013,418	1,791,166	1,078,987	0	7,883,571	35.3
South Sinai	2,007,423	1,007,476	1,435,720	306,501	4,757,120	118.9
New Valley	5,148,216	3,041,543	5,148,216	3,041,543	16,379,518	123.1
Total	593,315,191	381,068,983	221,031,028	17,877,639	1,213,292,841	21.4

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

Table A2.9 Distribution of MOH Expenditures by Budget Chapter, FY93 (percentage of total)						
Unit	Chapters				Total	Per capita
	1	2	3	4		
MOH headquarters	4.5%	55.1%	40.4%	0.0%	100.0%	5.2
Cairo	60.36%	26.97%	3.50%	1.18%	100.0%	13.0
Alexandria	62.83%	21.24%	12.02%	3.91%	100.0%	19.1
Port Said	67.10%	24.01%	7.81%	1.08%	100.0%	35.2
Suez	57.04%	32.79%	10.12%	0.04%	100.0%	26.4
Damietta	53.02%	30.41%	14.34%	2.22%	100.0%	25.1
Dakahlia	69.76%	14.34%	15.15%	0.76%	100.0%	15.1
Sharkia	74.98%	14.26%	9.20%	1.57%	100.0%	12.1
Kalyubia	69.21%	23.08%	7.71%	0.0%	100.0%	13.5
K. El Sheikh	65.18%	18.99%	15.70%	0.13%	100.0%	15.0
Gharbia	69.43%	20.14%	9.98%	0.44%	100.0%	18.3
Menoufia	70.91%	18.63%	10.46%	0.0%	100.0%	15.0
Behera	61.57%	25.59%	12.84%	0.0%	100.0%	11.4
Ismailia	50.34%	14.44%	25.97%	9.26%	100.0%	27.1
Giza	64.53%	29.15%	6.28%	0.04%	100.0%	11.7
Beni Suef	77.05%	16.90%	3.99%	2.06%	100.0%	16.5
Fayoum	73.93%	20.45%	5.48%	0.15%	100.0%	12.8
Menia	41.16%	49.80%	8.61%	0.43%	100.0%	25.9
Assiut	75.76%	14.75%	9.50%	0.0%	100.0%	15.4
Sohag	69.65%	19.14%	11.20%	0.0%	100.0%	12.1
Qena	64.73%	23.37%	11.89%	0.0%	100.0%	12.2
Luxor	31.46%	18.06%	20.24%	30.24%	100.0%	66.2
Aswan	49.48%	24.00%	22.86%	3.65%	100.0%	30.2
Matrouh	56.26%	31.66%	12.07%	0.0%	100.0%	27.4
Red Sea	28.38%	21.37%	28.87%	21.37%	100.0%	82.3
North Sinai	63.59%	22.72%	13.69%	0.0%	100.0%	35.3
South Sinai	42.20%	21.18%	30.18%	6.44%	100.0%	118.9
Frontier	31.43%	18.57%	31.43%	18.57%	100.0%	123.2
Total	48.9%	31.4%	18.2	1.5%	100.0%	21.4

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

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