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IMMEDIATE ACTION PROPOSALS FOR HOUSING IN EGYPT

THE JOINT HOUSING TEAM

Ministry of Housing and Reconstruction,
Ministry of Planning,
Arab Republic of Egypt

with

Office of Housing,
Agency for International Development

JUNE 1976

IMMEDIATE ACTION PROPOSALS FOR HOUSING IN EGYPT

The Joint Housing Team:

Ministry of Housing and Reconstruction
Ministry of Planning
Office of Housing, Agency for International Development

June 1976

June 30, 1976

H.E. Osman Ahmed Osman
Minister for Housing and
Reconstruction
Cairo, Egypt

Dear H.E. Osman:

The Joint Housing Team is pleased to submit its report Immediate Action Proposals for Housing in Egypt. We hope that this report will be of assistance to the Government of Egypt in the continuing task of providing satisfactory housing to the people of Egypt. It is already clear that the Government is making a major effort to respond to the housing needs of the people. This report is written with the full recognition of the significant achievements made to date. We are hopeful that this report will further this effort through constructive suggestions for immediate action in order to achieve still higher levels of housing production within the resource constraints.

The objectives of the mission of the Joint Housing Team were:

1. To develop, where possible, immediate recommendations for existing, recognized problems;
2. To identify areas for further study in order to prepare a long-range housing strategy for Egypt.

The field work started in late March 1976 with the arrival of the first consultant of the Office of Housing, AID team to join with the five-man senior team of Egyptian Government officers assigned to the project. This combined team collected and organized the basic data and information essential to the project. The results of this work are presented in the Statistical Appendix to this report. The other three members of the Office of Housing, AID team arrived in mid-April to assist in the analysis and prepare recommendations. The combined team

worked for a period of two and one-half weeks in Egypt. The Office of Housing team completed the draft report in the United States and a representative returned to Egypt to discuss the draft report with the Egyptian team members. This final report is then issued as our Joint Housing Team report.

Throughout the work Mr. David McVoy of the Office of Housing, AID, acted as Team Manager. We believe this approach was highly successful as the Joint Team permitted the blending of the international experience of the Office of Housing specialists with the vast local experience of the Egyptian team members. Therefore, it is hoped that the recommendations reflect practical and operational suggestions suitable for immediate implementation.

The Joint Team wishes to acknowledge the excellent cooperation and support received during every aspect of the work. Nonetheless, this report must be considered only the beginning of the process and much remains to be done in order to establish an operational housing policy for Egypt with a working set of implementation procedures. This is an enormous task. You have our best wishes as you continue your work toward meeting the housing needs of the people of Egypt.

Sincerely,

The Joint Housing Team

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Photographs courtesy of Mr. Charles Dean

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SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

Conclusions

It can be concluded that the national context within which housing policy must be formulated is greatly constrained. The existing housing deficit of 1.5 million dwelling units is enormous. Population growth will create the demand for an additional 1.6 million dwelling units by the year 2000. The economy, although improving, cannot support the level of housing investment which can materially overcome the shortage or even keep up with the new demand in spite of the high priority given housing. The national urban strategy, while correct in concept, will be too time consuming and costly to meet needs in the short run. Therefore, the continued growth of existing centers and particularly Cairo is inevitable.

There are no simple solutions for these problems. Housing will be an acute problem in Egypt, as in most countries of the world, throughout the remainder of this century. In the chapters which follow, the housing problem is analyzed and a series of recommendations are made which are aimed at optimizing the use of public and private resources in housing and in minimizing the human misery and hardships faced by the low-income people who are least equipped to compete for the scarce housing resources that are available.

Suggested Guiding Principles for Immediate Action

The Joint Housing Team suggests that the central objective of housing programs in Egypt be to achieve the maximum addition to the net housing stock of the nation. The fundamental emphasis must be in reducing the housing deficit and in achieving levels of production which can keep up with new household formation. Given the enormous numbers of total dwelling units to be provided, Egypt must concentrate its limited resources in the most efficient way. This will require substantial revision of current policies and procedures which will have the following major objectives:

1. Reduce the average cost per unit of housing units built in the public and private sector in order to build more units with the same level of capital investment. This will be possible by reducing the average size of the dwelling units built, lowering the infrastructure standards, improving the site planning and architectural design and by improving the building technologies used. (See Chapter II, "Reducing Public Sector Housing Costs".)

2. Increase the level of cost recovery from the dwelling units provided. Public housing units today are essentially given away without recovery of either principle or interest (in that, if required maintenance was provided and costed, rents would not cover the actual cost). There is no relationship between rents and the ability to pay. A much greater share of real cost must be borne by the occupants if housing production is to be increased. (See Chapter III, "Increasing Recoveries from Housing Investments".)

3. The semi-public and private sector must be encouraged to play a larger role in housing production. The current policies of Government which inhibit the semi-public and private sector from achieving higher levels of production must be removed. This includes overcoming problems of finance mobilization, building materials shortages, and rent controls. (See Chapter IV, "Stimulating the Private Sector".)

4. Establish a new emergency program focus on meeting the needs of lowest income people who cannot afford to participate in the regular housing programs of the public, semi-public and formal private sectors. This program should seek to conserve existing housing stock available to the poor, provide improved levels of infrastructure services, public facilities and opportunities for expansion to new lands through sites and services projects and other forms of minimum cost urbanization in order to relieve the crisis in overcrowding. (See Chapter V, "An Emergency Program for Lowest Income People".)

5. Continued emphasis should be given on training the needed skilled labor force along the lines already established by MOHR.

6. Develop an operational land policy and procedures to insure that adequate amounts of land are made available for housing in appropriate locations and at acceptable prices. (See Chapter VI, "Development of an Operational Land Policy".)

7. Finally, all of the above objectives need to be integrated into an overall housing policy for Egypt which can set the framework within which all of the various entities concerned with housing can operate and which relates housing to overall national development strategy.

A unifying concept which runs through all of the basic objectives above is the idea that housing cannot be thought of solely in terms of the physical structure. Housing must be related to the people who need shelter. The needs of households and their ability to pay are very different, and, therefore, the starting point for formulating a housing strategy is a definition of the target groups of people who are of concern.

Establishing the Target Groups

The concept of target groups is important because it permits housing planners to disaggregate housing from national statistics and begin to focus on housing related to particular groups of people. The number and type of target groups determined to be of concern should develop as planning for housing progresses. The first and most obvious criteria for selection of housing groups is household income. There has only been time available to work with income in suggesting the target groups below. However, other factors should eventually be considered -- for example: special occupational characteristics which might affect the use of shelter; special infrastructure or public facility requirements; special social or cultural characteristics of particular groups; etc. These characteristics might require the establishment of sub-target groups within the overall income distribution criteria.

Chart A below shows the overall income distribution curve for the urban households in Egypt established by the Joint Housing Team. Since income data is not readily available, the estimation was based on a variety of assumptions and analytical techniques which are discussed in Appendix I, "Household Income Distribution". There is undoubtedly a margin of error in the estimation. Nonetheless, it is probably the best available information and in any case illustrates sufficiently the fundamental points which should be taken into consideration when developing a housing strategy.

The columns on the chart show the general categories of labor for the heads of households for each income group (recognizing that many households have more than one source of income because of wives and children who work) and a distribution of the housing need estimate by the percentage of households in each income group for the nation and for Cairo. These two columns are, of course, only illustrative in order to achieve some sense of the magnitude of need by income group. It is probable that the real housing needs would not be as acute in Target Groups A and B as the straight percentage distribution would indicate. However, there are real shortages in housing stock available to these groups. Also, it is unlikely that Cairo's income distribution curve would follow the national curve exactly. It is probably that Cairo's actual income distribution would tend to be more favorable than that of the nation as a whole. Nonetheless, the totals are so enormous as compared to available resources that the possible errors should not affect the policy conclusions drawn from this table.

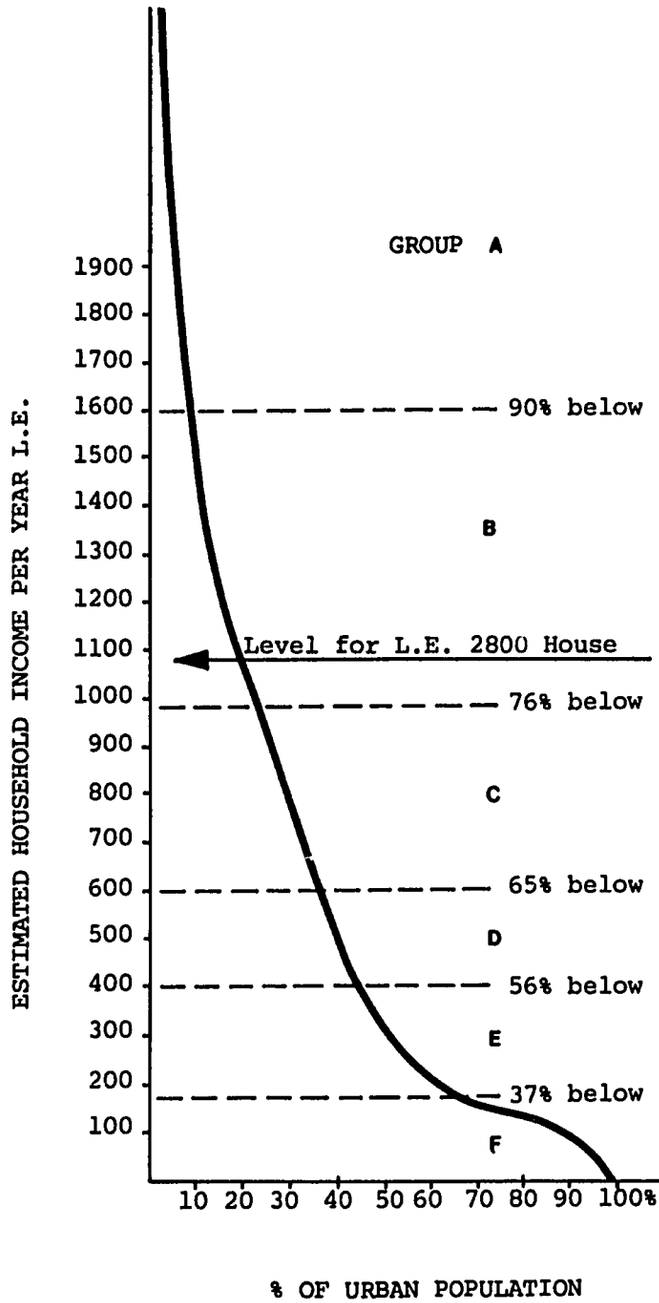
The purpose of identifying target groups by income is to permit comparison of the housing units to be provided to the ability of the household to pay. For example, the present average public housing unit costing 2,800 L.E. can only be afforded without subsidy by the families earning at least 1,062 L.E. per year (assuming financing of 30 years at 6.5 percent interest). Huge subsidies would be required to provide substantial numbers of such housing for most middle and lower income households. On the other hand, the present average charge to a household for a public housing unit is 3 L.E. per month (which is supposed to include maintenance as well). Some 64 percent of the households have the ability to pay more than is presently charged.

It can be concluded, therefore, that the costs per dwelling unit need to be reduced and the recovery payments increased to the actual ability to pay in order to maximize the number of units which can be built with the capital investment available. This is the subject of Chapters II and III.

Chart A

NATIONAL INCOME DISTRIBUTION RELATED TO HOUSING

EGYPT 1975 . URBAN



TYPE OF WORK	ESTIMATED HOUSING NEED 75	
	NATIONAL	CAIRO
A BUSINESS OWNER-PROFESSIONAL	152,400 UNITS 10%	74,728 UNITS 10%
B COMMERCIAL PROFESSIONAL	213,360 14%	104,619 14%
C GOV. WORK SKILLED WORK FACTORY TEACHER	167,640 11%	82,200 11%
D UNSKILLED CRAFTSMAN SHOP-KEEPER	137,160 9%	67,255 9%
E LABOR SERVANT VENDOR	289,560 19%	141,983 19%
F PART-TIME WORK UNEMPLOYED	563,880 37%	176,493 37%
TOTALS	1,524,000	747,288

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INTRODUCTION

Although housing is considered one of the basic needs of man, the ability to satisfy that need is very much dependent on the resource constraints operating within a given city or nation. At the broadest level these constraints include those imposed by the size and location of the population and the size and growth rate of the overall economy. Specifically, constraints will be found in such things as the availability of land, building materials, skilled labor and finance both within the public and private sectors; and the legislative, administrative and policy frameworks within which housing is provided. The major task, then, for Government is to attempt to optimize the delivery of housing from both the public and private sectors within these operating constraints.

This report attempts to make immediate action suggestions whereby the production of housing units can be increased thereby satisfying a larger percentage of the demand. This report also identifies areas in which, through further study and analysis, it may be possible to relax some of the existing constraints in order to further expand the housing stock to be provided.

By way of introduction to the more detailed conclusions and recommendations which follow regarding housing in Egypt, it is useful to look briefly at the broad constraints of population, the economy and the settlement pattern.

Population

The last complete census taken in Egypt was in 1960. The census in 1966 was based on only a sample. Since reasonably reliable vital statistics are kept in Egypt, it is possible to estimate with some accuracy the likely total population for the country, but it is difficult to estimate sub-area populations. Population projections for Egypt and Cairo 1970-1985 are shown in Table 1. More recent estimates by the Central Agency for Public Mobilization and Statistics indicate that the 1975 population for Egypt is 37 million persons with 44.8 percent of the people living in urban areas and 8.8 million of these living in the Greater Cairo Area. This agency estimates that by the year 1985 Greater Cairo will have a total population of 11 million. This estimate might be reduced if the new city strategy proposed is successful (see the discussion on the national settlement pattern below). This is approximately a growth rate of 2.5 percent per year for the nation, 3.6 percent per year for urban areas overall and over 4 percent for the Greater Cairo Area.

If an average family size of five persons is assumed, these population figures suggest that 1.6 million new dwelling units will be required by 1985. This estimate comes on top of an existing deficit estimated by the Egyptian Government at 1.5 million dwelling units. Therefore, the housing task ahead takes on enormous proportions.

The National Economic Situation

The Government of Egypt looks, with some justified optimism, on the potential of the national economy in the years ahead. Nonetheless, the growth target of 6.5 percent real growth in the economy to the year 2000 must be considered at the top range of possible performance as there are still many basic economic problems to be dealt with and, of course, unforeseen events may occur over such a long time period. Among the most critical economic problems of concern which have an effect on housing are the following:

1. Increasing deficit in balance of payments due to rising cost of imports and stable or declining prices of exports.
2. Slow growth of Gross Domestic Product at a rate of 4 percent.
3. Large foreign debt and consequent high debt service charges coupled with a lack of foreign exchange.*

* This deficit which fluctuated between 200 and 300 millions L.E. in the late 1960s, rose to 500 and 600 millions L.E. in the early 1970s, then jumped to 1000 and 2000 millions L.E. in the last two years.

TABLE 1

Population Projections - Egypt and Cairo, 1970-1985

Year	EGYPT Population (in thousands)	EGYPT Annual Rate of Growth	GREATER CAIRO Population (in thousands)	GREATER CAIRO Percent of Total Egypt	GREATER CAIRO Annual Rate of Growth	CAIRO MUNICIPALITY Population (in thousands)	CAIRO MUNICIPALITY Percent of Greater Cairo	CAIRO MUNICIPALITY Annual Rate of Growth
1882	6,712		520	7.7		350	66.5	
1897	9,669	2.9	812	8.4	3.7	535	65.8	3.4
1907	11,190	1.6	977	8.7	2.0	683	70.0	2.8
1917	12,718	1.4	1,063	8.4	0.9	748	70.0	1.0
1927	14,178	1.1	1,434	10.1	3.5	1,078	74.2	4.4
1937	15,921	1.3	1,770	11.6	2.4	1,345	76.1	2.5
1947	18,967	1.8	2,603	13.8	4.7	2,075	79.8	5.4
1960	25,984	2.8	4,332	16.7	5.1	3,349	78.2	4.7
1965	29,500	2.8	5,231	17.8	4.2	4,029	77.1	4.2
1970								
SERIES I	31,678	1.5	6,018		3.2	4,603		2.8
SERIES II	33,082	2.3	6,285	19.0	4.0	4,794	76.5	3.8
SERIES III	34,495	3.6	6,554		5.0	5,013		4.8
1975								
SERIES I	33,830	1.4	6,968		3.1	5,295		2.8
SERIES II	36,795	2.2	7,579	20.6	4.0	5,760	76.0	3.8
SERIES III	39,741	3.2	8,186		4.8	6,221		4.7
1980								
SERIES I	36,237	1.4	8,044		3.0	6,073		2.8
SERIES II	40,962	2.2	9,093	22.2	4.0	6,865	75.5	3.8
SERIES III	45,687	3.2	10,142		4.8	7,657		4.6
1985								
SERIES I	38,792	1.4	9,310		3.0	6,982		2.8
SERIES II	45,662	2.2	10,958	24.0	4.0	8,218	75.0	3.8
SERIES III	52,533	3.2	12,607		4.8	9,455		4.8

Source: Greater Cairo Planning Commission, 1965.

NOTE: According to the latest estimates, it seems that the most accurate projections are for Egypt Series II and for Cairo Series III.

4. Heavy burden of the defense budget necessitated by the existing military situation.
5. Skyrocketing cost of living subsidies due to the worldwide increase in food prices.
6. Inflation rate of approximately 29 percent in 1974-75.

The Government of Egypt's response to these basic economic constraints has been formulated in the 1976-1980 Economic Development Plan. The Plan has four basic policies: the encouragement of foreign investment; the build-up of the private sector; the restructuring of the public sector to improve efficiency; and an increase in labor productivity. The major objectives of the plan are as follows:

1. To increase the GNP by 60 percent, i.e., approximately 10 percent annually.
2. To increase exports by 90 percent.
3. To keep increases in imports within 25 percent by promoting local agricultural and industrial production.
4. To decrease foreign debt service by 50 percent by rescheduling loan payments and by shifting to intermediate and long-term loans to avoid such expensive sources of money supply as supplier's credits and banker's facilities.

The 1976-1980 Plan sets the basic objectives. It is intended to prepare annual plans with the detailed programs and budgets. The follow-up analysis of 1974 and 1975 suggests a GNP growth of 4 to 5 percent and investments achieving 80 to 90 percent of planned targets.

Consequently, 1976 and 1977 have been designated as transitional years with severe budgetary constraints and great obstacles to overcome. The following priority objectives were set for the 1976 Plan:

1. Reconstruction effort (24 percent of investments).
2. Completion of projects (43 percent of investments).
3. Investments to improve capacity utilization (18 percent of investments).
4. Strategic projects necessary to meet needs of above objectives, e.g., fertilizers, cement, textiles (14 percent of investments).

Table 2 indicates the tentative sectoral distribution of investments for the 1976-1980 Development Plan. The Ministry of Housing and Reconstruction has requested a larger allocation for housing in the Plan (some 2,035 M.L.E. versus the 1,000 M.L.E. currently proposed by the Ministry of Planning).

TABLE 2

1976-1980 Development Plan
Sectoral Distribution of Investment(1)

	1965-1975	1976	1976-1980 *
Agriculture	14.1	9.8	8.4
Manufacturing & Metallurgy Petroleum	31.0	28.1	36.3
Electricity	8.3	5.2	4.7
Contracting	1.6	1.2	1.6
Transport & Communications	24.0	31.4	29.0
Housing, Utilities & Services	21.0	24.2	20.0(3)
Total	100%	100%	100%
Total in millions L.E.	4743(2)	1325	8000

Source: Ministry of Planning.
*Preliminary estimates.
NOTES: (1) Excludes Trade & Finance.
(2) Includes Aswan High Dam.
(3) This total amount of 1720 million L.E. is divided as follows:

Housing	850
Public Utilities	350
Services	600

Preliminary breakdown of the Housing component is as follows:

Private Sector 450, of which 50 are allocated to cooperatives and 30 to other semi-public bodies.

Public Sector 400, of which 300 are allocated to MOHR.

Regardless of which allocation level is eventually established, it is clear that the level of investment in housing, while receiving a high priority among the available resources, is nonetheless very small in comparison to the enormous housing deficit figures. This suggests the importance of maximizing the number of units actually built with the investment levels available and underscores the need to seek alternative, lower cost solutions for shelter than the construction of standard housing units.

National Settlement Pattern

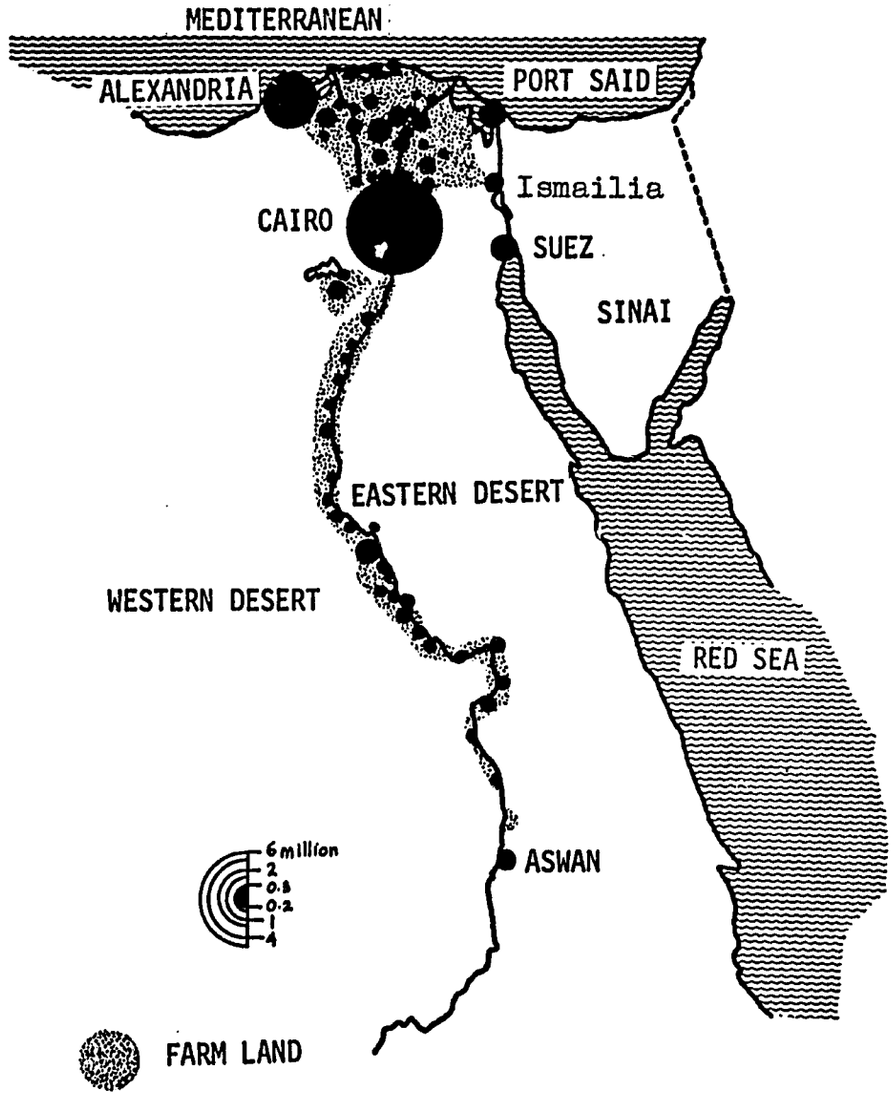
Egypt is in reality a linear nation (see Map 1) with the vast majority of its population, both urban and rural, distributed along the banks of the Nile River and within the Nile River delta. This has created a fundamental conflict between the use of land for food production versus urban development. As the total population of Egypt has grown and the nation has become more and more urbanized, this conflict has begun to reach crisis proportions.

The Government of Egypt, fully alert to the disastrous implications of this conflict on future food production, has responded with a desert settlement strategy. This strategy has already moved into planning and early implementation stages. It calls for the development of new cities on non-agricultural land and the expansion of existing urban settlements outside of Cairo -- particularly in the Canal Reconstruction Area and west along the coast from Alexandria. There is much merit in this strategy as a long-range solution.

The major problem with the strategy is that it will take many years and will require vast capital resources as "front end" investments (investments required before people can begin to settle there).

Egypt has neither the time nor the resources to fully implement the desert strategy in the short run as desirable as it is. Therefore, while progress is being made on the desert strategy at a pace which the country can afford, a new hard look must be taken toward reducing the total cost of urbanization per capita and the development of a short-range strategy to cope with the inevitable reality of continued substantial growth in the existing cities -- particularly Cairo.

It will be imperative to review the already prepared planning studies now in order to reconsider their total cost and approach and in order to adapt them to more realistic levels of resource availability. Only in this way can it be hoped that the estimated populations can be served. Secondly, it is now a matter of great urgency to consider the overall implementation process. The amount of construction work already completed in the Reconstruction Area is



MAJOR EGYPTIAN CITIES

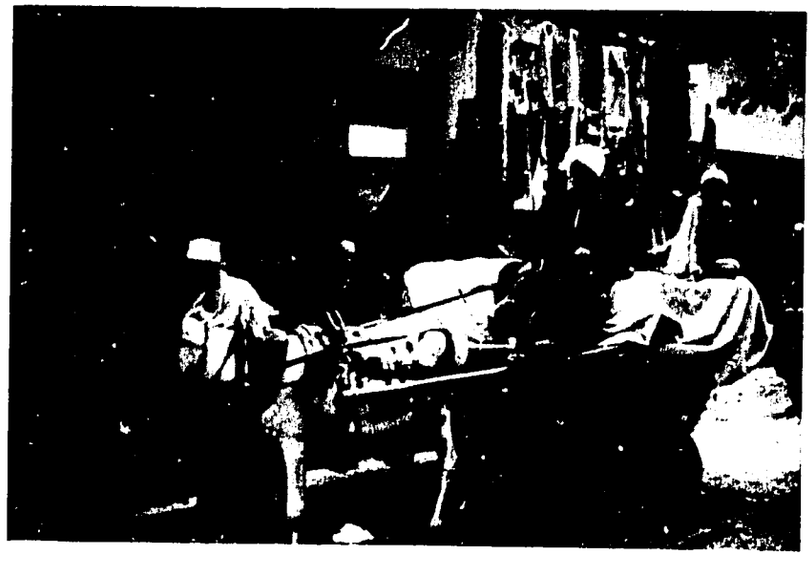
Source: Mona Serageldin, Impact of Population Pressure on a Primate City: Case Study of Cairo, Egypt; December,1971

a marvelous accomplishment and a tribute to the determination of the Government. However, the creation of a long-term, self-sustaining implementation process has not yet been fully developed.

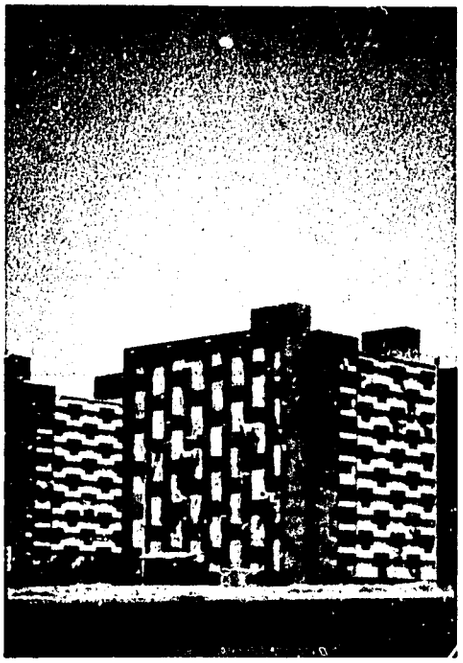
This is particularly true regarding the new cities recently planned or just being planned. The physical design of the city is the easiest part of the work. The real work is to organize the process whereby the city can come to life in the desert at a capital cost which the Egyptian Government can support.

For example, of all the city planning studies studied by the Joint Housing Team, only the Ismailia Housing Study showed any real concern with resource conserving strategies. The other plans largely call for a continuation of a housing program which the MOHR has already recognized as having unacceptable cost implications. These housing programs must be revised and made more realistic. A start in that direction is made in this report.

The real impact of the desert strategy may begin to be felt on the overall national urban pattern after 1985. Until then, however, the majority of urban growth will continue in the existing urban centers. Cairo will continue to serve as the major center for new urban migrants. Few would argue that the continued growth of Cairo is desirable if other practical choices existed, but that growth must be recognized as inevitable. The Egyptian Government needs to respond to this with a strategy to relieve the worst implications of this growth and to allow the city to survive and function. This will require a fresh planning approach to the problems of Cairo and particularly for the upgrading of existing slum areas and the opening up of new non-agricultural lands for the settlement of low-income people.



Traditional neighborhoods in old Cairo have a vitality and charm that should be recognized in new urban design.



Chapter I

NATIONAL HOUSING REQUIREMENTS AND PRODUCTION

The Introduction to this report indicated that the national housing deficit (or "need") was 1.5 million dwelling units in 1975 and that another 1.6 million units would be required by 1985. The current deficit has been calculated by MOHR as shown in Table I.1. Of course, the deficit number does not mean that 1.5 million households are without shelter. For the most part the deficit is a reflection of the overcrowding of more than one family into a dwelling unit. In 1966, for example, it was estimated that the overall average density was two persons per room in Greater Cairo. Most observers feel that this density of persons per room has increased steadily and may now even be approaching three persons per room (at least in some large sections of Cairo).

Housing Production

The current and proposed levels of housing production fall far short of the nation's housing needs. It can be assumed with certainty that unless housing policies change, the national housing deficit in 1985 will be greater than in 1975 in spite of the massive effort under way by the Government.

TABLE I.1

Existing Urban Housing Stock and Estimated Shortage
1975

1960 (Census of Housing)	1,675,000
Demolitions 1960-1975	225,000
New Construction 1960-1975	471,000
Total Number of Units	1,921,000
Substandard Units	300,000
Total Urban Population 1975	16,211,000
Total Number of Urban Families 1975	3,329,000
Estimated Absolute Shortage	1,408,000
Estimated Shortage Including Replacement Housing	1,708,000
Estimated Shortage Excluding All 1- and 25% of 2-person Families	
- with Replacement Housing	1,392,000
- without Replacement Housing	1,092,000
Annual Rate of Household Formation	90,000
Annual Rate of Demolition	10,000
Total Shortage	1,442,000

Source: Ministry of Housing and Reconstruction and Housing team member calculations.

TABLE I.2

Housing Production
1960/61-1975

Year	PUBLIC SECTOR PRODUCTION				PRIVATE SECTOR		TOTAL PRODUCTION	
	GOVERNORATE PROGRAMS		TOTAL					
	Number of Units	Cost in 1000's L.E.	Number of Units	Cost in 1000's L.E.	Number of Units	Cost in 1000's L.E.	Number of Units	Cost in 1000's L.E.
1960/61	1634	1593	2296	2556	11564	10684	13860	13240
1961/62	14679	9561	16768	12807	25675	14000	42443	26807
1962/63	19628	7512	21288	11498	22590	14770	43878	26268
1963/64	9263	7392	11880	13916	10864	9014	22744	22930
1964/65	7890	6302	9020	10848	8893	8492	17913	19340
1965/66	19267	13888	20509	18380	13000	17400	33509	35780
1966/67	8493	2070	9844	11828	15738	19939	25582	31767
1967/68	9832	2376	10967	5149	29505	40003	40472	45152
1968/69	2878	6174	5299	11077	22710	28570	28009	39647
1969/70	8222	5888	9491	10291	28717	23520	38208	33811
1970/71	4038	2868	5250	5484	22520	19050	27770	24534
1971/72(1)	4903	6165	5789	7489	21540	31300	27329	38789
1973	7586	10473	9691	12809	15032	20700	24723	33509
1974(2)	8088	9196	9624	10265	8646	15081	18270	25346
1974(3)	8088	9196	6400	35900	8646	15700	23134(4)	51600(5)
1975(2)	11800	14952	17700	22400	24000	45600	53500	37397
1975(3)	11800	14952	37700	123700	24000	45600	61700(4)	169,300(5)

Source: Ministry of Housing and Reconstruction.

NOTES:
(1) 18 months year.
(2) Exclusive of Reconstruction Budget allocation.
(3) Including Reconstruction Budget allocated to housing.
(4) Figures given for actual number of dwelling units built in 1975 are preliminary pending completion of follow-up report.
(5) Total cost per dwelling unit varies in accordance with planned mix of dwelling unit types in any year, in terms of both quality level and size. In general construction costs in reconstruction areas in the Canal Zone were substantially higher than elsewhere in the nation.

This historic record of housing production is shown in Table I.2. It can be seen that the amount spent on housing and the number of units built in both the public and private sector has been very uneven over the years, but has never reached the annual production needed to stay abreast of new household formation. Starting in 1974 and continuing through 1975, however, housing has received a higher priority and the rate of housing production has increased. This is because of the decision to commence the reconstruction program in the Suez Canal Region.

Housing investment in 1975 can be separated into money spent in the Canal Zone reconstruction area and in the balance of the nation. Spending in the Canal Zone approximated 80 M.L.E. or 50 percent of the housing investment. To a substantial extent, expenditures in the Canal Zone area can be considered to be related to national policy considerations which are broader than just the issues of supplying housing services. It cannot be presumed that upon the completion of immediate reconstruction that housing expenditures previously made in the Canal Zone will be made available for the provision of housing services elsewhere in Egypt. After removing the 80 M.L.E. estimated expenditures in the Canal Zone, the remaining 80 M.L.E. can be further divided in government housing investment and housing investment by the private sector. In 1975 the private sector accounted for about 50 M.L.E. or 63 percent of expenditures, while governmental units accounted for approximately 30 M.L.E. or 37 percent of expenditures.

Housing Production, 1976 to 1980

In the view of the Ministry of Planning, Egypt will spend approximately 1,000 M.L.E. on housing and attendant public utilities during the period 1976 to 1980. The spending program is summarized in the schedule below in Table I.3.

Table I.3

Preliminary Housing Construction Expenditures Estimates
Ministry of Planning, 1976-1980

Total Housing and Utilities:	1,200 M.L.E.
Public Utilities	350 M.L.E.
Private Sector Production	450 M.L.E.
Local Governments	200 M.L.E.
Industry Housing and others	200 M.L.E.

As the schedule shows, 350 M.L.E. has been allocated to the provision of public utilities. The private sector is expected to spend 450 M.L.E., local governmental units 200 M.L.E., industry housing and others is to account for 200 M.L.D.

These figures understate the actual housing expenditures implied by a program of this magnitude. The government has made a practice of monitoring private sector housing based on a construction cost per square metre of 16 to 20 L.E. Actual construction costs are substantially higher than this, in many cases doubling the government figures.

The Ministry of Housing and Reconstruction has asked for a larger program than that invisioned by the Ministry of Planning, for the 1976-1980 period. Table I.4 shows the MOHR's desired program for housing production, 1976-1980. This program suggests the building of 741,000 housing units composed of 295,000 units of public housing and 446,000 units of private housing. The total expenditures are calculated to be 1,320,000 M.L.E. not including the Canal Reconstruction Housing. The program proposed by the MOHR's program works out to an average cost per unit of 1,695 L.E. for public units and 1,838 L.E. for privately constructed units. Units of the size and type presently constructed cannot be built for these costs.

Elsewhere in this report the Joint Housing Team has recommended a mix of publicly assisted housing which would result in an average weighted cost of approximately 2,000 L.E. per unit. If this standard of housing were built, production over the next five years would amount to approximately 425,000 units if 850 M.L.E. is available as indicated by the Ministry of Planning and approximately 660,000 units if the 1,320 M.L.E. suggested by the Ministry of Housing and Reconstruction is made available. Either of these production levels is quite ambitious and represents greater production per year than occured during the period 1970 to 1976. If either of these targets are to be met, substantial changes appear to be required in the present approach to the provision of housing.

Financial Implications of Previous Approaches

There is substantial evidence that the past approach to housing production will result in further deterioration in the level of urban housing services provided. An analysis of the existing public housing production supports this conclusion.

TABLE I.4

Proposed Housing Plan
1976-1980
(Housing in thousands of units)
(Cost in millions L.E. - 1976 constant prices)

	1976		1977		1978		1979		1980		Total	
	Units	Cost	Units	Cost	Units	Cost	Units	Cost	Units	Cost	Units	Cost
Housing Budget												
Public Sector												
Low Cost Housing	20	30	27	40	35	50	60	85	93	140	235	345
Middle Income Housing	4	10	6	15	8	20	16	40	24	60	58	145
Upper Income Housing	--	--	--	--	--	--	--	--	2	10	2	10
Subtotal	24	40	33	55	43	70	76	125	119	210	295	500
Private Sector												
Low Cost Housing	40	60	48	72	60	90	80	120	100	150	328	492
Middle Income Housing	12	30	14	36	18	45	24	60	30	75	98	246
Upper Income Housing	2.5	10	3	12	3.5	15	5	20	6	25	20	82
Subtotal	54.5	100	65	120	81.5	150	109	200	136	250	446	820
TOTAL	78.5	140	98	175	124.5	220	185	325	255	460	741	1320
Reconstruction Budget(1)												
Canal Zone	7.0	31.0	21.7	98.5	22.5	102.5	23.5	107.5	24.3	86.8	99.0	457.0
Greater Cairo	5.0	23.3	12.7	60.0	12.7	60.0	11.7	55.0	12.7	60.0	54.8	258.3
TOTAL	12.0	54.3	34.4	158.5	35.2	162.5	35.2	162.5	37.0	146.8	143.8	715.3
GRAND TOTAL(2)	90.5	194.3	132.4	333.5	159.7	382.5	220.2	487.5	292.0	606.8	884.8	2035.3

Source: Ministry of Housing and Reconstruction.

NOTES: (1) This represents that portion of the reconstruction budget that is allocated to housing. Some minor projects that are outside the Canal Zone and Greater Cairo are not included.

(2) Other public bodies that have a housing component in their plan in combination have submitted requests for an additional 122.5 millions L.E. for housing in their 1976-1980 plans.

Public housing provided in 1975 had an average unit cost of 2,500 L.E. to 3,000 L.E.* Based on a cost of 2,500 L.E. per unit and an annual public housing investment of 30 M.L.E. (assuming a constant real commitment and that real prices do not change), the present program of nearly complete subsidy could produce about 12,000 units per year or 120,000 units over a ten-year period. The Ministry of Planning has set a real economic growth target of 6.5 percent per year. If this rate of growth were achieved and the commitment to housing were to increase at the same rate, a total of 172,000 units could be produced. These levels of production fall far short of needs. It is apparent that new approaches will be required.

The Present Housing Delivery System

Housing is currently produced by a variety of public, semi-public and private entities under the overall policy supervision of the Ministry of Housing and Reconstruction (see Appendix III for a discussion of the Administrative Framework for Housing and Land Development). The following are the main participants in the housing delivery system in Egypt:

1. Public Sector -- MOHR

Most public sector production is controlled by the MOHR working through the Governorate's Housing and Reconstruction Administrations. The MOHR controls the budget allocations and sets overall production levels. The Governorates are responsible for the design and construction which is normally done by private contractors selected through public bidding.

Financing for MOHR programs is from the National Budget and was estimated at L.E. 80 million for 1975. MOHR production during 1975 was about 30,000 new and rehabilitated units and is projected at 70,000 units for 1976. The house types constructed under MOHR programs are shown in Table I.4. The construction cost per square metre is an artificial number which does not relate to actual experience.

2. Public Sector -- Public Companies

Ten publicly-owned companies also produce housing under the supervision of the MOHR. Most of these companies were once private, profit motivated developers and builders. They were nationalized in the mid-1960s and have since operated

* The Suez Master Plan indicates a 1975 cost of 2,225 L.E. for a 65 M^2, four-room house or 32 L.E. M^2.

TABLE I.5

Definition of Housing Types

Year	Housing Budget Allocation (percent)	Construction Cost L.E./m^2	Size of Unit in m^2	Monthly Income of Beneficiary(1) (L.E.) Upper Limit	Lower Limit	Monthly Rent(2) L.E.
1960-65 Plan						
Low Cost Housing	60	6-8	30-70	25	8	1.2-5
Middle Income Housing	30	8-10	60-120	50	25	5-10
Upper Income Housing	10	10-12	70-180	100	50	---
1965-70 Plan						
Low Cost Housing	71	8-10	40-75	25	8	6-10(3)
Middle Income Housing	26	10-12	80-120	65	25	12-16
Upper Income Housing	3	12-16	100-200	---	65	---
1970-76 Plan						
Low Cost Housing	70	8-12	40-60	35	--	6-9.5
Middle Income Housing	25	12-16	62-90	100	35	11-16
Upper Income Housing	4	16-20	120-150	150	100	26-32
Luxury Housing	1	over 20	over 150	---	over 150	---

Source: Ministry of Housing and Reconstruction.

NOTES: (1) Since 1973, priority ranking aimed at particular target groups has superceded the income limits.

(2) In accordance with rent regulation laws.

(3) Not representative of special rents in public housing programs implemented under the Nasser Emergency Housing Project and the units affected by the 1968 rental law for public housing.

under MOHR limited control. Their financing comes from private banks and insurance companies, from land sales and from repayments on old projects. Some are also starting savings programs for prospective home buyers and the savings are used to help finance construction.

Housing produced by these companies has mostly been for upper income families. Current projects include five-room apartments with two baths and maids' room with 200 M^2 range. One company estimated that their average unit cost will be L.E. 7,000 to L.E. 15,000 over the next five years.

Almost all housing produced by these companies is sold on a condominium basis and the companies are responsible for collection of monthly payments. Estimates on collections vary from 10 to 40 percent delinquency.

3. Semi-Public Sector Housing Cooperatives

The first law permitting the development of housing cooperatives was passed in 1944. In 1954 a new law was passed granting an annual budget of L.E. 2.5 million for housing coops, under the direction of the Ministry of Social Affairs. In 1961 responsibility was transferred to the Ministry of Municipal and Social Affairs, which later became the MOHR.

In 1971 the General Organization for Housing Cooperatives (GOHC) was established to promote and supervise the development of housing coops and to serve as the link between the coops and MOHR.

In 1975 there was a redirection of the cooperative housing program to shift from upper income projects to the middle income level. At the same time Government financing for coops was increased to L.E. 10 million per year. A new proposal is now under discussion to further increase Government financing to L.E. 20 million per year.

From 1967 to 1976 housing cooperatives have helped to finance and produce approximately 26,000 units at a cost of about L.E. 41.5 million. The 1976 budget will provide for about 10,000 units. The major sources of financing for housing cooperatives are:

1) Savings from cooperatives and their members;
2) Government budget allocations; and
3) Income from completed projects.

Until 1970 financing was provided at 5 percent interest and 15-years to cooperative groups and 6 percent interest for individuals. Home improvement loans were granted at 3 percent interest for 20 years. In 1975 terms were extended to 30-years at 3 percent interest.

In the past GOHC made three types of loans:

1) Cooperative apartment buildings with one apartment for each member;

2) Cooperative land subdivisions where each member purchased a lot and then built a small apartment building for sale or rent on a speculative basis to non-members; and

3) Individual loans to non-coop members.

The GOHC performs the following functions in developing a typical housing cooperative:

1) Reviews applications from coops and checks land ownership;

2) Checks drawings and building permits;

3) Executes loan agreements;

4) GOHC architects assist in contracting and inspection;

5) Reviews coop bylaws and registers coops; and

6) Issues permits for building materials.

Under the 1975 redirection of housing cooperative only Type 1 loans will be made and they will be limited to dwelling units costing less than L.E. 5,000. Most loans will go for units costing between L.E. 3,000 and L.E. 1,500 per unit. The average 1976 loan will be L.E. 2,000.

The size of the dwelling units will be reduced in the new program and new projects will be "complete developments" with community facilities. The GOHC is also looking for new ways to encourage savings for housing cooperatives.

We support the redirection of the cooperative effort toward lower income levels as an effective way of increasing private sector production to complement MOHR efforts.

4. Semi-Public Sector -- Industrial Workers Housing

This recent program provides that public sector enterprises earmark 15 percent of their profits for the provision of services to their employees, among which is housing. The earmarked amounts are deposited in a special fund in the Finance Ministry and drawn upon in accordance with national budget allocations for each service sector in any given year. Out of the 15 percent fund, two-thirds is for facilities such as schools and hospitals and one-third is for housing.

The scope of the program has been very limited. On the one hand, the profits of public sector enterprises are low and have declined in the past few years because of curtailed productive capacity for lack of maintenance and replacement budgets. On the other hand, national investment policies did not give services, including housing, high priority ranking.

Nevertheless, it is expected that the program will acquire new momentum in the near future as a result of:

1) The priority given to investments to improve capacity utilization in the transitional plans of 1976 and 1977;
2) The commitment made by the government to relieve the severity of the housing shortage.

The industrial housing funds are channeled through the local services councils. Only 5 percent of the earmarked funds have actually been authorized for housing. The budget allocation for 1974 and 1975 as well as the budget request submitted for the 1976-1980 plan are given below:

Table I.6

Budget Allocations for
Industrial Workers Housing by Year

Year	Budget in millions L.E.
1974 (allocated)	3.9
1975 (allocated)	3.9
1976 (preliminary)	4.0
1976-1980 (requested)	30.0

Even in the unlikely event that the total budget request is granted, the amount allocated would finance about 6,000 to 7,000 units, if the current program housing standards continue to prevail.

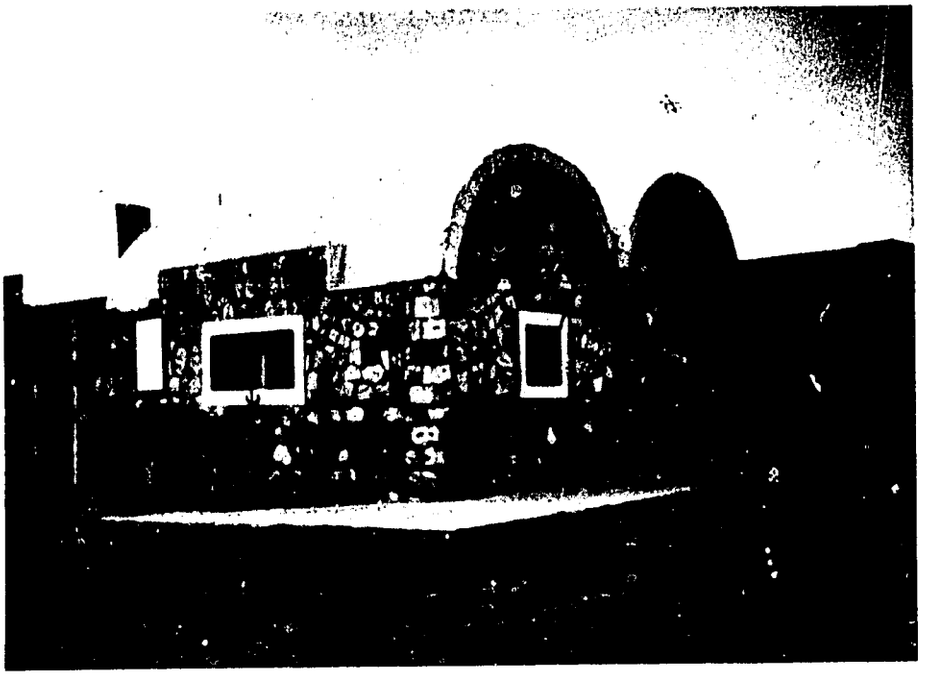
5. Private Sector -- Formal

Some housing is also produced by private profit motivated companies for upper income families. (See Chapter IV, Stimulating the Private Sector.)

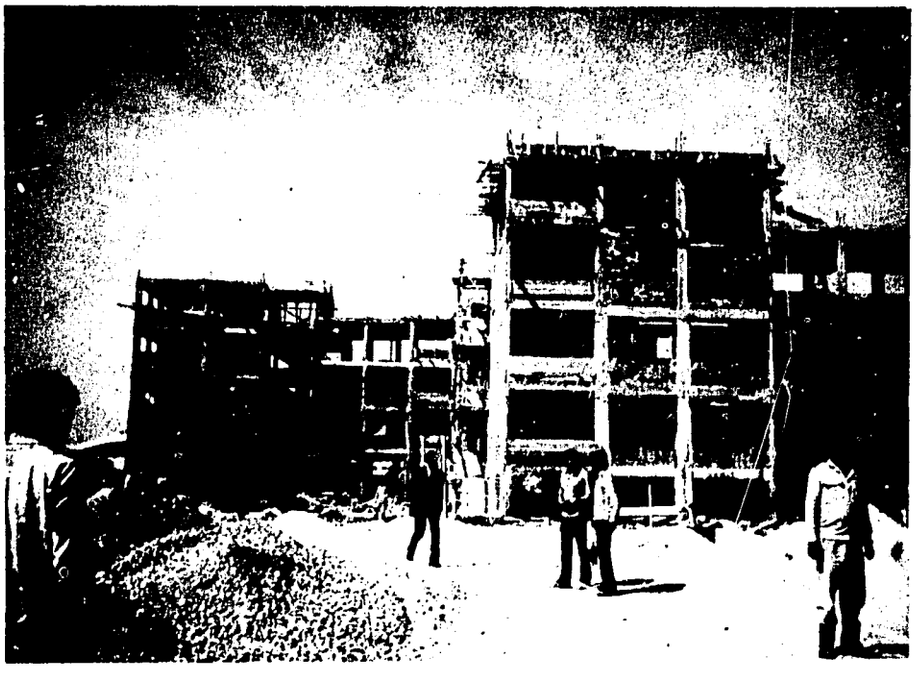
6. Private Sector -- "Unorganized" Construction

An estimated 50 percent of all housing constructed in urban areas is done by private individuals through self-help or by small "contractors". This type of unorganized construction often takes place "illegally" without building permits and on land where the occupant does not have clear title. Much of this construction is done to expand or rebuild existing housing. In the past mud brick and wood were the major materials used, but this is changing and new construction is mostly of fired "red brick" and concrete. There are no firm figures on the number of new or rehabilitated dwelling units constructed by private individuals in this way. A very rough estimate would be 50,000 units per year.

It is clear from the above brief discussion that the delivery system for housing production in Egypt is very much constrained by capital shortages, building materials shortages and limited capacities. There is no focus on or programming for the needs of the lowest income people who are forced to illegally without Government assistance. In the chapters which follow, some suggestions will be made which attempt to respond to these immediate problems.



Local limestone and vaulted roofs used on this new MOHR project in Ismailia.



New Industrial Workers Housing Project under construction near Alexandria.

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Chapter II

REDUCING PUBLIC SECTOR HOUSING COSTS

The starting point for improvement in the housing program of the Government of Egypt is the reduction of the average cost per unit of the housing constructed. This can be accomplished through an overall reduction in the general size of each dwelling unit (which is presently too large by international experience for public housing units) and through better architectural design, site planning and reduced infrastructure costs.

Reducing Unit Size

The traditional approach to housing in Egypt and many countries has been to start with the design of a "standard dwelling unit" according to predetermined standards for the size of the unit, number of rooms, room size, plumbing fixtures, etc. The next step has been to build these standard units at the lowest cost possible and then make them available to low-income families by providing huge government subsidies.

The problem with this "standard dwelling unit" approach is that few governments have the resources to subsidize sufficient quantities to meet the tremendous demand by low-income groups for housing. As a result, a few lucky families receive new houses while the vast majority continue to expand the squatter areas or increase the densities of central city slums.

Another approach which is now being used in several countries is to start with an analysis of the income distribution pattern within the country, divide the population into target groups and then determine how much families in each group can afford to pay for housing.

With this information, it is then possible to determine the total "allowable house price" for each group without subsidies. Table II.1 gives an example of how this approach could be applied in Egypt.

The income distribution table presented in the Summary of Conclusions and Recommendations provides the basis for this analysis. This table divided households into income groups A to F. Those in Group A are the highest income households or those earning over 1,600 L.E. per year. It is generally agreed that this group can and should obtain housing through the private sector, and therefore, would be ineligible to participate in Government-sponsored housing programs.

The other income groups are shown in Table II.1. The total cost of a dwelling unit (including construction, land and infrastructure) can then be established for each income level as shown in Table II.1 as follows:

1. The percentage of the annual income which can be allocated to housing is shown (i.e., 17 percent for Group B, 15 percent for Group C, etc.).
2. This percentage when applied to annual household income yields the annual cash payment which the household can afford to make to amortize a mortgage loan.
3. The amount of a mortgage loan which can be amortized based on terms of 30 years at 6.5 percent annual interest is calculated.
4. The percentage of the total house cost represented by a downpayment at the time of purchase is shown.
5. The cash amount of the downpayment can therefore be established.
6. The downpayment plus the amount of the mortgage loan added together give the total value of the "affordable house" which a given household could purchase and pay for without subsidy.

Table II.1

ESTIMATING THE UNIT COST AFFORDABLE
BY INCOME GROUPS WITHOUT SUBSIDY

Target Group	Annual Income	% for Housing	Annual Payment	Total Loan 30 Yrs. 6.5%	% Down-payment	Amount of Downpayment	Total Affordable House
B	1,500	17%	255	3,330	17%	682	4,012
	1,400		238	3,107		636	3,743
	1,300		221	2,886		591	3,477
	1,200		204	2,664		545	3,209
	1,100		187	2,442		500	2,942
	1,000		170	2,220		455	2,675
C	900	15%	135	1,763	15%	311	2,074
	800		120	1,567		276	1,843
	700		105	1,371		242	1,613
	600		90	1,175		207	1,382
D	500	13%	65	849	10%	94	943
	400		52	679		75	754
E	300	7%	21	274	10%	30	304
	200		14	182		20	202
	150		10.50	137		15	152
F	100		SPECIAL PROGRAM				
	0						

For example, the table shows that a household in Group C which has an annual income of 800 L.E. can afford a dwelling unit costing 1,843 L.E. without subsidy.

Obviously, it is in the best interests of the Government to attempt to provide housing units which are related to the specific income groups of concern and their ability to pay. Chart II.1 shows graphically the range of dwelling unit sizes and costs which each of the income groups can pay for without subsidy. The vertical dimension indicates the size of the dwelling units in square metres and the horizontal dimension shows the total cost per square metre. The curved lines show the relationship between dwelling unit size and total cost which each income group can afford without subsidy. Therefore, the Group B household with the 800 L.E. annual income can afford, without subsidy, a dwelling unit which is just over 60 square metres if it can be constructed for 30 L.E. (total cost) per square metre or a dwelling unit of just under 30 square metres if it can be constructed for 55 L.E. (per square metre or any combination in between along the line shown).

This chart should be interpreted as the desirable target for the design of housing projects for the respective income groups. The architects in Egypt should be challenged to produce housing types which fall within the lines shown on the chart. (See discussion later in this chapter on design improvement.)

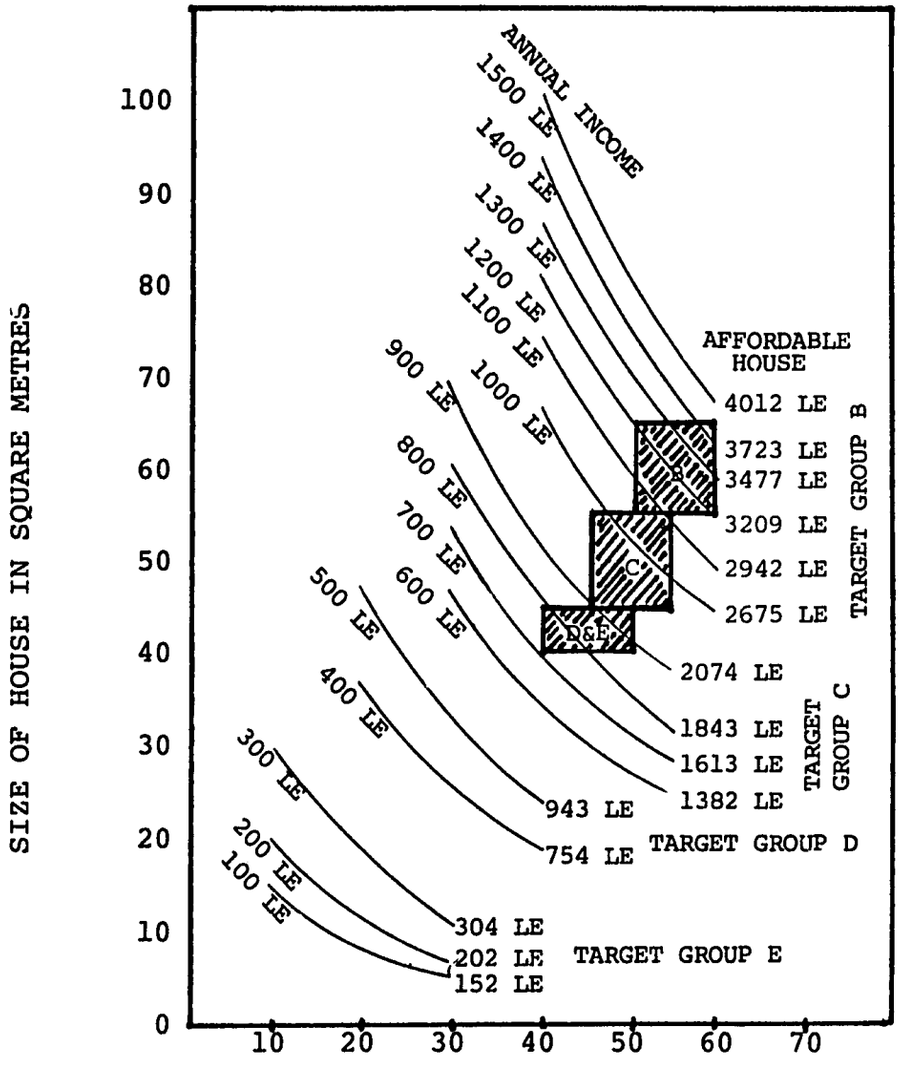
Superimposed on the chart in the shaded blocks are the ranges of dwelling unit sizes and costs considered by the Joint Housing Team to be useful first targets for the cost reduction program. The present standards (particularly dwelling unit size standards) tend to be higher on the average. It can be seen that if these standards for public housing units were followed, income group B households (with the exception of the households earning 1,000 L.E. per year) could afford the public housing without subsidy. Therefore, no subsidy should be given to Group B households which receive publicly built housing.

The block indicating the range for income group C housing shows that a subsidy will be required for almost all Group C participants in the housing program. The exception is that a dwelling unit of 45 square metres at a cost of 45 L.E. per square metre could be afforded without subsidy by the highest income Group C families (those with incomes between 900 and 1,000 L.E. per year).

The proposed dwelling unit standards for income groups D and E are considerably in excess of what these groups can afford without subsidy. In fact, only households with incomes over 700 L.E. per year could afford these houses without subsidy.

Chart II.1

AFFORDABLE UNSUBSIDIZED HOUSE IN SQUARE METRES
AND COST PER SQUARE METRE BY INCOME AND TARGET GROUP



Total Cost in L.E.s per Square Metre
(Construction, Land & Infrastructure)

▨ Range of costs proposed by Joint Housing Team as first cost reduction from existing policies.

From this chart we can conclude that, with the exception of the housing units foreseen for Group B, the other will result in major subsidy costs to the Egyptian Government. Therefore, while recognizing that these preliminary proposals by the Joint Housing Team are a considerable improvement over the existing standards in that they relate the standards to income groups and the ability to pay while lowering previous space standards somewhat, they do not go far enough in meeting the housing problem in Egypt.

Chart II.2 once again shows the range of the preliminary proposed standards in the shaded squares. In addition, there are added the implications to dwelling unit costs through reductions which are feasible through improved design and construction practice (in the dashed squares). Even with improved design, it can be seen that the subsidy element, while reduced, is still very high for income groups C, D and E. From this we can conclude that consideration should be urgently given to an entirely new housing program focused on the needs of these lower income groups. Such a program could be the provision of a core house with a lower standard of utilities and a smaller land area. Core house programs are well established in many countries which have faced a similar dilemma of too heavy a subsidy element in standard housing.

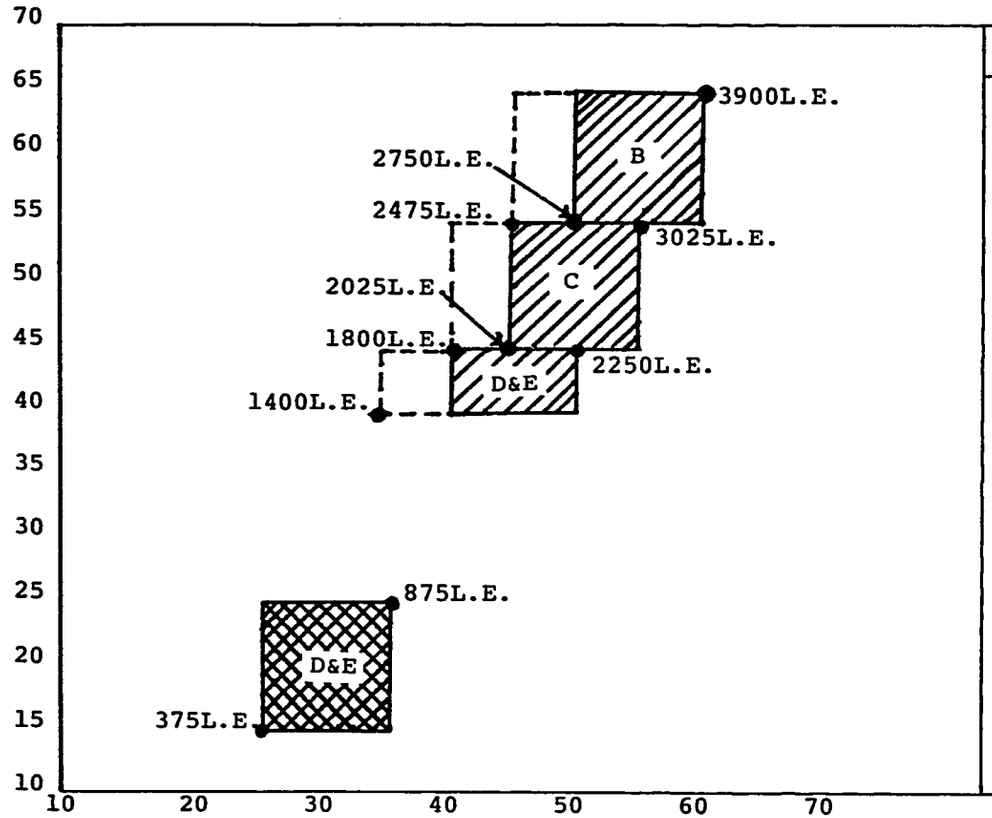
The range of a feasible core house program is shown in the hatched square. It calls for core house sizes of between 15 and 25 square metres (essentially one room with a small kitchen and bathroom) at a total cost range of between 25 and 35 L.E. per square metre. If a core house program were initiated, it would make possible the provision of basic units to Group D without subsidy and at greatly reduced subsidies to Group E.

The various typical dwelling unit costs are shown in the table on the right hand side of the chart. The element of subsidy is shown along with the percentage of subsidy per a given unit cost. The table selected mid-ranges of income in each income group to make the illustration (i.e., 1,300 L.E. in Group B, 800 L.E. in Group C, 500 L.E. in Group D and 200 L.E. in Group E). Therefore, the actual subsidy will be more or less depending on the actual income of the family within a given income group.

We can conclude from the chart that since it is intended that Group B housing receive no subsidy from Government, the most expensive range of units should only be sold to members of Group B with the higher range of incomes. Group C housing should concentrate mainly on the lower ranges of dwelling units in order to minimize subsidies. In fact, if the hoped for design improvements are made, only the lower income households in Group C will need any subsidy.

Chart II.2

UNIT COST RANGE AND SUBSIDY REQUIRED
ON DIFFERENT ASSUMPTIONS OF UNIT SIZE AND SQUARE METRE COSTS



Group	Unit Cost	Size	Cost Per M^2	Average Subsidy	% of Subsidy
	3,900	65	60	423	11%
B	2,750	55	50	0	0
	2,475*	55	45	0	0
	3,025	55	55	1,182	39%
C	2,025	45	45	182	9%
	1,800*	45	40	0	0
STANDARD					
	2,250	45	50	1,307	58%
D	1,600	40	40	657	41%
	1,400*	40	35	457	33%
	2,250	45	50	2,048	91%
E	1,600	40	40	1,398	87%
	1,400*	40	35	1,198	86%
CORE					
	875	25	35	0	0
D	375	15	20	0	0
	875	25	35	673	77%
E	375	15	20	173	46%

TOTAL COST IN L.E.S PER SQUARE METRE

Range of costs proposed by the Joint Housing Team

Range of costs feasible with better design

Range of costs for core house solution for D & E groups

* Costs considered possible through improved design.

The impact of attempting to provide a standard dwelling unit below Group C level incomes becomes obvious in the chart. The subsidy element in Group D for standard housing ranges from 58 percent for the highest cost-proposed Group C unit to 33 percent in the lowest-cost units incorporating the savings possible through improved design. In Group E these subsidies become much higher ranging from 91 percent to 86 percent. These levels of subsidy should be considered unacceptable as the long-range basis for a housing program in Egypt.

The use of the core house as an alternative shows that this solution could be made available to Group D households without subsidy and to Group E households with a substantial but much smaller subsidy. It should be pointed out that although the subsidy element in core housing for the low income groups is still high as a percentage of the total cost, the aggregate amount of the subsidy in L.E. is in fact much less per household affected.

Finally, it should be pointed out that the lowest income people in Group F are not included in proposed housing programs at all. The current estimate is that there are over 500,000 households in the lowest income group who need dwelling units. A special program is required to respond to the needs of this group. (See Chapter V -- An Emergency Program for Lowest Income People.)

Alternative Allocations of Government Investment

The allocation of public investment in alternative types of housing is clearly a policy choice which has many ramifications. A set of three alternative allocations is shown on Chart II.3. The purpose of this chart is to show the kind of relationships which exist between house unit size and cost and the number of units which can be built. A number of assumptions are included in the chart. All of these assumptions would have to be subjected to further consideration by Government before any of the alternatives could have practical value in Egypt or before they could form the basis for a specific proposal.

Table II.2 shows the target groups of concern (omitting Group A) and estimates the need for housing in 1980 (the end of the five-year plan period). This "need" estimate has been established by projecting the 1975 estimated "need" by income group to 1980 with an annual rate of increase of 3.6 percent which is the estimated growth rate of the urban population. Next the various unit costs are shown as listed in Chart II.2. The maximum number of dwelling units which could be built with 400 M.L.E. by each cost category is shown to illustrate the range of possibilities. For example, if only units costing 3,900 L.E. were built, a total of 102,600 units could be

obtained from the investment of 400 M.L.E. On the other extreme, if only the least costly core houses were built at 375 L.E. each, then 1,066,700 units could be built. The correct mix of housing for Egypt will fall within these extremes. No inflation factor has been included in the estimates for the five-year period.

The 400 M.L.E. has been distributed as a percentage among the income groups in the same ratio as the total "need" of the income group for convenience only. This is, of course, arbitrary and is only for illustrative purposes. It might be more appropriate to distribute the investment with a bias toward the lower income groups.

Alternative I (high range) shows how much housing stock could be generated using the most expensive housing unit proposed for each income group. This is calculated by dividing the cost of the unit into the millions of L.E. available. The subsidy in millions of L.E. is established by taking the subsidy element for the mid-range of the income group from Chart II.2 and multiplying the percentage of subsidy times the millions of L.E. Alternative I shows that if the high range of housing units is built for all income groups, a total of 148,000 units will be obtained during the five-year period. (In actuality, the number of units would be less because of inflation during the period.) The amount of subsidy would be 214 M.L.E. or 54 percent of the total investment.

Alternative II (middle range) takes the lower cost units as currently proposed by the Joint Housing Team and applies the same mechanical calculations. It can be seen that this alternative produces 211,000 units of housing which is an increase of 63,000 units or 43 percent over Alternative I for the same capital investment. The subsidy element in Alternative II is reduced to 160.8 M.L.E. or 40 percent of the total investment. More importantly, the subsidy is better distributed -- away from Groups B and C and toward the lower income households in Groups C and D (even though the total subsidy in M.L.E. is less).

Alternative III (low range) uses standards not yet achieved in Egypt and not yet recommended by the Joint Housing Team. Alternative III, therefore, can be considered a speculative illustration showing what might be possible if the housing policies were even further changed beyond the initial recommendations of the Joint Housing Team. This alternative recognizes that it is possible to make a significant savings on the cost of standard dwelling unit construction through improved design and site planning. It also introduces the core house in response to some of the needs of the lower income people in Groups D and E. Under Alternative III a total of

Table II.2

ALTERNATIVE ALLOCATIONS OF 400 M.L.E. BY INCOME GROUP
UNIT COSTS WITH INDICATION OF THE LEVEL OF SUBSIDY REQUIRED

Target Group	Need By 1980 '000	Unit Cost	Maximum Units Possible Per Category With 400 M.L.E.	ALTERNATIVE I (High Range)			ALTERNATIVE II (Middle Range)			ALTERNATIVE III (Low Range)		
				Units '000	Cost M.L.E.	Subsidy M.L.E.	Units '000	Cost M.L.E.	Subsidy M.L.E.	Units '000	Cost M.L.E.	Subsidy M.L.E.
B	250	3,900 2,750 2,475*	102.6 145.4 161.6	26.6 11%*	104	11.4	37.8 15%	104	0	42.0 17%	104	0
C	202	3,025 2,025 1,800*	132.2 197.5 222.2	27.8 14%	84	32.8	41.5 21%	84	7.6	46.7 23%	84	0
D	164	2,250 1,600 1,400* 875 375	177.8 250.0 285.7 457.1 1,066.7	30.2 18%	68	39.4	42.5 26%	68	27.9	24.3 38.9 39%	34 34	11.2 0
E	347	2,250 1,600 1,400* 875 375	177.8 250.0 285.7 457.1 1,066.7	64.0 18%	144	131.0	90.0 26%	144	125.3	34.3 54.9 128.0 41%	48 48 48	41.3 37.0 22.0
F	673	---		0			0			0		
TOTALS Percentage of Subsidy in Program				148.0	400	214.6 54%	211.0	400	160.8 40%	369.1	400	111.5 28%
DEFICIT 1980	TOTAL NEED 1/ 1,636,000											

1/ 1975 deficit estimated 1,320,000 units.

*Percentages represent percentage of 1980 housing need met by income group.

369,100 units could be built -- an increase of 149 percent oyer Alternative I and a 75 percent increase over Alternative II. In addition, the subsidy element is reduced to 111.5 M.L.E. or 28 percent of the capital investment. The implications of the reduction in subsidy is further discussed in Chapter III in terms of the creation of capital to maintain the building program.

The percentages shown under the number of units in each alternative by income group represent the percent of the 1980 housing need by income group met. It can be seen that for income group B the number of units built for the 104 M.L.E. increases from 26,600 (Alternative I) to 42,000 (Alternative III). This can be translated into meeting 11 percent of the income groups "need" in Alternative I to meeting 42 percent of the "need" in Alternative III. Since it has been agreed that the major objective of the housing policy of Egypt should be to make the maximum net addition to the housing stock, the case for using the lowest cost units proposed for each income group becomes very strong indeed.

Impact of Alternative Investments on National Urban Needs

Even though the analysis must by necessity be highly speculative, it is interesting to compare the alternative public investment policies as to their possible impacts on overall national urban housing needs in 1980. The range of impacts is shown in Table II.3.

This table must be considered only illustrative given the overall weakness of the data inputs. Nonetheless, several conclusions can be drawn.

The table first takes the estimate of the 1975 housing needs by income group (data which is probably biased toward showing a greater housing need among upper-income groups than probably exists) and factors it up to an estimated 1980 housing need by use of an annual growth rate of 3.6 percent which is the overall growth rate of population in urban Egypt. This creates a 1980 need of 1,818,000 units or an increase of 294,000 units during the five-year period. Next, a totally speculative distribution of private investment is computed on the basis of the National Plan allocation of 450 M.L.E. at an average unit cost of 3,500 L.E. which yields a total of 128,500 units. These units are arbitrarily distributed among the higher income groups on the basis of 55 percent to Group A, 30 percent to Group B, 10 percent to Group C, 5 percent to Group D, and nothing to Groups E and F. This distribution deducted from the "need" yields the "unmet need" in 1980 to which presumably the public housing investment would be directed. The totals of units to be built under each of the three alternatives included in Table II.3 are shown as is the remaining "unmet need" after the program.

Table II.3

ILLUSTRATIVE POSSIBLE IMPACTS OF ALTERNATIVE HOUSING INVESTMENTS ON TOTAL NATIONAL URBAN NEEDS

Target Group	1975 D.U. Needs '000	1980 D.U. Needs '000	Units Private Investment 450 M.L.E.* '000	Unmet Need '000	ALTERNATIVE I		ALTERNATIVE II		ALTERNATIVE III				
					Units '000	Unmet Need	Units '000	Unmet Need	Units '000	Unmet Need	ALT. I	ALT. II	ALT. III
A	152.7	182	70.7	111.3	0	111.3	0	111.3	0	111.3	-27%	-27%	-27%
B	213.3	250	38.6	211.4	26.6	184.8	37.8	173.6	42.0	169.4	-13%	-19%	-21%
C	167.6	202	12.8	189.2	27.8	161.4	41.5	147.7	46.7	142.5	-4%	-12%	-15%
D	137.1	164	6.4	157.6	30.2	127.4	42.5	115.1	63.2	94.4	-7%	-16%	-31%
E	289.1	347	0	347.0	64.0	283.0	90.0	257.0	277.2	69.8	-2%	-11%	-76%
F	563.8	673	0	673.0	0	673.0	0	637.0	0	637.0	+13%	+13%	+13%
TOTALS	1,524.0	1,818	128.5	1,689.5	148.0	1,540.0	211.0	1,441.0	369.1	1,224.4	+01%	-5%	-20%

* Average unit cost 3,500 L.E.

It can be seen that Alternative I results in no net reduction in the 1975 "need" totals. Alternative II reduces the deficit by five percent and Alternative III reduces it by 20 percent. The individual reductions among income groups are shown for each alternative.

Since the Government program is not aimed at income groups A and F, no change in the unmet need is shown for these groups. However, private investment is likely to reduce the Group A "need" by 27 percent. On the other hand, the needs of Group F will grow by 13 percent since no private investment or public investment is likely for this group. This is a serious problem and is the underlying reason for recommending an emergency program for this group in Chapter III.

Obviously, this analysis is highly hypothetical. However, it does serve to underline the basic fact that only if a much reduced average unit cost is used by the Government in the years ahead is there any chance of making substantial reductions in the housing deficit. Since all alternatives proposed by the Joint Team reduce unit costs already, it can be deduced that if no change in current Government housing policy is made the actual deficit will be larger in 1980 than in 1975. This would be most unfortunate given the very large investment, both public and private, to be made in the housing sector during the next five years.

Reducing Costs by Improved Design

1. Expandable Housing

If the sizes of the dwelling units are reduced to lower costs, new design approaches are required to produce livable housing.

Because land is expensive and scarce in Cairo and other urban areas in Egypt, high density development is required for low-income housing. It is more difficult to design "expandable housing" in a high density area, but it can be done. In fact, a type of expandable high density housing is already common in most urban areas in Egypt. Four and five storey buildings are built in stages over periods of five to ten years by individuals. Often the first floor is a small shop or light industry with living quarters in the rear during the first stage.

The second storey is added later for expanded living space for the owner's family. At a later date, a third, fourth and even fifth floor may be added to produce rental income from other families.

Cool, quiet courtyard in old, traditional Egyptian house.

The old Cairo street pattern provides small cool, shaded areas for social gatherings among neighbors.

Traditional Egyptian residential architecture is characterized by tightly grouped multi-storey structures clustered around small courtyards and laced together with narrow streets and walkways. There is a tendency in Egypt and many countries to discard the past and build new "modern" buildings of an international architectural style without giving careful consideration to the best elements of traditional architecture.

It is true that the older areas of Cairo have many buildings in dilapidated condition, the streets need more frequent cleaning, traffic does not move well and there is a general impression of confusion and conflict. On the positive side, there is a definite sense of vitality with small islands of space for repose in the sidewalk coffee shops, the quiet alleyways with craftsmen working in their doorways and a general feeling on the part of the people living there that they belong to that neighborhood. The tall four to five storey buildings create shade in the small courtyards and break the desert winds into cooling breezes.

In contrast, some of the "modern" housing projects have blocks of five storey apartment buildings laid out in rows, much like the worst examples of public housing throughout the world. There are other examples of new MOHR financed housing projects where the architects have recognized the need to draw upon the experience of the past and have created small courts and pedestrian walkways.

We strongly recommend that the MOHR should develop new architectural designs for multi-family housing which draw upon the best aspects of traditional Egyptian architecture and allow for future expansion by the owners themselves. In this way the MOHR can build smaller units initially at prices which fit the economic capacity of the home buyers and greatly reduce subsidies.

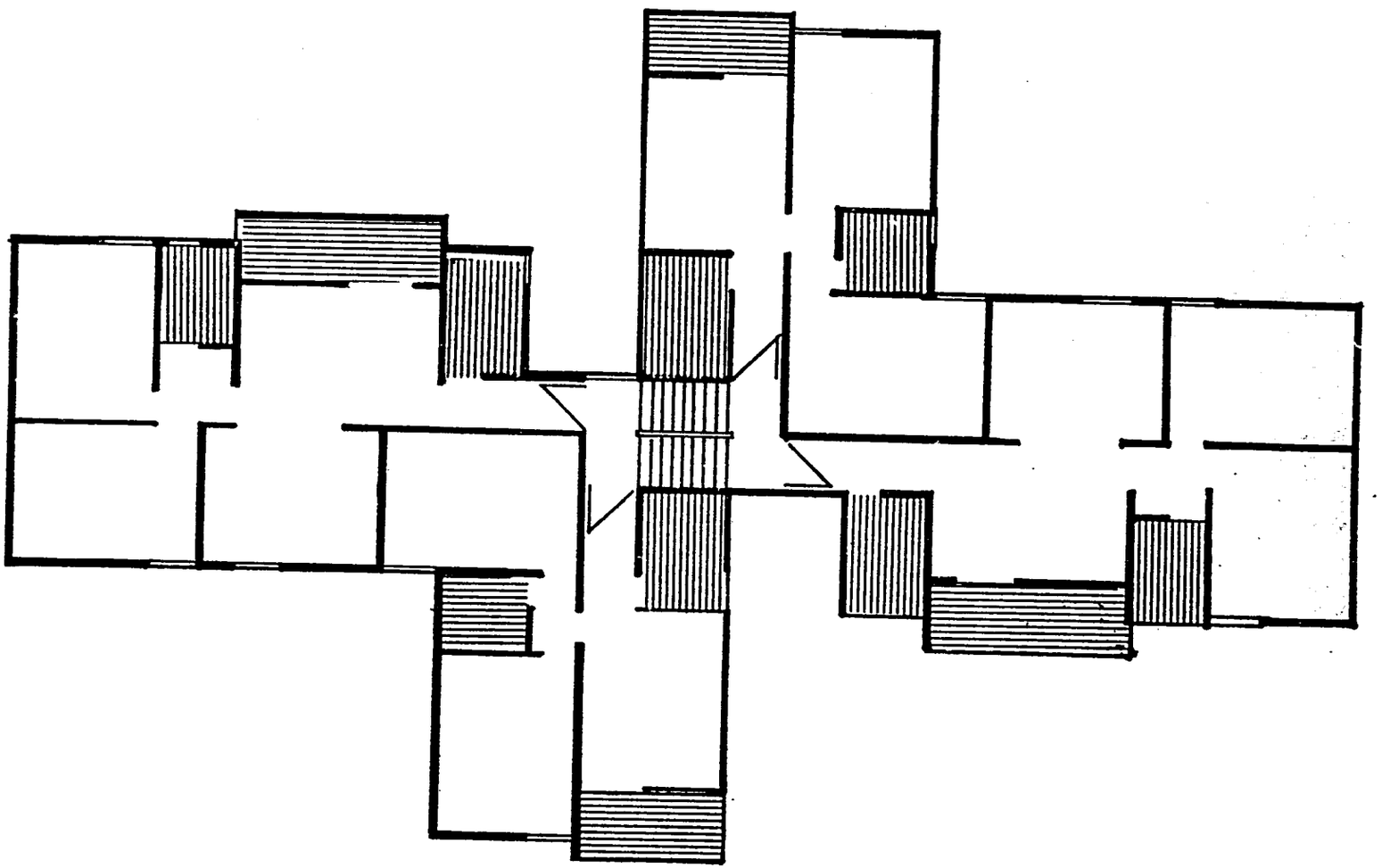
Improved Design Efficiency

There is a wide variation in the design efficiency on housing for low-income groups in Egypt. Some of the newer projects are excellent while others are not designed with a conscious effort to hold down cost.

Costs could be cut 20 to 30 percent by improving the design of some projects. For example, Figure 1 shows a plan of a new multi-storey apartment which has four units on each floor, two units of 65 M^2 and two of 75 M^2. It is well designed from the aesthetic point of view but very inefficient when we consider the cost-benefit ratio. The major areas where design change would reduce costs are:

Chart II.3

SCHEMATIC FLOOR PLAN OF MULTI-STOREY
APARTMENT RECENTLY CONSTRUCTED IN CAIRO



1. Building Configuration

The "pinwheel" shape of the building will increase cost considerably. Each floor contains roughly 280 M^2 of floor area (2 apartments of 75 M^2 and 2 apartments of 65 M^2). The amount of exterior wall required to enclose this space is about 110 metres in the "pinwheel" configuration. This same amount of space could be enclosed with approximately 79 lineal metres of exterior wall in a rectangular shaped building with dimensions of 14 x 27.5 metres. The savings in material and labor as a result of the reduced exterior wall area would be considerable and an even more efficient plan for the same space would be a square plan of 16.5 x 16.5 dimensions providing the same 280 square metres of floor area with an exterior wall of 66 metres. This would be a savings of about 40 percent in materials and labor over the shape shown in Figure II.1.

A second problem created by the configuration of the building shown in Figure II.1 is the number of corners required by this design. There are 16 corner joints resulting from the "pinwheel" shape compared to an optimal minimum of four corners in a rectangular or square shaped building. Even in a single storey building any design which increases the number of corners beyond the absolute minimum of four is more costly because each corner requires additional labor in joining materials, special detailing, waste in materials due to breaking of bricks and additional reinforcement. In a multi-storey building it is especially important to minimize corner joints since the additional costs are multiplied for each additional floor.

2. Grouping of Plumbing

A basic factor in reducing costs in housing for low and middle income families is to group bathroom and kitchen areas back-to-back whenever possible to reduce the cost of labor and materials. In Figure 1 we see that bathroom and kitchen areas are dispersed through the floor plan which will greatly increase construction costs. A more efficient design would locate bathroom and kitchen areas on opposite sides of the same wall within each apartment as a minimum. Ideally, a building with only four apartments on each floor, should have all bathrooms and kitchens clustered in such a way that you would have a central utility core greatly reducing costs.

3. Room Sizes and Circulation

For very low-income families, such as those in Groups C and D, the MOHR should reevaluate its minimum standards for room size. In some of the plans reviewed by the team, room size was excessive and the percentage of floor area devoted to circulation was excessive for low-income housing. Consideration should also be given to multi-use rooms in the smaller apartments. For example, combining living and dining areas, or even planning for sleeping space for children in the living room.

4. Construction Practices

The MOHR should carefully study construction techniques to improve efficiency and reduce costs. For example, the current practice of pouring very rough floor slabs and then pouring a finishing layer of grout and tiling after seems unnecessary and expensive for low-cost housing. Normal practice in many countries would be to pour a finished concrete floor as one step allowing the occupants to add floor tiling at a later date at their own expense if they so desire. It may also be possible to reduce initial cost by leaving interior walls unplastered and allowing the occupants to do this at their own expense at a later date.

Reducing Costs Through Improved Site Planning

Site planning techniques in Egypt range from very good to very "old-fashioned". During the past ten years most developed countries have radically changed site planning techniques from the traditional grid system to cluster planning in an effort to reduce costs and improve livability.

In the traditional grid system with intersecting streets and rectangular block plans, a typical subdivision would include the following breakdown:

Lot Area	55%
Street Area	20%
Commercial Area, Green Area, Parking Area, etc.	25%

Through cluster planning it is possible to greatly reduce the area devoted to streets and to also reduce water, sewer and electrical lines leaving more space for community facilities or additional lots. In a typical cluster plan, street area would be reduced 10 to 12 percent with a corresponding reduction in the lineal feet of utility lines, greatly reducing costs.

Traditionally, urban areas in Egypt closely resemble new communities built through cluster site type planning. If cluster planning was introduced to Egypt in new projects developed by the MOHR, the result should be completely modern communities at reduced costs which still retain the best elements of traditional Egyptian residential architecture. It is possible to achieve the same density of development with either system.

Experience in several developing countries has shown that overall infrastructure costs can be reduced by approximately 20 percent through the introduction of the latest site planning techniques.

Fine examples of traditional Egyptian architecture can still be found in new construction near Cairo. This house has walls of local limestone and a dome of mud brick.

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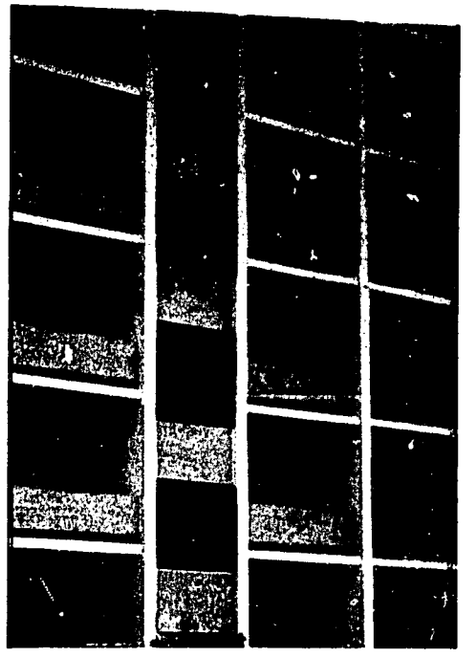

Chapter III

INCREASING RECOVERIES FROM HOUSING INVESTMENTS

Chapter II suggested ways in which the average cost per unit of public housing could be reduced. The other side of the issue is how to increase recoveries of the capital investment in order to obtain a better multiplier effect with the money invested.

In 1968 rents in public housing were set at 1 L.E. per room for low income housing with an additional charge of 1 L.E. for the dependencies and at 1.5 L.E. per room for middle income housing with an additional charge of 1.5 L.E. for the dependencies. This has resulted in creating a financial burden for the Ministry since collections do not cover maintenance costs. Furthermore, efforts to promote ownership rather than rental tenure in the publicly assisted housing program led to setting the following terms: a 10 percent downpayment and a twenty-year mortgage at 3 percent, provided that payments do not exceed 25 percent of a family's income.

The major source of housing finance is the Ministry of Housing and Reconstruction, publicly assisted housing program executed through the local governments. Loans are granted to Governorates in accordance with the following terms:

Interest Rate:	1960/61 - 1962/63	2%
	1963/64 - 1973	4.5%
	1974 - 1976	5%

Term: 24 years, first payment due 3 years after project completion.

Payments are made from the receipts of sales and rentals with the Ministry making up the difference from its housing budget.

These policies have the net effect of giving the Government a minus rate of return on its housing investment. Fundamental to reorganizing the housing program of the Government, therefore, is a restructuring of the recovery system.

Rental Versus Sales Housing

The first step should be to move the Government out of the business of building rental housing. Rental housing units are recognized as having the worst record for collections (although no specific data was collected on this point), and it leaves the full maintenance burden on the public sector. In fact, little or no maintenance is ever done with the result that the rental housing stock deteriorates rapidly.

Not only should the Government stop building more rental housing, but it should study the feasibility of selling off the existing rental housing stock as cooperatives or condominiums. This will require plan preparation and the use of community organizers to work with the tenants to form appropriate organizations to assume responsibility for the dwelling units and prepare for their maintenance. One system which has been proposed elsewhere calls for the phased selling of the apartments over a period of time so that tenants who do not wish to buy their units are moved out to other rental quarters and a household willing to buy the unit takes over that unit. In this way entire apartment blocks can be made available for sale while the individual household is not unduly penalized.

The price received for the apartment is of secondary importance to the concept of selling it. Since the apartments are actually costing the Government money (since rent does not cover maintenance), any sale will result in a net gain to the Government. However, if possible, reasonable terms should be established to reflect the market value of the unit and the ability to pay of the present tenants so that additional funds can be raised to be used for the building of more housing.

The Use of Subsidy

Most importantly, an entirely new concept regarding the use of subsidy is proposed. Because of the importance of the concept of subsidy to the housing program, the subject is discussed fully in Appendix II.

It is proposed that where subsidy is required there be a single write-down subsidy element substituted for the array of subsidies now in use (such as interest rate subsidies, land cost subsidies, infrastructure subsidies, etc.). In fact, under the present system of subsidies, it is very difficult to ascertain exactly what the real price of the dwelling unit provided is. It may be considerably higher than official estimates.

A single write-down subsidy, as the concept is used here, means that the full market price of the dwelling unit be established with full costing of construction, infrastructure, land and interest. Then the household is asked to amortize that portion of the total price which is within its ability to pay based on its income and downpayment. The difference becomes a single write-down by which the Government pays the lender the difference between the capital cost and the amount of downpayment and monthly payment of principle and interest which the family can pay. This has the advantage of closing the subsidy and permitting the subsidy element to be written off each year by the Government. In turn, this insures that if the amount of the capital allocated for housing subsidies fluctuates in a given year, it will not disrupt the financing of the existing housing stock.

The once-only write-down subsidy also has the advantage of indicating to the home buyer the true cost of the dwelling unit. This is useful in establishing a sense of value in the minds of the occupants and also permits the fixing of the amount of subsidy at the time of purchase. This, in turn, will allow the Government, if it so chooses, to place a "lien" on the dwelling unit for the amount of the subsidy. This "lien" would only be recovered if and when the dwelling unit is sold at a market price to another household (assuming that subleasing would be prohibited). In this way there will always be a chance that the Government will recover the full price of the dwelling unit and, more importantly, the household would not be allowed to make the windfall profit of capitalizing the subsidy through sale.

It will also be desirable to write into the purchase agreement a periodic validation of the household income with the intent that if the household income has increased, that a preset portion of that increase would be collected in higher monthly payments with the added increment going to pay off the original subsidy element. All of these opportunities for additional recovery are facilitated by having the once-only write-down system of subsidy proposed.

The Implications of Alternative Recovery Systems

The number of dwelling units built for a given investment through time is highly dependent on the recovery system selected and the terms and conditions set.

At present it would appear that collections on public housing units are not given the priority they deserve. The Joint Housing Team did not investigate this aspect of the housing situation due to the lack of time and available data. It should be the subject of more thorough study in the future. As far as can be determined the monies collected are not specifically retained for further housing investment, but eventually return in the form of general revenues. It is recommended that this process be discontinued, after further study, in order to close the housing finance cycle. This could be accomplished through the establishment of a National Housing Bank or a similar institution. In this way funds allocated to housing could be recycled into further housing construction and the monitoring of the financial process would be greatly improved.

Table III.1 illustrates four alternative recovery systems each of which assumes that funds recovered will be retained for further housing investment. The table assumes, in this case, an initial housing investment of 100 M.L.E. over a five-year period in equal annual investments of 20 M.L.E. each. It further assumes (for illustrative purposes only) that all housing units are built and occupied in a one-year period with payments starting in the first month of the following year. (To simplify the illustration, it is assumed that all payments due in a year are reinvested in the same year.) It also assumes that there will be a 10 percent default rate on collections. Finally, the table assumes that there will be an inflation rate of 6.5 percent in the cost of the dwelling unit starting with a dwelling unit costing 2,000 L.E. This means that the unit costing 2,000 L.E. in year one will cost 12,397 L.E. in the year 30. All loans are assumed to run for a period of 30 years.

Alternative I assumes a 10 percent downpayment and a 6.5 percent, 30-year loan on the remaining balance. This alternative produces 52,830 dwelling units in the first five years (the period of the initial investment of the 100 M.L.E.). It then continues to produce over 2,500 additional units each year thereafter through reinvestment of the recovered funds (less the 10 percent default rate). At the end of 30 years the number of units to be built has slowly increased to 2,800 (allowing for the inflated cost of the housing units). A total of 120,270 units could have been built during the 30 years. At the end of 30 years there would be a falling off for the next five years as the original larger loans (from the first five years of investment) are retired, but then the rate of construction would slowly start to increase again.

Table III.1

APPROXIMATE NUMBER OF DWELLING UNITS BUILT PER 100 M.L.E.
CAPITAL INVESTMENT UNDER ALTERNATIVE REPAYMENT ASSUMPTIONS

Year	Unit Cost W/6.5% Inflation	ALTERNATIVE I: 10% Downpayment/ 6.5% Interest		ALTERNATIVE II: No Downpayment/ 6.5% Interest		ALTERNATIVE III: No Downpayment/ 3% Interest		ALTERNATIVE IV: No Downpayment/ 30% Write-off/ 6.5% Interest on Balance	
		Units Built Per Year	Cumulative Total	Units Built Per Year	Cumulative Total	Units Built Per Year	Cumulative Total	Units Built Per Year	Cumulative Total
1	2,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
2	2,130	10,910	20,410	10,040	20,040	9,820	19,820	9,840	19,840
3	2,268	10,790	31,700	10,040	30,080	9,630	29,450	9,660	29,500
4	2,415	10,650	42,350	10,000	40,080	9,420	38,870	9,470	38,970
5	2,572	10,480	52,830	9,920	50,000	9,210	48,080	9,270	48,240
6	2,739	2,990	55,820	2,520	52,520	1,680	49,760	1,750	49,990
7	2,917	2,580	58,400	2,520	55,050	1,650	51,410	1,720	51,710
8	3,106	2,570	60,970	2,540	57,590	1,620	53,030	1,700	53,410
9	3,308	2,590	63,560	2,550	60,140	1,590	54,620	1,670	55,080
10	3,523	2,600	66,160	2,560	62,700	1,560	56,180	1,640	56,720
11	3,752	2,610	68,770	2,570	65,270	1,530	57,710	1,620	58,340
12	3,996	2,620	71,390	2,580	67,850	1,500	59,210	1,590	59,930
13	4,255	2,630	74,020	2,590	70,440	1,470	60,680	1,570	61,500
14	4,531	2,640	76,660	2,600	73,040	1,440	62,120	1,540	63,040
15	4,825	2,650	79,310	2,610	75,650	1,410	63,530	1,520	64,560
16	5,138	2,660	81,970	2,620	78,270	1,380	64,910	1,490	66,050
17	5,471	2,670	84,640	2,630	80,900	1,350	66,260	1,470	67,520
18	5,826	2,680	87,320	2,640	83,540	1,320	67,580	1,440	68,960
19	6,204	2,690	90,010	2,650	86,190	1,290	68,870	1,410	70,370
20	6,607	2,700	92,710	2,660	88,850	1,260	70,130	1,390	71,760
21	7,036	2,710	95,420	2,670	91,520	1,230	71,360	1,370	73,130
22	7,493	2,720	98,140	2,680	94,200	1,200	72,560	1,340	74,470
23	7,980	2,730	100,880	2,690	96,890	1,170	73,730	1,320	75,790
24	8,498	2,740	103,620	2,700	99,590	1,140	74,870	1,290	77,080
25	9,050	2,750	106,370	2,710	102,300	1,110	75,980	1,270	78,350
26	9,638	2,760	109,130	2,720	105,020	1,080	77,060	1,240	79,590
27	10,264	2,770	111,900	2,730	107,750	1,050	78,110	1,220	80,810
28	10,931	2,780	114,680	2,740	110,490	1,020	79,130	1,190	82,000
29	11,641	2,790	117,470	2,750	113,240	990	80,120	1,170	83,170
30	12,397	2,800	120,270	2,760	116,000	960	81,080	1,140	84,310

Alternative II assumes no downpayment, but continues the 6.5 percent interest rate for a 30-year loan. This alternative produces 50,040 units during the first five years. (The difference of 2,790 units between Alternatives I and II is caused by the reinvestment of the downpayments.) During the 30-year period, 116,000 units could be developed. There is a total difference of only 4,270 units between Alternative I and II using a 10 percent downpayment. Obviously, if the downpayment amount were increased, this difference would rapidly expand. (For this reason the maximum feasible downpayment should always be sought from those who have the ability to pay it.) At the end of the 30-year period, as is the case in Alternative I, the rate of new construction would decline for the next five years and then begin to increase thereafter.

Alternative III assumes no downpayment and a three precent loan for 30 years. This alternative produces 48,080 units during the first five years. The smaller number of units occurs because of the inflation during the five-year period at a rate not covered by the interest rate and recoveries. After the first five years, the number of units to be built with repayments falls off from 1,680 units in the sixth year to 960 units in the thirtieth year. At that point there will be a rapid falling off (as the initial capital is repaid) and soon thereafter the program will become totally decapitalized (because of continued inflation and the 10 percent default rate). Altogether Alternative III produces only 81,080 units or almost 40,000 units less than either Alternative I or II, even though it produces only 4,000 units less in the first five years.

Alternative IV assumes no downpayment, a 30 percent write-off subsidy of the kind recommended in this report, and a 6.5 percent interest rate on the remaining balance. This alternative produces 48,240 units during the first five years and 84,310 units over the full thirty-year period. As in Alternative III the funds would become totally decapitalized shortly after the thirtieth year. The advantages of the write-off subsidy approach as opposed to the interest subsidy approach in Alternative III are discussed in Appendix II. The main advantage is that the write-off subsidy gives a better control of the funds and offers the chance for recovering part of the subsidy through additional payments as incomes increase.

The importance of properly costing the dwelling units produced and achieving adequate recoveries is well illustrated in Table III.1. Since it can be assumed that inflation will occur at some rate (whether or not at the 6.5 percent rate used in the illustration is not important), the recovery must insure that the funds are costed at a rate which

avoids decapitalization of the investment over time. The use of the recovery to reinvest in additional housing is also important as in Alternatives I and II more houses are built in the 25 years following the initial investment than during the first five years even allowing for inflation in unit costs. Even in Alternatives III and IV over 33,000 additional units can be built through the reduced recoveries.

More accurate and detailed financial projections should be prepared by MOHR to test the housing policies under consideration. In this way the full effect of various subsidies on different income groups and on the national treasury can be assessed prior to making a commitment to a particular course of action.

Dwelling Unit Allocation Criteria

The financial recovery system proposed above assumes that the allocation of the dwelling units will be made on the basis of income within the various specific target groups. Although it may be desirable to have additional criteria for assigning priorities among households of the same target group, this represents a considerable change in the present system of allocation

Since 1973 dwelling unit allocations have been made on the basis of the following criteria:

Priority Ranking	Percent Allocation
1. Cases of administration eviction	20%
2. Cases of new young families	20%
3. Cases of employees assigned to new locations	20%
4. Cases of families returning from abroad	20%
5. Cases of members of the armed forces	20%

These criteria do not relate to income levels of the households and certainly do not give priority to the lower income groups since criteria three to five almost certainly reward families in Target Groups A through C. If the objective is to make the majority of public housing available to lower income groups, then the criteria should reflect this priority.

Mobilizing Private Savings

There is considerable evidence that it may be possible to mobilize higher levels of domestic savings for housing than is now the case. This can be seen from the ease with which private developers are able to sell out their projects for cash before breaking ground and the fact that all land offered for sale by the Government or by private parties can be sold off before infrastructure is installed. This is a reflection of the housing shortage, or course, but it also indicates that people are willing to invest their savings in housing. There should be an organized system whereby households are encouraged to save in a housing finance institution in order to receive priority for the allocation of public or private housing. This will require a study in order to define the specific housing finance mechanism which would be appropriate. The starting point for such work should be the existing housing finance institutions which include:

1. The Housing Cooperatives

Although included in the private sector budget allocation, cooperative housing activities supervised by the General Organization of Housing Cooperatives are heavily subsidized ventures.

In fiscal year 1953-54, an annual budget of 2.5 M.L.E. at reduced interest was granted for cooperative housing loans. These cooperatives were first under the Ministry of Social Affairs and, in 1961, they were transferred to the Ministry of Municipal and Rural Affairs, which became the Ministry of Housing and Reconstruction.

In 1971, the General Organization for Housing Cooperatives was created to supervise the activities of the various housing cooperatives and to serve as the link between them and the Ministry.

Financing sources are: a) balance of earlier allocations; b) new budget allocations; and c) savings of cooperatives and their members and other individuals wishing to buy land and build housing.

Documents required are: a) registration of land ownership; b) survey map with site plan; c) complete architectural drawings of buildings; d) building permit; and e) legal documentation relating to membership in cooperative, registration of cooperative, mortgage contract, and agreement prohibiting participants from disposing of property without referring back to the general organization.

Up to 1970, the Organization granted cooperatives 15-year term housing loans at 5 percent for groups and at 6 percent for individuals. In addition, it granted home improvement loans at only 3 percent.

In 1970 the terms of the housing loans were changed to 20 years at 3 percent. In 1975 these terms were again changed to be 30 years at 3 percent.

Simultaneously, there was a redirection of cooperative activities towards lower middle income groups and away from upper income single-family development (or small apartment buildings), and in 1976 new rules governing loans were issued.

The Organization issues to the applying cooperatives permissions to build in accordance with government building allocations, and obtains for them building materials and supervises construction.

Since 1967 cooperative loans of 19.5 M.L.E. have been granted to help finance 26,000 units at a cost of 41.5 M.L.E. In 1976 the budget of cooperatives was 10 M.L.E., which could help finance about 5,000 units.

New directions for 1976-1980 include: a) cooperative apartment buildings; b) reduction in size of unit; c) building complete cooperative developments, including infrastructure and community facilities; and d) finding new methods to channel savings toward investments in housing.

2. The Credit Foncier

It is the main institution financing the private real estate market.

a. Required Application Documents

1) Ownership contract
2) Building permit
3) Complete set of drawings for the building approved by the municipality
4) Survey map showing site or property
5) Survey from the general organization of cooperatives or other public organizations showing the amounts drawn from these bodies if the loans carry interest rates below those charged by the bank.

b. Conditions of Loans

1) Amount of loan as percent of mortgaged property value (land plus building)
2) New construction or additions (60%)
3) Other alternatives or improvements (50%)
4) Interest rate (6.5%)
5) Terms of 5 to 15 years.

c. Required Documents for Mortgage Contract

1) Tax documents from the real estate taxation office
2) Property delineation by the cadastre authorities
3) Title search going back 15 years
4) Tax documents from taxation department relating to commercial profit taxes, if any.

3. Savings

There are three formal savings institutions: 1) savings accounts in commercial banks; 2) postal savings fund; and 3) social security, pensions and insurance funds. The small magnitude of the savings accumulated in the formal institutions attest to the general poverty of the population. However, there is a certain amount of hoarding which could be usefully channelled in the investment market.

4. The National Housing Fund

A draft law has been submitted to establish a housing fund for building low income housing projects. The fund's sources of revenues would be derived from:

a. Twenty-five percent of receipts from sales and rent earnings and benefit charges of government-owned real estate in both urban and rural areas that is subject to Presidential Decree No. 101/1958.

b. Revenues of housing bonds to be floated by the fund.

c. Receipts of benefit charges levied when exemptions from height regulations are granted in accordance with the laws directing and organizing building operations.

d. Credits allocated to the fund in the State's budget.

e. Amounts earmarked for the purposes of low income housing in international agreements that the State may conclude.

f. Loans

g. Grants, donations, gifts and endowments.

h. Earnings from investing the fund's money.

There is considerable evidence that further improvements in the savings system for the accumulation of capital for financing housing could be developed in Egypt. During the past 15 years, many developing countries have established new

savings and credit systems with some outside technical and financial help. Some of the most notable examples are found in Central and South America, expecially in Mexico and Brazil.

More recently, programs have been developed in Africa, and several Asian countries are beginning studies which would lead to development of new or improved housing finance systems.

The type of system which would work best in Egypt could only be determined after a detailed study of the local situation. We recommend that such a study be undertaken in the near future.

Some of the elements of a national finance system which should be considered in Egypt are as follows:

1. National Housing Bank. Consideration should be given to the creation of a national housing bank whose activities would be controlled by the MOHR and the national housing policy. In other countries housing banks of this type have often been established with seed capital from the national government and with loans from international agencies interested in housing. Additional sources of capital for the banks normally come from national savings plans which are developed through savings and loan associations or simply as new activities or "windows" in existing financial and banking institutions. In some countries, additional sources of capital have been developed by regulations which require private industry to contribute a payroll tax for housing or otherwise contribute to the national housing fund. In some countries other special taxes have been established, such as a beer tax in Panama or "capital gains" taxes on land sales by private individuals which seek to curtail speculation while also providing funds for low-cost housing.

2. Savings and Loan System. The establishment of private savings and loan associations in several countries has been remarkably successful in accumulating local capital for moderate-income housing. Normally, a central organization which could be the housing bank, is given the authority to charter these associations and then monitor and regulate their savings and loan activities. Individual savers can then make deposits and receive a fair return on their savings and also be eligible for receiving mortgage loans or home improvement loans.

3. Mortgage Insurance Program. Another element in many housing finance systems is a mortgage insurance program whereby the government agency (could be the housing bank) guarantees mortgage loans made by local private banks, insurance companies or other financial institutions. The government agency normally regulates the type of housing which will be built, the total cost of the housing, and has some type of inspection system to insure that the house is adequate to secure the mortgage. Probably the most successful example of such a system has been the FHA system in the United States, although similar systems now exist in several developing countries.

4. Creation of Secondary Mortgage Market. In a more developed housing finance system, an important element is the establishment of a "secondary" mortgage market, whereby financial institutions such as insurance companies may purchase first mortgages at a discount without becoming directly involved in the individual loan activities. This has the effect of injecting more money into the housing finance system by allowing local housing financial institutions to "roll over" their mortgage money at a faster rate.

5. Home Improvement Loans. In several countries new programs are being developed to provide credit for home improvement through government housing agencies, local banks, credit unions and other institutions. There seems to be a special need for such assistance in Egypt, where much of the housing stock is lost each year through deterioration and lack of maintenance.

Older public housing projects which are occupied on a rental basis and have serious maintenance problems.

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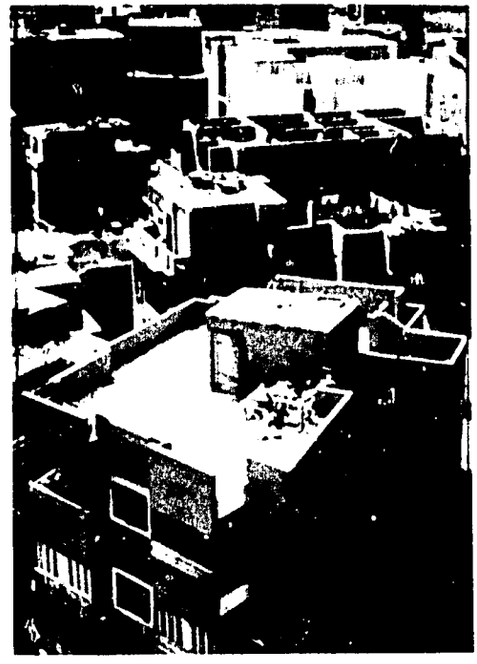


Chapter IV

STIMULATING THE PRIVATE SECTOR

The private construction sector consists of two distinct components:

- a formal sector catering to the demand of private investors in the housing field (discussed here);
- an informal sector catering to local shelter needs in lower income areas (see Chapter V: An Emergency Program for Lowest Income Groups).

Contrary to general belief, private contractors claim that housing construction never really slowed down in Cairo between 1967 and 1973 but the character of development has changed markedly over the decade.

The legal impediments and technical difficulties encountered by a private individual wishing to build are of such magnitude that potential developers would have undoubtedly turned away from investing in housing had it not been for the tremendous shortage existing at all quality levels, which guarantees the developer a most lucrative return on his investment. The annual increase in construction costs are shown in Table IV.1.

TABLE IV.1

Annual Increase in Construction Costs
1961-1974

Year	Material Cost Index	Labor Cost Index
1961	100	100
1962	103.4	130
1963	111.3	160
1964	121.5	186
1965	125	197
1966	137.3	209
1967	151	217
1968	154	221
1969	157	226
1970	162.7	240
1971	167.7	259
1972	178	280
1973 October	186.4	350
1973 December	273	420
1974	277.8	437

Source: Ministry of Housing and Reconstruction.

Problems Related to Building Materials

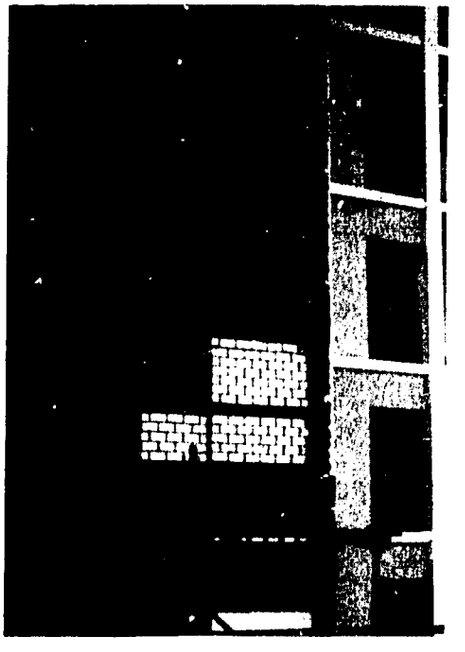
As fully documented in Section VI of the Statistical Appendix, the prices of building materials have increased by a factor of close to 3 over the past decade, with a 100 percent increase recorded since 1973. Government regulations aimed at ensuring the distribution of materials in accordance with the allocations of the national housing plan have proved most cumbersome and only managed to create and sustain a thriving black market, where prices fluctuate in relation to supply and demand, as shown in Table IV.2. This is not surprising given the methods of government distribution of regulated materials:

- Cement allocations are given on a monthly basis, over the construction period, payable in advance and generally delivered three to four months late.

- Steel reinforcement allocations are given for one floor at a time upon certification by the engineer from the municipal building department supervising the construction process that the lower floor skeleton has been completed.

- Wood for doors, windows and opening frames as well as glass panes are given one floor at a time upon completion of work on the previous floor. In addition, allocations are made by volume irrespective of the sections or quality requested, such that waste and misuse of this imported material is high.

Aside from its corrupting influence on grossly underpaid government employees, the impact of such a system on the construction process is immediately apparent. Shortages and delays in deliveries result in higher costs and extended time periods for construction. To get around these bottlenecks, private builders prefer to secure the materials they need most urgently on the black market; they may also sell their own allocations, whenever they get them, on the black market. On the other hand, the lack of lumber for scaffolding and form work extends the time needed to build the reinforced concrete skeleton by 50 percent by forcing contractors to pour slabs in separate segments instead of one floor level at a time.



The shortage of building materials is illustrated in this project where several types of bricks are used.

TABLE IV.2

Official and Black Market Prices of Building Materials
1976

Material	Unit	Official Price	Black Market Price	
			Current Price	Highest Price Reached in Past Three Years
Sand	m^3	--	2.0	--
Gravel	m^3	--	4.0	--
Cement	ton	15.0	30.0	40.0
Steel	ton	150.0	180.0	220.0
Lumber	m^3	120.0	180.0	204.0
Glass (3mm)	m^2	0.85	2.0	3.0
Red Brick	1000	--	17.0	--
Sand Brick	1000	22.0	--	--

Source: Interviews with private contractors, April 1976.

There is a consensus of opinion that the quality of building materials has deteriorated in recent years. This is not particularly surprising, given conditions of quasi-monopolistic production, protection from foreign competition and severe shortage. It is hoped that the quality of products will improve as stricter quality control measures are enforced in the public sector and as private enterprise is attracted to the manufacture of building materials.

In the field of building materials, it is recognized that there is a limited supply and that there should therefore be some control on the use of building materials to insure that residential building materials are directed to Groups B and below. One way to achieve this would be to modify the present law on issuing building permits which do not adequately achieve its stated purpose because the present law attempts to direct building efforts to lower and middle income housing by using a per-square-metre construction cost to insure that most construction activity takes place at the lower and middle levels. In practice, after the permit is issued, there are no adequate controls to be sure that the developer actually produces low-cost housing. If the system was modified to include a maximum dwelling unit size as a condition of the building permit, upper income construction would be curtailed in favor of increased production at the lower and middle levels. For example, 60 percent of all permits could be issued for dwellings of less than 60 square metres with 80 percent for dwellings of less than 80 square metres, allowing only 10 percent of the new construction for dwellings above 80 square metres. The result of such a system would be to stimulate and encourage private sector construction at the lower and middle levels. How to implement such a proposal would require further study.

Problems Related to Labor

The most striking change that has occurred during the past 15 years is the dwindling number of general contractors in the private construction sector. This trend can be directly traced to the laws fixing the magnitude of the construction work that could be handled by a private firm. The annual ceiling was first set at 30,000 L.E. and, subsequently, raised to 100,000 L.E. In 1975, the ceiling was raised to 500,000 L.E. for the Canal Zone reconstruction work; this limit was then extended to the rest of the country.

Given prevailing construction costs, these limitations led contractors to curtail their productive capacity. Simultaneously, the trend toward specialization was established as the only viable means to make reasonable profits under conditions of fixed business volume.

There is some indication that raising the ceiling to 500,000 L.E, may encourage some firms to increase their capacity and diversify.

Other factors reinforcing the specialization trend were:

- shortages, defective quality, and price fluctuation of building materials; and
- shortage of skilled and semi-skilled labor, forcing contractors to restrict the scope of their operations to limited fields.

Concomitantly, the trade labor contractors, a traditional figure in the construction industry since the disappearance of the guild system, has acquired new importance. Typically, owners secure their building material needs and have to deal directly with labor bosses in no less than 11 different trades and trade groupings involved in residential construction:

- Excavations and concrete;
- Reinforced concrete and masonry;
- Damp-proofing;
- Plastering (exterior and interior) and other facing work;
- Tile flooring;
- Stairs, marble;
- Carpentry (doors, windows and closets);
- Metal work (doors, windows and railings);
- Painting;
- Plumbing;
- Electrical.

This development has been marked by the disappearance of the qualified job foreman, replaced by supervisors and guards appointed by the owner, whose main purpose is to prevent the theft of building materials. Since both inspection by the municipal building department and supervision by the project engineer or architect (if any is retained) are notoriously defective, it is not surprising to note that the quality of new construction is very low. Worse still, structural failures due to faulty construction and negligence continue to be recorded at a disturbingly high rate of recurrence.

There is a general shortage of construction labor, particularly in the skilled categories. Many craftsmen have left, attracted by the higher wages offered in the surrounding oil-rich countries. The shortage triggered a rapid increase in local wage rates that was compounded in the past several years by the magnitude of the reconstruction effort and the premiums offered to workers in the reconstruction zones.

This policy had the dual effect of raising wage levels, by as much as a factor of 3 for some trades, while at the same time siphoning off the bulk of the available labor force to the Canal Zone. Needless to say that construction activities elsewhere in the nation, and particularly in Cairo, have suffered from this drain of skilled and semi-skilled labor in terms of bad workmanship and low productivity of labor.

Because of fluctuations in the prices of materials and rising wages of labor, contractors refuse to work on the basis of firm estimates and lump sum fees. Trade contractors will not accept private work unless it is paid in advance. Often the slowness of the construction process itself will result in allowing the general inflation to erode the profits margin included in the bid price, whereupon the trade boss will either insist on renegotiating the contract or quit the job altogether, leaving the owner to search for someone else to finish the work.

Table IV.3 shows the cost of a 10-unit, 5-storey walk-up for low-income groups built in the private sector.

Problems Related to Legal Impediments

The normal procedures and processes associated with the construction of small apartment buildings, namely a 10-unit, 5-storey walk-up structure, add up to a total construction time of two to three years, barring severe shortages in basic materials that could bring the work to a complete halt for an extended period. This cannot be solely attributable to low labor productivity, manual methods of construction and problems in the supply of materials discussed in the previous sections.

A large chunk of time is expended going through government regulatory measures summarized in Table IV.4, which proved to be as cumbersome in implementation as they were futile in terms of achieving their stated objective.

The basic problem arises from the fact that some stipulations embodied in the laws are unrealistic. Foremost among these is the divergence between the officially set and market price of construction by housing type used for the purpose of housing budget allocation at the national level, as shown in Table IV.5.

Problems Related to Rent Control

A greater deterrent to investment in housing has come from rent control legislation. The assessment formula for new construction sets rents at 5 percent of the value of land, plus 8 percent of the building cost. However, assessing committees generally estimate building cost in accordance with the official standards defined in the building permit rather than actual cost incurred as stipulated in the law. Hardly, if ever, do they deviate from official standards by more than 10 percent.

TABLE IV.3

Construction Cost of a 10-Unit*- 5-Story Walk-Up - Building Low Cost Housing, Private Sector Construction - Cairo, 1976
(in L.E.)

	1976
Excavations	201.6
Grading	100.8
Concrete	742.7
Reinforced Concrete	5988.5
Masonry	1275.4
Damproofing	354.6
Stairs	340.2
Flooring	1586.6
Plastering & Painting	3146.8
Metal Work	10.3
Carpentry	3504.9
Plumbing	1452.4
Electrical	507.5
TOTAL	19,212.3
Overhead & Profit	20%
Grand Total	23,054.7
Cost per Square Meter	34.1

Source: Interviews with private contractors, April 1976.

* Average of 65 square metres per apartment.

TABLE IV.4

Average Time Necessary to Complete the Construction of a 10 unit, 5 story walk-up Building

1.	Land Acquisition	(unknown)
2.	Project Design	2 months
3.	Procedures to issue a Building Permit:	
	a. Approval of design by the land development company from which the building lot was purchased	1 month
	b. Approval of project by the Municipal Planning Department to ensure that building lines are properly set in relation to street widths	1 month
	c. Approval of the local committee for the supervision of building operations to ensure the allocation of building materials by housing type	1 month
	d. Approval by Municipal Building Department and issuance of building permit	1 month
4.	Agreement with general contractor or different trade contractors	1 month
5.	The Construction Process:	
	a. Foundations	2 months
	b. Superstructure basic structural work	6 months
	c. Finishing:	
	Interior Finishes	6 months
	Exterior Finishes and connections to public utilities	4 months
	d. Time expended for approval and release of allocated building materials from appropriate regulatory bodies and distribution offices	1 1/2 months - assuming implementation according to regulations but without undue delays
	Total Time	26 1/2 months

TABLE IV.5

Official and Market Construction Costs for Residential Buildings
1976
(in L.E. per square meter)

	Housing[1] Budget Allocation Percent	Official[1] Control Cost L.E.	Public[1] Sector Cost L.E.	Private[2] Sector Cost L.E.
Low Cost Housing	70	8-12	35-40	25-30
Middle Income Housing	25	12-16	40-45	30-35
Upper Income Housing	4	16-20	---	35-45
Luxury Housing	1	---	---	50 & Over

Source: (1) Ministry of Housing and Reconstruction.
(2) Interviews with private contractors.

Property owners have resorted to one of two methods to get around rent control legislation:

1. The charging of key money, which is illegal but commonly practiced and accepted as a normal condition of the housing market. Owners will charge key money equivalent to the difference between regulated rents and actual costs before signing leases for newly-built units. Similarly, tenants will ask for key money in order to surrender a rented flat to the owner or to another tenant. Thus, prospective tenants have to pay both the owner of the building and the current tenant of the apartment in order to secure lodgings or office space.

   Key money currently varies between 500 and 2,000 L.E. per room, reaching as high as 5,000 L.E. for choice locations.

2. Selling flats in apartment buildings on an ownership basis as condominiums. Since this market is not subject to any kind of control, the exorbitant sale prices only attest to the severity of the housing shortage. Condominiums that sold for 5,000-8,000 L.E. in the late 1960's reached 10,000-15,000 L.E. in the early 1970's and 20,000-30,000 L.E. in 1974, and 40,000-50,000 L.E. in 1976. Even in middle-class residential areas, it is now difficult to find a 4-room apartment for less than 20,000 L.E., while in choice locations on the Nile front, astronomical prices of 60,000 L.E. and over have been quoted.

We believe that rent control should be abolished on any new construction below 90 square metres to encourage more private initiative in this area. Present rent controls should be revised so that the actual rents paid relate to monthly incomes to avoid unnecessary subsidies.

Summary of Recommendations for Reducing Costs

The obvious actions which would help slow the cost increase in construction are:

1. Increase the supply of building materials;

2. Increase the supply of skilled labor; and

3. Improve design and construction efficiency.

The Government of Egypt is taking action in the areas of increasing supply of building materials and also in the development of a new, large-scale training program for construction workers and supervisors. Based on the information during the team's visit to Egypt, very little is being done in the third area of improving design and construction efficiency. The following are our recommendations for reducing construction costs:

1. We believe that a gradual phasing-out of Government controls of the prices of building materials should take place along with efforts to gradually increase local production. These actions would be complementary in that as price controls are relaxed, the private sector would be encouraged to expand production and new companies would have more incentive to start new factories. This would increase supply and in turn should affect the rate of increase of building material prices.

   We also believe that the MOHR should make a careful study comparing imported building materials to those produced locally to be sure that imports are kept to an absolute minimum and do not compete with locally-produced items. Such a study should identify certain items which are now imported, for example, parquet wood flooring, higher grade glass, and luxury type plumbing fixtures, which are also produced locally and should probably not be imported except under penalty of heavy duties. The MOHR should develop a program to improve quality of locally-produced items by importation of better machinery and technical advice.

2. Training programs for skilled labor should be continued. We have no specific recommendations on this new activity which seems very well conceived. The idea of producing enough skilled labor to meet domestic needs and in addition being able to export skilled labor is excellent.

3. Our major recommendations for design and construction are contained in Chapter II. We believe that much improvement could be made through increased technical exchange in the fields of dwelling design, site planning, new uses of building materials and in the general field of construction management. There is probably also a need for improvement in the area of quality control of building materials and standardization of building components.

Chapter V

AN EMERGENCY PROGRAM FOR LOWEST INCOME PEOPLE

The previous chapters have presented some conclusions and recommendations in regard to how the Government and the private sector can combine to provide more housing for the capital invested. However, given the enormous overall housing requirements and the very low incomes of the mass of the urban households, it is obvious that under the best of circumstances a large percentage of the lower income urban population will have no chance to participate in any of the formal housing programs. The Joint Housing Team noted that there was a sense of frustration within Government and the private sector representatives interviewed that nothing can be done for the lowest-income people. This need not be the case.

It is apparent that the formal private market is dealing almost exclusively with upper income groups -- that is, less than 15 percent of urban households. Government-subsidized public programs are reaching various categories of middle income households. However, over 60 percent of urban families are left to solve their housing needs as best as they can.

For all intents and purposes, the families at the very bottom of the income pyramid are totally outside the housing market, squatting in tombs, mosques and makeshift shacks in any vacant spot they can find even if it is only available on a temporary basis.

However, there is a large segment of this population which is in desperate need of housing and can afford to pay something for shelter cost. It is therefore not surprising that an informal private market has developed to cater to this unmet demand.

The Ministry estimates that 50 percent of subdivisions and 60 percent of building activity are in violation of existing legislation. Private contractors in Cairo give much higher estimates, reaching 80 percent in some areas of the City.

Illegal construction activity ranges from makeshift rooms added on the roofs of existing structures to four- and five-storey walk-up structures, built on government-owned land or land secured at cheap prices -- such as cemeteries and in outlying areas without utilities.

Uncontrolled rural housing on the urban fringe will eventually be a part of the Greater Cairo Metropolitan Area.

Building materials and construction labor are secured accordingly. At one end of the spectrum, materials are purchased on the black market, and workers secured through the trade bosses. Market conditions dictate the pace of construction. Lacking any type of control over the operations of these small local entrepreneurs, it is not surprising to note that buildings thus erected often violate standards of light and ventilation in addition to being in contravention of height regulations, particularly in older areas with narrow streets.

At the other end of the spectrum, owner and tenant often collaborate in the building process, contributing their own labor as well as that of relatives and friends. Used materials are secured from the salvaging operations associated with demolition. A type of mortar called "Qosromil", produced from lime and burned garbage ashes, is used as a substitute for cement.

Demographic pressure provides a continuous incentive for building, as rooms in new constructions and additions can be rented for over twice the amount charged for older rent-regulated units in the same area. Monthly rents of 1-2 L.E. per room are not uncommon in the poorer sections.

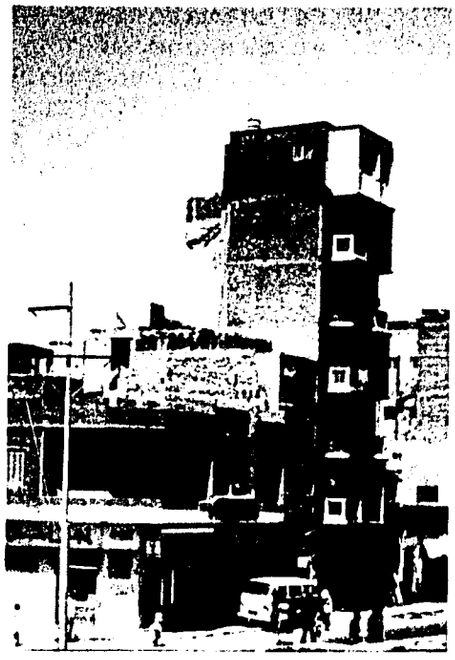
These realities, coupled with the inability of the government to provide alternative shelter to displaced families, should the prescribed legal penalties stipulating partial or total demolition be enforced, led the government to promulgate the 1966 Law suspending the implementation of legal orders and decisions concerning illegally-built structures, and empowered the local government authorities to undertake corrective measures at the expense of property owners. Illegal building activities of necessity flourish everywhere.

In this manner, additions are piled up onto existing older structures, already dilapidated for lack of maintenance, often bringing about their total collapse.

In a similar fashion, uncontrolled sprawl adds to the urbanized area zones unserved by public utilities and containing a curious mixture of dwellings ranging from basically sound to unfit for human habitation.

This report agrees that it is clearly out of the question to attempt to provide even the smallest and lowest-cost standard housing units for the mass of the urban poor. The lowest-cost feasible solution is still far above the ability to pay of the lowest-income people in Target Group F (incomes of less than 200 L.E. per year). This group represents over 500,000 urban households or 37 percent of the total. Indeed, even with a continued high priority given to housing, the total production of housing units (even with the kinds of cost-saving improvements suggested here) will not begin to reach levels which will allow the reduction of the backlog of housing needs (perhaps not even keep up with new household formation) in Target Groups D and E.

Clearly, something must be done to respond to the needs of these groups and it must be done urgently in order to avoid crisis conditions in overcrowding in the existing housing stock, water supply, sanitation, health conditions, etc. There are, of course, various improvements being made for the lowest-income people in infrastructure and public facilities, but these improvements so far have been accomplished in a random manner.



Vertical expansion of private housing is going on throughout Cairo.

Table V.1 indicates the state of housing conditions in 1966 for Greater Cairo. At that time there was an average of two persons per room and approximately half the dwelling units were served with water, sewer and electricity. It is believed that these conditions have deteriorated substantially in the last 10 years. It is estimated that overcrowding may have reached three persons per room on the average (the implications can be better understood when it is remembered that upper income group housing is included in the average which means thousands of units with one person or less per room, which lowers the average overall). Water supply and sewer service has also failed to keep up with urban growth in Cairo and other urban centers.

A generalized map (see back cover insert) of the physical location of the various income groups illustrates the large areas of low-income household concentration and their strategic location with reference to markets and jobs. It is these areas which must be improved in order to conserve the existing housing stock and provide minimum "liveability" to the people.

It is necessary to develop an integrated improvement program for the lowest income people. Such a program will consist of two major parts: 1) the upgrading of existing settlement within the city; and 2) the provision of sites and services plots for the expansion of low-income settlement.

TABLE V.1

Greater Cairo - Housing Condition - 1966

District	Persons Per Dwelling	Persons Per Room	Percent Dwelling Units Supplied With Utilities		
			Water	Sewer	Electricity
North Cairo					
El Sahel	6.0	2.2	86.9	88.3	65.4
Rod El Farag	5.9	2.1	85.1	87.6	74.4
Shoubra	4.1	1.6	70.4	76.0	47.5
East Cairo					
El Mataria	5.4	2.2	55.6	63.3	34.5
El Zeitoun	5.7	1.9			
Heliopolis	4.0	1.2	87.7	87.7	86.1
El Wayly	5.8	2.1	73.1	74.6	58.2
Central Cairo					
El Zaher	5.8	1.8	90.1	89.8	89.8
Bab El Shaaria	6.4	2.5	79.0	79.3	68.8
El Mouski	5.6	2.2	83.6	81.4	81.6
El Gammalia	6.3	2.7	34.4	37.6	25.8
El Darb El Ahmar	6.5	2.5	63.3	66.9	48.6
El Khalifa	5.8	2.4	27.7	27.9	19.5
West Cairo					
Boulaq	6.2	2.6	71.0	71.6	57.5
El Azbakia	5.0	1.7	88.9	89.3	83.4
Qasr El Nil	3.8	1.0	74.1	73.1	73.7
Abdine	4.8	1.7	84.8	86.0	79.4
El Sayeda Zeinab	5.8	2.1	78.9	78.8	73.8
South Cairo					
Masr El Qadima	5.5	2.0	65.7	46.9	49.8
El Maadi	4.9	1.8	42.6	60.8	36.7
Helwan	4.6	1.9	59.3	66.7	38.8
Cairo Suburbs					
Giza	5.0	1.8	68.2	74.2	59.4
Dokki	4.4	1.4	72.1	74.3	63.6
Al Ahram	5.4	1.9	65.4	75.9	56.3
Imbaba	5.5	2.2	61.4	69.9	53.1
Shoubra El Kheima	5.8	2.4	37.3	69.1	40.6
TOTAL URBANIZED AREA	5.5	2.0	61.8	67.2	59.2
TOTAL GREATER CAIRO REGION			58.0	50.0	51.0

Source: Greater Cairo Planning Commission, 1969, based on the results of the 1966 Census.

Existing Settlement Upgrading Program-

The upgrading program will have to be developed after careful study and analysis. It should be seen as a means of bettering existing conditions and the quality of life for people in their present dwellings. The process takes place over a period of time and in different stages of improvement. The concept is to provide the residents of existing low-income areas with immediate improvement in the services available which in turn will increase their sense of security and encourage investment in improved housing. Because of rent controls, the lack of available credit and the shortage of building materials, it may be necessary to have a special program to encourage improvements in housing. These problems can be overcome, however, if the Government is willing to assign an appropriately high priority to the upgrading program.

The concept is to have a comprehensive program oriented to the real needs and priorities of the people. In this sense, an upgrading program should not be viewed as the provision of physical improvements alone (such things as paved roads and water supply), but include better health and education services, job generation, access to credit and the other components required for the sustained improvement of the standard of living of the residents.

1. The Objectives of the Settlement Improvement Program

The overall objective of the settlement upgrading program is to immediately increase the standard of living of households through the implementation of an integrated physical, social and economic program package which will:

a) Reduce deficits in household needs of essential public services;

b) Increase human capacity, incomes and productivity;

c) Increase households' and enterprises' control of capital assets;

d) Promote social and economic stability and reduce vulnerability of low-income neighborhoods;

e) Promote self-help and self-reliance among the people.

In achieving this overall objective, the Government's operational objectives should be as follows:

a) Coordinate existing institutions and agencies at the national and city levels and increase their capacity to successfully plan, implement and maintain the improvement plan;

Buildings in the older sections of the city are collapsing from age and lack of maintenance.

b) Mobilize the maximum levels of existing finance available from divers sources, including the residents, to accelerate the implementation of improvement projects and to supplement these funds with new budget allocations as required;

c) Spread the benefits of the improvement program as rapidly as possible to all designated urban centers;

d) Integrate existing low-income communities into the overall city structure and maximize their contribution to city development both economically and socially.

2. Methodology and Program Content

There is no one correct solution which can respond to all of the differences in the needs and potentials of the low-income residents. Nonetheless, there are certain guidelines and methodological relationships which can be recognized in planning the improvement program on the citywide level and in designing individual improvement projects.

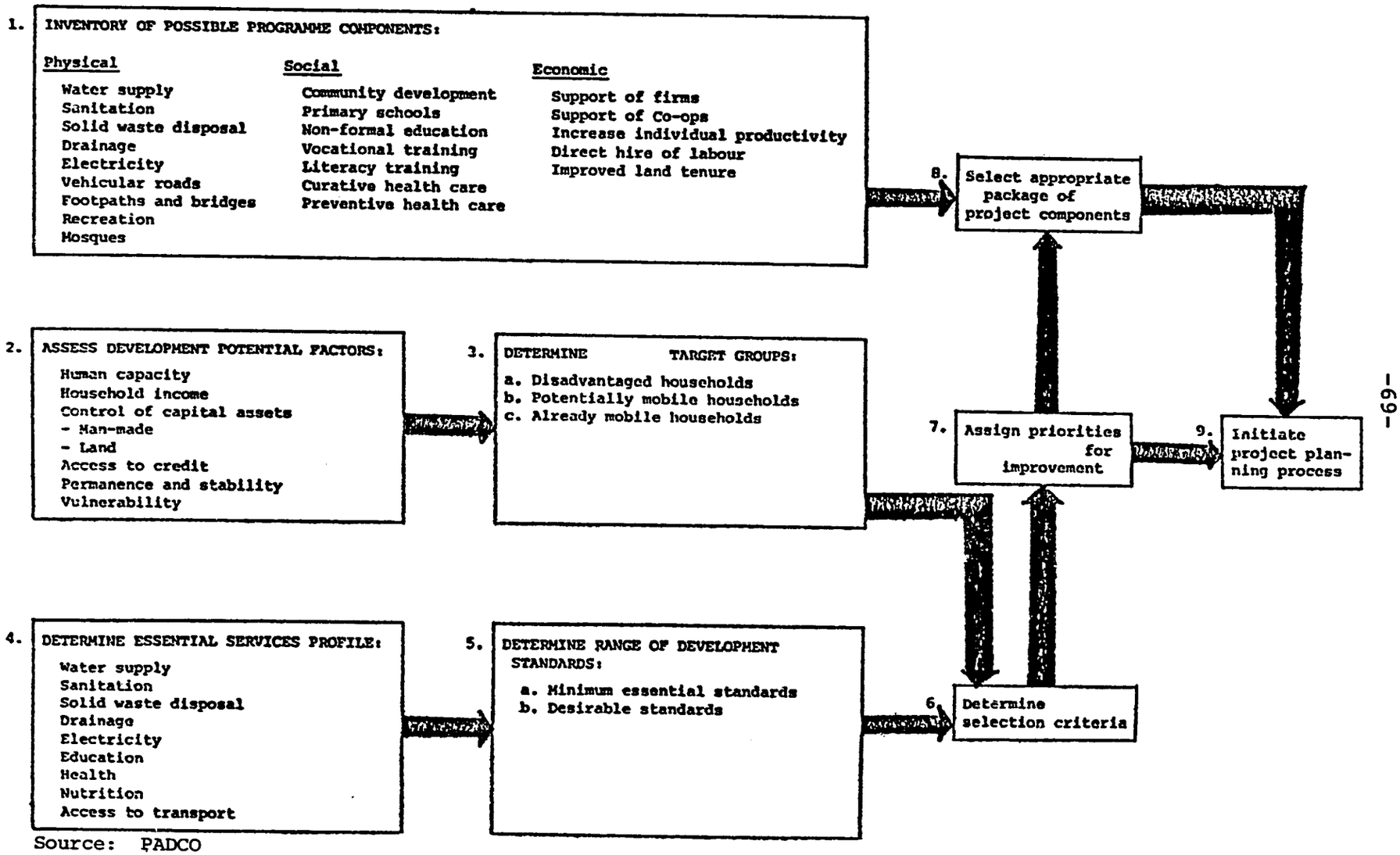
Figure V.1 attempts to show these basic methodological relationships for establishing a citywide program prior to planning the individual projects.

Block 1 represents an inventory list of physical, social and economic components which might be included in an improvement project. The physical components represent the basic kinds of improvements which can be made. Within each type of physical improvement there are options regarding the specific items. For example, water supply options include: house-to-house connections, community water taps, and water trunks and vendors. For the most part, these physical components have been used in various forms in the Egyptian cities. The social components are primarily related to programs of various types even though schools, health and community development programs would probably involve a physical structure. Except for school buildings and health clinics, little attention has been given to the social components in low-income areas to date even though some social programs are being run independently by various agencies. The economic components are also programs rather than physical structures. Economic programming is even less developed in Egypt than the social programs. For the most part these components have been utilized in other countries.

The methodological task is to determine which of these many option components are relevant in a given area improvement project. This is a matter of professional judgement, budget limitations and implementation capacity of the city. It will be useful, however, to apply a simple analytical approach to assist in making these determinations.

Figure 1

Suggested methodology for planning
a citywide Improvement Program



Source: PADCO

Block 2 lists the development potential factors of low-income residents which should be considered. The concept is that projects, in whatever form they eventually take, should be concerned with increasing the development potential of the residents rather than simply trying to ameliorate existing physical conditions. The development potential factors are concerned with expanding human capacity for productive work, increasing household incomes, adding to the control of capital assets among the residents, increasing the permanence and stability of the area and reducing its vulnerability.

Based on the analysis of development potential, it will be possible to determine target groups of areas (Block 3) which share a general level of development potential and therefore have the capacity to utilize certain types of improvement packages. It is suggested that at least three target groups can be identified, although specific city studies may indicate subcategories within them. The three general groups are:

a) Disadvantaged households which, because of a mix of physical, social or economic constraints, have very little potential for development until those constraints are removed. These are the worst off.

b) Potentially mobile households which, with a certain mix of improvements, could become upwardly mobile (economically and socially) but which are now stagnating.

c) Already mobile households which are currently improving themselves economically and socially and which, with certain improvements, could accelerate this growth to rapidly become totally integrated into the physical, social and economic fabric of the city.

The existing conditions within the areas are important in determining what improvements should be made and at what standards. To facilitate this analysis, it is recommended that a simple profile be made of the deficits (or surpluses) of essential services in each area and for the citywide group of areas. The emphasis is on determining the kinds of services actually delivered and available to residents rather than the presence or absence of physical facilities. This information is required in order to provide the data needed to set the target standards for the improvement projects.

Block 5 identifies two kinds of target standards: a) minimum essential standards; and b) desirable standards. These standards should be based on existing conditions and related directly to the ability of the city to finance and implement a citywide program with equity for all. There can be no arbitrary standards set; each city should set its own standards based on current

conditions with the idea that all citizens should enjoy the minimum essential standards and the desirable standards should form the upper limit for the use of public funds in improvements.

After the basic analysis and assembly of information has been obtained to complete the items described above, the city will be ready to realistically determine the selection criteria (Block 6) by which specific areas are chosen for improvement each year. After this process has been completed, priorities can be assigned to each of the areas to be improved based on the criteria agreed upon (Block 7). Then the specific improvements for each area chosen to be improved can be selected from the inventory of available components (Block 8). At this point, actual planning for specific improvement projects can begin within the overall policy and strategy framework established for the citywide program (Block 9).

Sites and Services Projects

The extremely high population densities in Cairo can only be relieved and new household formation accommodated if new areas for low-cost urbanization are opened up. Since it is apparent that formal housing programs cannot accomplish this goal on a sufficient scale, the alternative will have to be sites and services projects. The location and form of such projects can only be determined after study and analysis, but the principles are already established through worldwide experience with the concept.

Essentially, sites and services projects attempt to provide land with essential infrastructure and facilities at a cost even the lowest income people can afford. The savings over formal housing projects is, of course, that there are no public investments in the house structure (though some projects have utilized a "core house" or partial house concept, and lower standards of infrastructure (for example, unpaved roads and water taps instead of house-to-house connections). As is the case with the settlement upgrading program discussed above, it is possible to include social and economic program components in order to respond comprehensively to the needs of the residents.

The advantage of the sites and services project, besides its much lower capital cost, is that it provides flexibility to the household to improve its house structure as savings and materials become available. Indeed, it is possible to contemplate sites and services projects which would expand vertically to five floors providing rental accommodations, small shops and light industry as well as the dwelling unit of the owner. It is entirely possible to achieve overall densities in sites and services projects which will equal or exceed those now developed in formal housing projects.

The Need for an Overview Analysis

There is a need for an initial overview analysis and program definition before action planning can commence for upgrading and sites and services projects for the urban poor. The data base regarding the low income target groups is between 15 and 20 years out of date. This will need to be corrected through a brief analytical study, preferably with access to up-to-date aerial photographs of Cairo and Alexandria. This need not take more than two to three months' time, but will be essential in order to establish realistic standards and procedures with which to guide the detailed project planning work.

This study will set the overall standards and objectives for the emergency program for low-income people and form the basis for Government commitment and decision-making. After completion of the first phase work, a series of project planning tasks can be initiated at the scale the Government wishes to pursue.

Chapter VI

DEVELOPMENT OF AN OPERATIONAL LAND POLICY

A key component of any strategy to overcome the housing shortage in Egypt is the establishment of an operational land policy. Since land is required for the expansion of the housing stock, the Government must insure that an adequate supply of land is available with appropriate levels of infrastructure, at the rate required for new housing construction, and at prices that can be afforded by the target groups. This is not happening at present.

In spite of the extremely high densities in the older quarters of Cairo and the overall sprawl of the city there seem to be large areas of land available for development. It is reported that the public sector owns 82 million square metres in Greater Cairo (although how much of it is already developed is not known). Areas such as Nasr City have vast amounts of vacant land already subdivided into building plots and sold into private hands, but not yet developed. There is room for expansion on the urban fringe of the city. There is room for urban expansion in Alexandria, in spite of some of the difficulties caused by large areas of low-lying land. There is land in and around the Canal Zone cities as well. There are ample sites for the proposed new cities on desert land. This is not to say that there are no basic problems of raw land availability, but rather to suggest that the fundamental problem is in structuring the orderly process whereby land is made available for urbanization. This is the fundamental purpose of an urban land policy.

The present situation has resulted in rapidly escalating land prices which have been reported to have risen over 300 percent in the past two years in some areas. A crude estimate of current land costs is presented in Table VI.1. These costs per square metre are extremely high and, of course, almost preclude the provision of housing for low-income people without enormous subsidy.

It is not possible within the scope of the short mission of the Joint Housing Team to make specific immediate action suggestions regarding land policy. This must come only after a full study of the situation has been made and the alternatives for restructuring the land market in both the public and private

TABLE VI.1

Cairo - Land Cost
1975

Location	Cost in L.E. Square Meter
Central Business District	750 - 1000
Northern Industrial Areas	300 - 400
Residential Areas	
Nile Frontage	700 - 1000
Other Choice Locations	
Western Bank	50 - 200
Eastern Bank	200 - 300
Zamalek	150 - 500
Heliopolis	100 - 150
Nasr City	30 - 60
Peripheral Zones	30 - 40
Outlying or Peripheral Zones - Without Utilities	10 - 20

Source: Interviews with public and private real estate developers.

sector fully tested. There is enough experience throughout the world to insure that a vigorously pursued and professional prepared land policy given adequate national political support will have a demonstrably favorable effect on the land problem in urban Egypt.

In the paragraphs which follow, very brief descriptions of some of the instruments available for responding to the urban land crisis are itemized. The intent is not to recommend any one or combination of the instruments, but to illustrate the range of possibilities which have been used by other countries coping with similar problems. In developing the work program for the study on urban land policy, specific analysis regarding the suitability of these types of responses to Egyptian conditions should be included.

Coordination of Land Development Decisions of Public Agencies

Public agencies are responsible for a significant part of the land development in Egypt. Each agency presently takes its own decision on land development and carries out its own program. An appropriate mechanism needs to be established whereby the individual land development decisions of all public agencies are coordinated. The stress will be on planning, coordinating and implementing the land development programs of Government. This is a difficult and complex job in all parts of the world. It is not too soon to begin to seek out the views and participation of those who must eventually be involved in the land development process.

The establishment of an inter-ministry and inter-agency committee could be considered as a useful first step toward achieving the coordination desired. An interim committee meeting periodically under the direction of MOHR would provide a useful forum to discuss the social, economic, physical, administrative, and financial implications of the land policy recommendations as they develop. In this manner the views of the implementing agencies and private sector could be incorporated into the policy planning process itself while recommendations are still flexible. Such a committee should improve the chances that the final land policy recommendations will be useful and acceptable to the ministries and agencies concerned.

The Use of Public Investment to Guide Growth

Public investment in new roads, water supply, and public facilities can be used to direct and control land development to a certain extent. The strength of this instrument is that it is fully under the control of government and requires no special administration or enforcement. The weakness is that it provides

unearned profits for private property owners and it can only be partially effective in influencing decisions of higher income groups, industry and commerce. It has no influence in providing a positive benefit to low-income groups and marginal enterprises. Public investment, since it needs to be made in any case, should be used to influence the implementation of the land policy, but it is desirable to use it in coordination with one or more other instruments.

Administrative Land Use Controls

There are no working overall land development controls being utilized in Egypt. Traditional zoning and subdivision controls of the European model are probably not appropriate without major modification in Egypt. There is a need, therefore, to consider the development of flexible and appropriate controls which respond directly to the needs in the Egyptian context. Consideration might be given to identifying special control districts of critical importance for the future of the urban area in which appropriate regulations could be vigorously applied. At the same time, flexible, relatively uncontrolled development should be allowed in areas in which the imposition of controls would work to the detriment of the low-income groups.

The use of land development controls such as zoning and subdivision regulation in an appropriate form also can contribute to implementing land policy. The strength of this set of techniques is that it requires minimal public expenditure and can provide some protection by preventing development which is not in the public interest. Its major weaknesses are that it is essentially a negative, rather than a positive, mechanism for guiding and encouraging appropriate growth; and it requires the establishment of a sizeable administrative unit to enforce it. It also can greatly affect private land values either by denying use of land for certain development, thereby penalizing the owner, or by permitting certain development, thereby providing unearned increases in value. Land controls carefully constructed and applied have a role to play in land policy, but they should be used with other instruments as well to reduce the uneven impact on land values.

Land Taxation Options

There are at least four major kinds of special land taxation other than the straight property tax which can be considered individually, combined or modified to meet Egyptian requirements. Each has slightly different objectives, advantages and disadvantages. Their general overall purpose is to capture for the public interest all or part of the value added to land through public action such as direct investment or land development controls. They also are intended to reduce land speculation as an attractive investment.

The main advantage of taxation is that it raises money for the public sector and thereby contributes to the financing of additional projects in the public interest. It also helps prevent unearned values from accruing to private property owners against the public interest. The main disadvantage of all forms of land taxation is that they require a major administrative system for enforcement. They also require advance technical work to apply the systems fairly. They are often politically sensitive because of the major impact on land values and therefore on the interests of property owners.

The four most recognized types of special land taxation are as follows:

1. Land Value Increment Tax

This tax is levied on land on a recurring basis with the objective of capturing part of rising land values for public purposes. It is difficult to administer and has a high potential for evasion. It can work hardship on individual property owners by collecting revenues when the value increase has not yet been realized by the property owner.

2. Betterment Levy

This tax is directly tied to the increased value accrued by private property because of specific public investment such as a new road or water supply. It helps to recover revenues for future public investments. It is a difficult tax to fairly assess against property owners and it is difficult to collect.

3. Tax on Speculative Short Term Gain

This tax sets high or even confiscatory rates on gains from the sale of land held less than a certain period of time, usually 2-5 years. Its purpose is to take the profit out of real estate speculation entirely. It is relatively easy for the property owners to escape this tax by obscuring the real sale price or by waiting out the time period restrictions. It is a difficult tax to administer as it requires up-to-date land sale registration.

4. Penal Tax on Vacant Land

This tax is used to force particular parcels of land into immediate development by assessing an especially high tax on the vacant land until it is improved. This tax is designed to assist in the orderly development of the city by preventing vacant land of high priority from being withheld for speculative purposes.

The tax is only sound when well-established plans are available with supporting analysis regarding how particular parcels should be developed. It may work unfairly to a property owner in a given situation who does not have the capital to develop, and could be required to sell the land, perhaps at a sacrifice, to others who would develop it.

The use of the above tax options for the implementation of land policy are worthy of study and consideration. Nonetheless, they are unlikely to be immediately useful, given the relatively undeveloped property tax collection mechanisms, the lack of an up-to-date cadastre, and the inherent difficulty of imposing completely new tax concepts suddenly.

Direct Public Participation in the Urban Land Market

The right of the public sector to own land is well established in Egypt. For the most part, government-owned land in urban areas is used to facilitate government development projects. Consideration can be given to the concept of creating government powers to participate directly in the urban land market at sufficient scale to influence the private land market. This concept, which is frequently called "land banking", has the following main objectives:

1. To assure the orderly growth of the urban area through direct control of urban land.

2. To assure that the land requirements of all income groups, particularly low-income groups, are met on a regular, on-going basis.

3. To control land speculation and indirectly encourage investment in more productive areas compatible with national development objectives.

4. To assist in achieving social equity objectives through redistribution of land ownership values.

The general process of land banking is for a public agency to acquire, through purchase, title to urban land and undertake a process whereby the land, in significant quantities, is assembled and acquired, planned, equipped with appropriate infrastructure, and distributed to public and private users through dedication, sale or lease. This process is usually undertaken by a land development agency formed for this specific purpose with wide powers and access to ample financial resources.

It is assumed that the land development agency can, through the process of land development, work on a self-financing basis. By capturing what would otherwise be unearned profits from land speculation accruing to private owners, the land development agency can also achieve its social objectives of meeting the the needs of low-income people.

The initial capital cost of large land purchases is the main prohibiting factor affecting the use of land development agencies. Some success has been achieved, however, with the use of land bonds as the source of initial finance. Land bonds are issued to the selling land owners in lieu of cash payments. The bonds are then retired by the land development agency over the development period of the project. Interest costs and carrying charges can be built into the project financing.

Land Adjustment Programs

An alternative form of direct public participation in the urban land market is through land adjustment or land redistribution projects. In this case, the public agency is empowered to acquire all the land in a given area for the purpose of replanning the property lines to make the future development of the area more efficient and to retain part of the land for right-of-ways, easements and public facility locations. Procedures are established to make the acquisition of land, without compensation, equitable to all of the property owners affected by the project. The land remaining which is intended for private development is then allocated back to the original property owners according to an established formula.

Land readjustment helps both the private property owners by returning to them land which is much more efficiently developable and therefore of higher value than before, even though some land is kept for public use. The public sector benefits by obtaining title without cost to lands needed in the future for public facilities and infrastructure.

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Appendix I

HOUSEHOLD INCOME DISTRIBUTION

by Mona Serageldin

Household income distribution is one of the most difficult statistics to develop because of the scantiness of available information.

Published census results, manpower surveys and labor force statistics do not give the information needed to cross-tabulate the urban population by the type of occupational breakdown corresponding to earning capacity. Consequently, any income stratification can only be inferred from synthesizing segmental data provided by various socio-economic indicators.

Such a method cannot pretend to yield accurate statistics. In no way can it replace an adequately stratified sample survey. Rather, it is an attempt to derive from the available data the best possible estimate of the income distribution of urban households, knowledge of which is crucial for any meaningful discussion of housing policy.

One of the best studies on urban income distribution was carried out in 1960 by the I.E.D.E.S. French study group, based on 1958 economic and demographic statistics. It is undeniably dated even if it can still be considered the most extensive research of its kind.

The central agency for public mobilization and statistics carries out family budget studies based on sample surveys. The most recent survey was in 1964-1965 and was published in 1972. Relevant abstracts are given in section III of the Statistical Appendix.

It is clear that the survey sample is somewhat biased towards higher income groups, Cairo residents, and probably includes a higher proportion of large families. Of the families surveyed, 22.3 percent lived in Cairo, 32 percent had 7 or more members, 50 percent spent over 270 L.E. per year, with average household expenditures of 354 L.E. Yet, in 1965, no more than 14 percent of the Egyptian population lived in Cairo, average family size was 5.27, and average household consumption expenditures were 277 L.E. per annum, with the median well below that amount.

One of the major reasons for this upward bias is the failure of the family budget study to cover that portion of the urban population that does not hold regular employment. This segment was estimated by the I.E.D.E.S. study to represent about 37 percent of the urban population.

For the purposes of this study, two methods were used to update the above information:

1. Accepting the income distribution provided and updating the actual amount of income or expenditures in accordance with the increases recorded in consumer price index since the time at which the study data were collected. The two resultant curves are shown on Diagram I.

2. Attempting through the use of population and labor force statistics to arrive at a more recent income distribution and/or to check the accuracy of the updated study results.

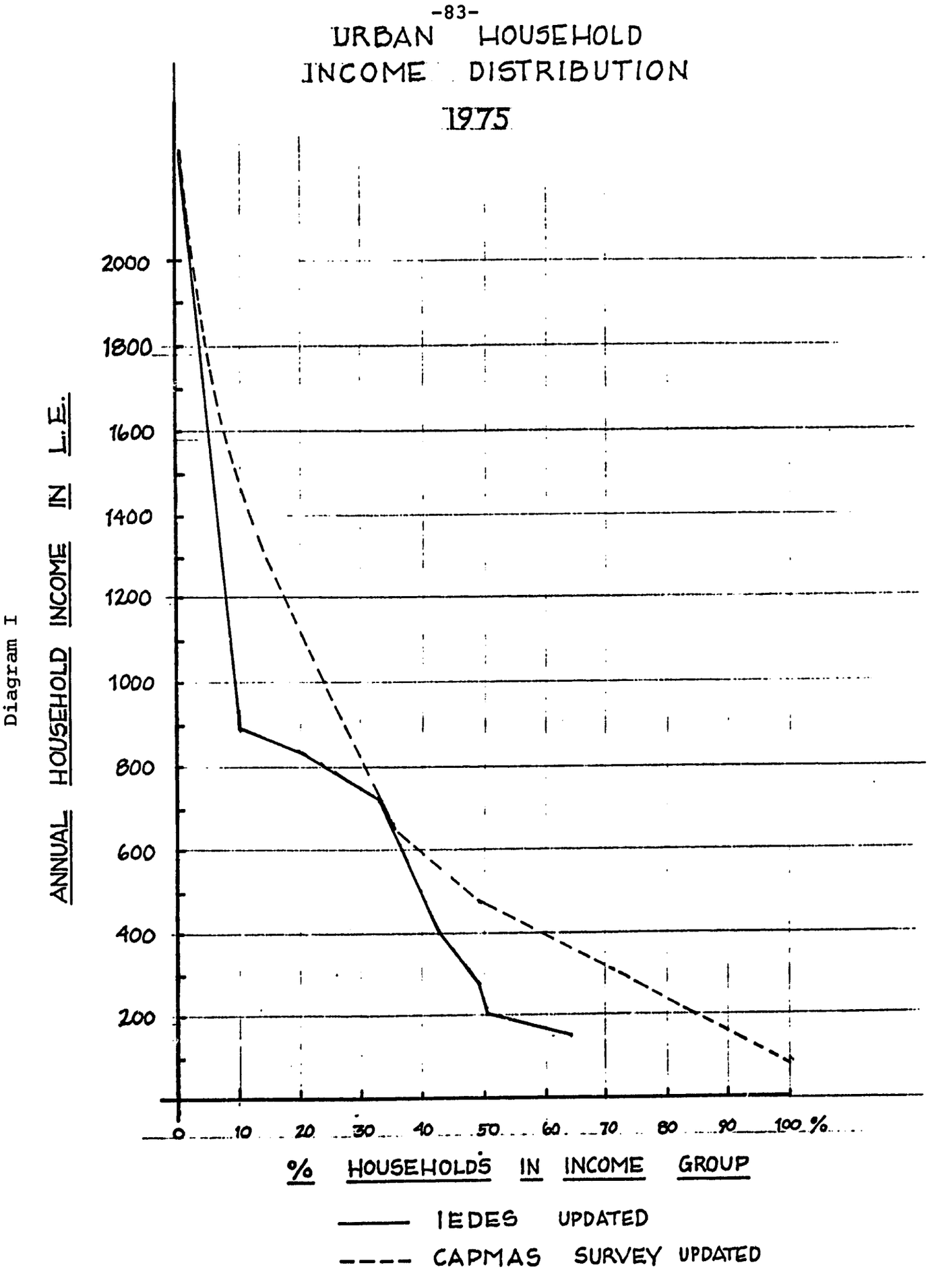
The following discussion will focus on the City of Cairo for which it was possible to assemble the largest array of relatively recent data; namely, 1972 and 1973. About 20 percent of the population in Egypt live in the Greater Cairo Region. This represents 44 percent of the total urban population, 36 percent of which reside within the limits of the Cairo governorate. With some adjustments arising from the unique character of the Capital City, it can be assumed that similar socio-economic characteristics will pertain in the other cities and towns of the nation. Differences affect both ends of the income scale. Cairo houses the largest proportion of wealthy families, but as the major migrant recipient area in the nation, it has been estimated that it attracts one migrant every ten minutes.

In the middle ranges, Cairo has: 1) the largest academic community in Egypt; 2) the largest proportion of government employees, amounting to over 30 percent of total government employment; 3) inordinate numbers of factory and transport workers; and 4) until the large-scale reconstruction effort began in the Canal Zone, it also was the center of the construction activity.

Comparing the population and labor force statistics[1/] tabulated in section II of the Statistical Appendix, it becomes apparent that a substantial segment of the potential labor force is not covered by the manpower data. A rough estimate of this uncovered work force is presented in Table I.

[1/] Since an estimated one million persons commute daily to work in Cairo from suburban areas, while less than 200,000 commute from Cairo to work locations elsewhere in the region, employment statistics cannot be used for this analysis.

Diagram I


URBAN HOUSEHOLD
INCOME DISTRIBUTION
1975
ANNUAL HOUSEHOLD INCOME IN L.E.
2000
1800
1600
1400
1200
1000
800
600
400
200
0
10
20
30
40
50
60
70
80
90
100 %
% HOUSEHOLDS IN INCOME GROUP
IEDES UPDATED
CAPMAS SURVEY UPDATED

The following analysis will focus primarily on the male labor force, disregarding for the time being the female labor force, as it is practically impossible to determine, among the non-covered segment, the proportion of housewives and the proportion working in non-classified jobs.

Since university enrollments include a substantial proportion of students living in Giza, Dokki, Embaba and other suburban areas, a figure of 140,000-150,000 non-covered males in the labor force should be viewed as very conservative. This non-covered labor force should not be regarded as consisting only of unemployed people. Undoubtedly a large proportion are recently arrived migrants in search of job opportunities. However, the majority probably consists of persons engaged in economically marginal occupations which can be, of course, construed as a form of disguised unemployment.

At the other end of the spectrum, the non-covered category also includes the negligible number of extremely wealthy individuals who are living entirely off income from properties or other sources of non-earned income.

Occupational group classification offers the best available means to relate the active labor force to various earning capacities. The broad classification categories given in the official statistics need to be further disaggregated since they encompass widely different incomes.

For the purposes of this study, six different household income levels are identified:

A. Above 1,600 L.E. per annum.
B. From 1,000 - 1,600 L.E. per annum.
C. From 600 - 1,000 L.E. per annum.
D. From 400 - 600 L.E. per annum.
E. From 150 - 400 L.E. per annum.
F. Below 150 L.E. per annum.

Category A consists of high officials, business owners, managers of modern commercial establishments, practitioners in the high earning professions and university professors.

Category B includes the upper echelons of government administration, professionals, business owners and managers, and university teaching staff.

Category C includes high level trade and service employees, supervisors, technicians, higher level teaching staff, skilled craftsmen and factory workers (i.e., trade chiefs and head machinists), qualified butlers and chief cooks, etc.

TABLE I

Cairo - Labor Force, 1972/1973

Category	Males	Females
1. Population age 12-64	1,739.2	1,676.6
2. Active Labor Force	1,177.6	159.3
- seeking employment	30.4	8.5
- illiterate	389.7	39.9
- education unspecified	4.8	1.9
3. Adults outside Active Labor Force	561.6	1,517.3
4. Student Enrollment(1)	420.5	283.3
- preparatory	162.4	131.2
- secondary	111.7	87.4
- teacher training	1.5	2.0
- university(2)	146.4	64.7
5. Adults Without Listed Occupations	139.6	1,232.0

Source: (Rows 1, 2, 3, & 4) Central Agency for Public Mobilization and Statistics, Cairo 1974, December 1974, Document 1269A/74.

NOTE: (1) Covers academic year 1972/1973.

(2) Includes students in Cairo University which is located in Giza.

Category D includes semi-skilled labor in the construction trades, transport and manufacturing sectors, highly qualified clerical workers, experienced sales and service workers and middle level teachers.

Category E includes regular low-skill employment categories in construction, industry, commerce and services. It thus includes lower echelon government clerks and service employees, elementary school teachers, cooks, waiters and salesmen.

Category F encompasses all types of unskilled labor, household servants, office boys, janitors, apprentices, day laborers in construction, sales and services trades.

The distribution of the Cairo male active labor force of 1,177,600 among these categories is given in Table II. It is based on interview information regarding wage and salary levels in different occupational categories and should by no means be viewed as an accurate income stratification. Rather, it provides a crude indicator of wage and salary income. This income is often below real household income due to:

1. Unearned income such as income from real estate or other forms of ownership. This applies, of course, primarily to levels B and A.

2. Households with more than one wage earner, a characteristic which is rising with female participation in the labor force, adult children living with their parents and doubling up of families as a result of the housing shortage.

3. Widespread multiple job-holding, particularly among the lower and middle levels of government employees to supplement the very low salary levels in the government. Although salaries were increased in 1975, it is doubtful that this situation will change since the high rate of inflation has eroded income gains at almost all income levels.

4. Transfer payments from the growing number of Egyptians working abroad.

Taking into account all the above factors, it was deemed more accurate to follow the distribution derived from the family budget survey for households in the upper income groups. Conversely, the adjusted distribution derived from the I.E.D.E.S. study and the team analysis was deemed to better represent conditions in the lower income groups D, E and F.

TABLE II

Approximate Income Distribution of Labor Force
by Occupational Group

Occupational Group	Income Levels F	E	D	C	B	A	Total
Professionals					61.0	51.2	112.2
Managers, Administrators and Executives					31.1	15.4	46.5
Clerical Workers		77.9	42.3	16.6			136.8
Sales Workers	58.6	23.9	27.4	10.0	11.8	6.8	138.5
Service Workers	121.1	42.1	10.2				173.4
Factory Workers, and Laborers	120.0	110.0	140.0	112.0			482.0
Agricultural Workers	18.4						18.4
Unspecified	69.9						69.9
Total Covered Labor Force	388.0	253.9	219.9	138.6	103.9	73.4	1,177.7
	32.95	21.56	18.67	11.77	8.82	6.23	100%
Total Labor Force	529.1*	253.9	219.9	138.6	103.9	73.4	1,318.7
	40.12	19.25	16.68	10.51	7.88	5.57	100%

Source: Housing Team estimates.

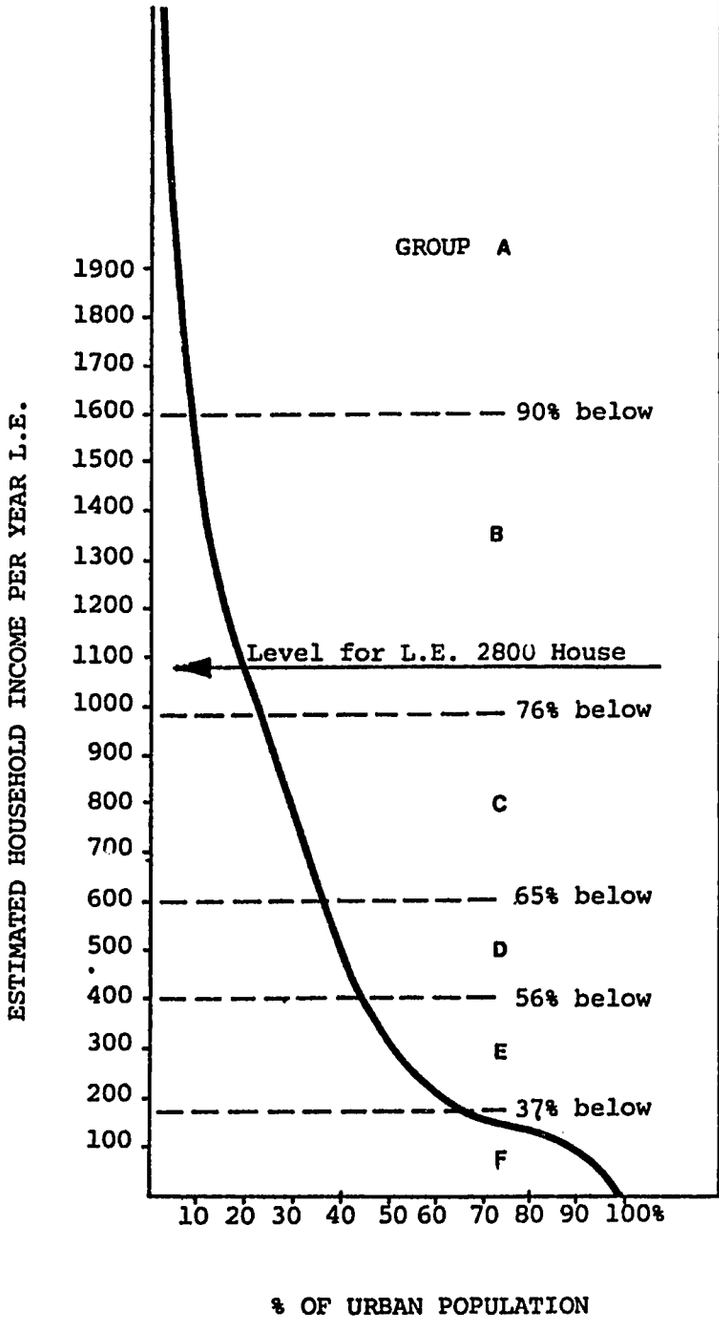
*Includes the 141.1 adult males, age 12-64, not counted in the labor force classifications. This compares with a total of 566.0, consisting of the non-covered segment and those listed as illiterate or unemployed which cannot include more than 30.4 double counted persons.

Since both income curves shown on Diagram I showed 65 percent of the households earning below 650 L.E., this level was taken as the dividing line between both distributions. The adjusted income stratification is given below.

Diagram II

NATIONAL INCOME DISTRIBUTION RELATED TO HOUSING

EGYPT 1975 . URBAN



TYPE OF WORK	ESTIMATED HOUSING NEED 75	
	NATIONAL	CAIRO
A BUSINESS OWNER-PROFESSIONAL	152,400 UNITS 10%	74,728 UNITS 10%
B COMMERCIAL PROFESSIONAL	213,360 14%	104,619 14%
C GOV. WORK SKILLED WORK FACTORY TEACHER	167,640 11%	82,200 11%
D UNSKILLED CRAFTSMAN SHOP-KEEPER	137,160 9%	67,255 9%
E LABOR SERVANT VENDOR	289,560 19%	141,983 19%
F PART-TIME WORK UNEMPLOYED	563,880 37%	176,493 37%
TOTALS	1,524,000	747,288

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Appendix II

THE NATURE OF HOUSING SUBSIDIES

by Richard Pratt

The existence of housing subsidies is found in many countries ranging from the least developed agrarian societies to the most highly developed industrial nations. The generally stated purpose of such subsidies is to improve the quality of housing in that nation and a broader implied purpose is to improve the quality of life.

Housing subsidies do not reduce the national cost of housing. For a given level of housing production, or investment, the economic cost is essentially independent of the existence of a subsidy. The cost of housing is the cost of capital, material and labor resources which are devoted to the housing sector. Subsidy programs may redistribute housing costs among groups but they cannot reduce these costs. A housing subsidy is a tranfser of income to a household for the purpose of providing them housing services greater than that which they could or would consume from their incomes.

Housing subsidies, whether to all households or limited to lower income groups, are rooted in the belief that households will choose a less than optimal level of housing investment and must be induced to purchase greater housing services. The existence of poverty or low income-income households does not provide sufficient rationale for housing subsidies. The existence of impoverished households within the economy may be a justification for a downward income redistribution, however, it does not justify channeling redistributed funds directly into housing.

A housing subsidy should not generally be used in place of an income supplement. Under most circumstances households do not have a "housing problem", they have only an "income" problem. Housing is generally available for those who have the ability to pay. Housing services are inadequate because households do not have sufficient income to afford higher housing standards. Unless it is believed that "special" social benefits derive from housing, households will benefit more from an unrestricted increase in their income than from being provided housing services of equal value.

An example may make this clearer. Assume that an Egyptian household has an annual income of 600 L.E. and that based on its needs for food and other necessities, the household wishes to invest 17 percent of its income in acquiring a housing unit. This household then has an ability to pay 102 L.E. per year for its housing services (17 percent x 600 L.E.). This housing payment will allow the purchase of a unit costing approximately 1,344 L.E.[1/] If the Egyptian government is willing and able to provide this family with a dwelling costing 2,500 L.E., the cost to government in providing the capital for this unit may be approximated as 191.44 L.E. per year.[2/] By providing this unit, the government has theoretically increased the household's income by 32 percent and has substantially increased the amount and percent of income used for housing.

If, instead of providing the house, the government were to provide the family with an additional 191.44 per year, the family would have a total spendable income of 791.44 L.E. per year. If the household received this income as cash and if their desire for housing still approximated 17 percent of income, their actual desired housing expenditure would be 134.55 L.E. per annum. This would be consistent with a housing unit having a value of 1,757 L.E. Thus, the government has placed the family in a home having a value approximately 743 L.E. greater than that which they would choose if they were given an income rather than a housing supplement. By providing a deep housing subsidy the government has provided more housing services than the individual household wishes to consume given its income.

The provision of direct and deep housing subsidies in the Egyptian economy can be expected to have the following results:

1. National over-investment in housing if the policy is agressively applied, or alternatively, the development of an uneven housing stock composed of a few units of excessively high physical standard and a great proliferation of units substantially substandard.

2. Inequitable income distribution between the few households receiving high quality subsidized housing and the many receiving no housing assistance.

3. Consumption of housing services in excess of those desired by low income assisted families, given their implied total income including what the government provides in a housing subsidy.

[1/] 1,344 L.E. is the size of a loan which could be paid off with monthly payments payable with 102 L.E. per year over a thirty-year period at 6.5 percent interest.

[2/] This is the annual payment necessary to pay off the 2,500 L.E. unit at an interest rate of 6.5 percent per year over a thirty-year period.

Subsidies to Stimulate Economic Activity

The use of certain subsidies to increase the general level of housing investment in Egypt can be supported on economic grounds. Increased housing production may provide jobs and income that would otherwise not exist. Much of the labor employed in housing construction can be either unskilled or of a skill level which can be achieved by relatively short training periods.

In Egypt certain types of housing units can be almost entirely constructed using non-strategic indigenous materials. Housing subsidies which encourage new construction may provide increased employment and income and upgrade the quality of housing while having little adverse affect on the consumption of strategic materials or the nation's balance of payments. If these goals are to be sought, the subsidies used should be specifically tailored to provide the maximum incentive to the housing industry while using the minimum feasible governmental subsidation and administrative involvement.

Methods of Subsidy in the Egyptian Housing Program

A number of direct and indirect housing subsidies exist in the Egyptian Housing Program. These include the following:

1. The sale of land by the government or public sector firms at a price below the fair market value.

2. Provision of utilities, utility hook-ups, and utility services at less than the cost of service.

3. The sale of homes by public sector firms at less than the fair market value of these homes.

4. The provision of rental housing by local authorities at less than market value or fully allocated cost of such housing.

5. Sale of public housing units at less than the fair market value.

6. The provision of funds from the commercial banking sector at rates that may be below the true cost of long-term capital.

7. The provision of mortgage loans from local government and cooperatives at interest rates less than cost.

8. The failure to vigorously collect existing contractual housing payments from occupants.

Each of the above subsidies can be expressed as one of two major types. The first of these is the interest rate subsidy involving the lending of funds by a governmentally supported unit at less than the market rate of interest. This type of subsidy is provided in the financing of public housing units sold and also in the financing provided these cooperatives. The second general type of subsidy is the capital subsidy which is provided when a housing asset or improvement is provided at less than cost or fair market value. Examples of this type of subsidy exist in the utility area and the sale and rental of public housing.

Interest Rate Subsidies

Interest rate subsidies are commonly used in providing housing in the urban areas of Egypt. Cooperative associations provide thirty-year mortgage loans of 3 percent interest with funds which cost at least 6.5 percent in the unsubsidized market. The subsidy of approximately 3.5 percent per year is provided by a budget allocation from the national government. A similar program exists for the sale of public housing with mortgage loans made at an interest rate of 3 percent. The underlying cost of credit on these loans is 6.5 percent with the difference being made up by an allocation from the budget of the Ministry of Housing and Reconstruction.

The amount of government resources involved in providing interest rate subsidies can be substantial. Table II.1 shows the monthly subsidy which is involved for a twenty-year loan of 1,000 L.E. for various levels of the actual cost of funds and the rate of interest which the mortgage loan bears. For example, if banks were lending at an interest rate of 6 percent while the mortgage to the dwelling unit purchaser bore an interest rate of 3 percent, the monthly subsidy would be 1.62 L.E. Similarly, if the actual cost of money were 8 percent and the rate on the mortgage were 3 percent, the monthly subsidy would amount to 2.82 L.E. per 1,000 L.E. of mortgage.

When interest subsidies are provided from annual budget allocations, the nation's housing program can be seriously jeopardized by the increasing amount of subsidy required to maintain a housing program of a given size. The subsidy necessary to meet the difference in interest payments continues on a year to year basis during the entire time that the mortgage loan is outstanding. When the housing program is in its fourth year, subsidies are required not only for the production of housing in the fourth year, but to pay the continued subsidy on units completed in the third year, second year and first year.

Table II.1

MONTHLY SUBSIDY PER 1,000 L.E.
FROM LENDING BELOW THE COST OF MONEY
(Assumes 1,000 L.E. Loan, 20-Year Maturity)

Interest Rate on Mortgage	Monthly Subsidy in the Actual Cost of Money				
	6%	7%	8%	9%	10%
3%	1.62	2.21	2.82	3.45	4.10
4%	1.10	1.69	2.30	2.94	3.59
5%	.56	1.15	1.76	2.40	3.05
6%	0.00	.59	1.20	1.83	2.49
7%		0.00	.61	1.24	1.90
8%			0.00	.63	1.29
9%				0.00	.65
10%					0.00

Exhibit II.1 shows the yearly subsidy required to maintain a lending program of 1,000 per year, each of 1,000 L.E., assuming that the interest rate subsidy is generated by money costing 6 percent which is relent to the home purchaser at 3 percent. As the exhibit shows, if a constant level of housing production is to be maintained, the required subsidy increases each year over the maturity of the loans. For example, by the tenth year, the annual subsidy as read from the exhibit is approximately 195,000 L.E. per year. The yearly subsidy would peak under these circumstances in the twentieth year with the annual subsidy level reaching approximately 390,000 L.E.

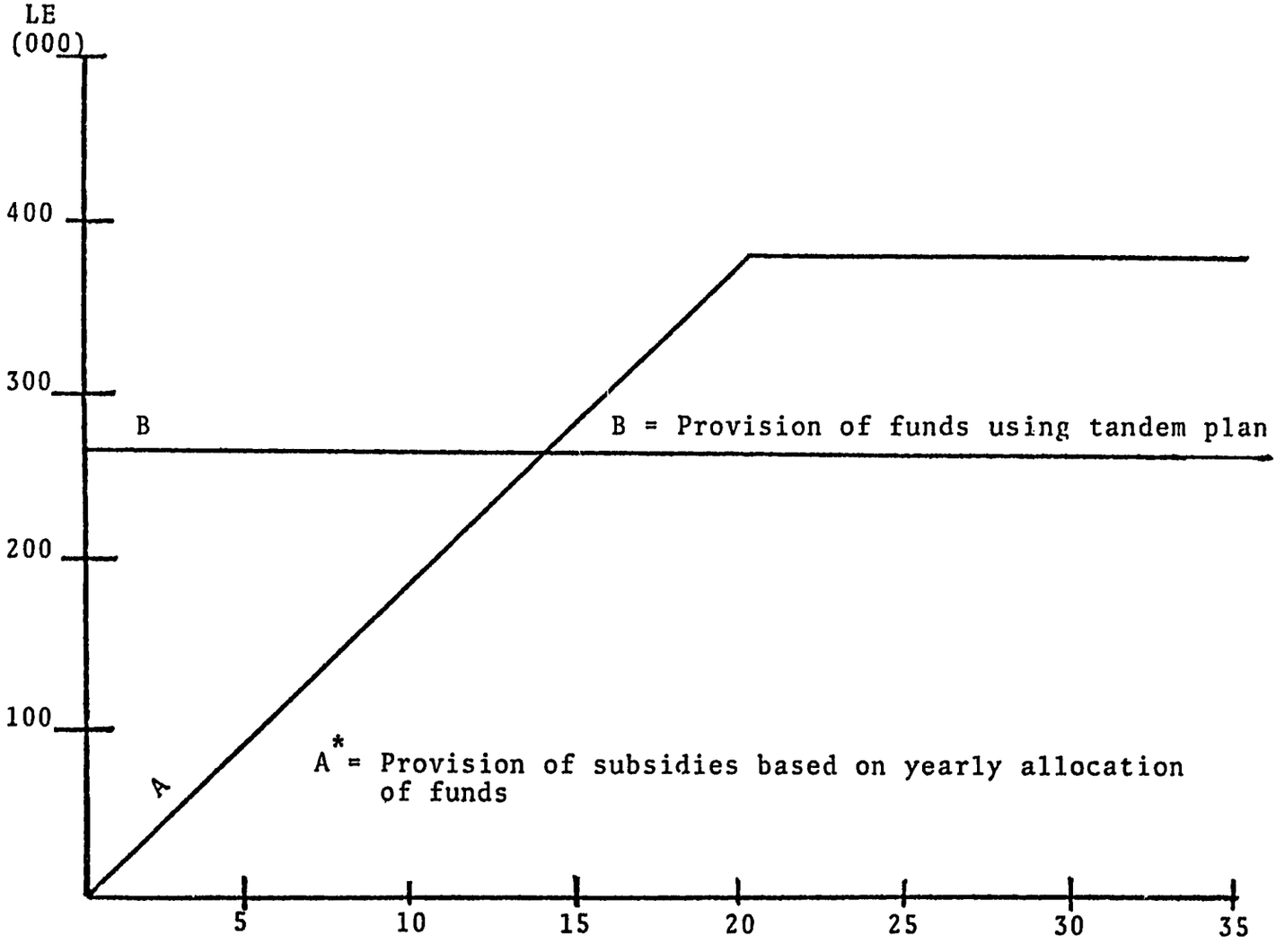
The actual impact of a program of this type may be better illustrated by using the exhibit in association with numbers relevant to a possible housing program in Egypt. A substantial national program might produce 50,000 units a year, each eligible for an interest rate subsidy from a 6 percent cost of funds down to a 3 percent mortgage loan. The mortgage recipient would receive a twenty-year loan of 2,000 L.E. on each unit.3/

3/ The Ministry of Housing and Reconstruction has a goal of producing 295,000 public units in the period 1976 to 1980 or an average of 60,000 units per year.

EXHIBIT II .1

YEARLY SUBSIDY REQUIRED TO SUPPORT
THE GRANTING OF 1,000 LOANS PER YEAR
OF 1,000 LE

(Assumes Cost of Money is 6%, Mortgage Rate 3%,
and 20 Year Maturity)



* Subsidies are based on the difference in annuity payments necessary to pay off 1,000 LE loan at 7.6% versus 3%. As a result the pattern is somewhat different than wuld exist if actual yearly allocations were plotted, however, the implications are identical.

The annual subsidy required would be 19.44 L.E. per 1,000 L.E. of loans or 38.88 per 2,000 L.E. loan. The 50,000 units would require an equivalent of 1,944,000 L.E. for the first year of the program. However, by the tenth year, the subsidy would amount to 19,440,000 L.E., and by the twentieth year of such a program, the annual interest subsidy would amount to 38,800,000 L.E. per year. In the twentieth year only 1.9 million L.E. or 5 percent of the total annual subsidy would be going to support current production. The remaining 95 percent would be required to support subsidies on past production. In each additional year, for at least the first two decades, a smaller and smaller portion of the yearly subsidy will be available for current production, while a greater and greater portion will be required to subsidize payments on loans made in previous years.

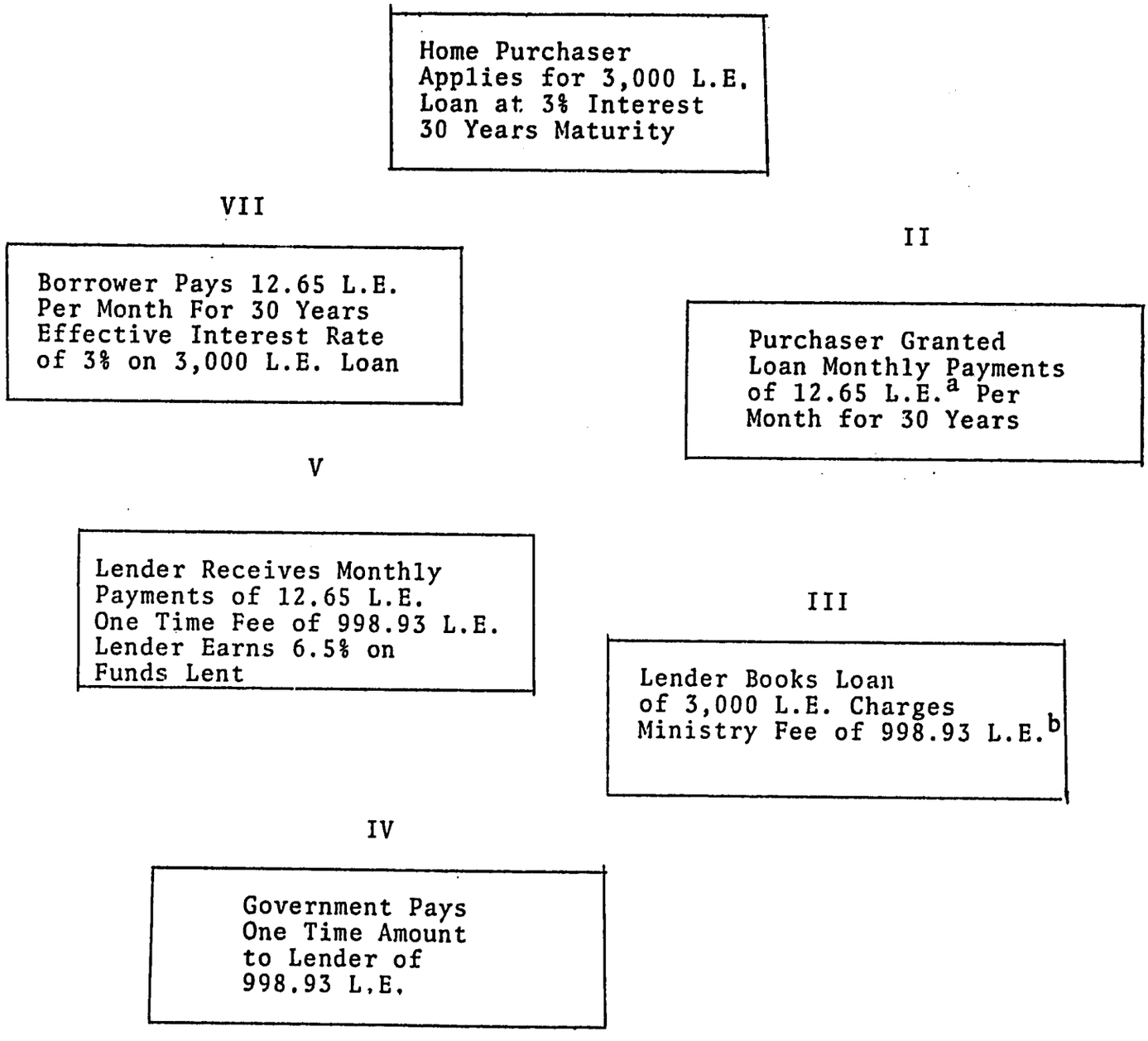
Tandem Program or Discounted Loan Program

Interest rate subsidies can be provided which do not require annual allocations for subsidizing past production. This is done by providing the subsidy through a one-time original discount on the mortgage. Under this program the lender would provide mortgage funds at the current market interest rate. The mortgage loan would be made at a rate determined by the existing subsidy policy. The mortgage would then be valued based on the subsidized rate to the home owner. This value would be less than the unpaid principal of the mortgage as a result of the subsidy involved. The Ministry would then make a one-time payment to the lender equal to the difference in value between the subsidized and unsubsidized loan. The original lender would earn the full interest rate which it agreed to in making the loan, the home owner would pay the lower subsidized interest rate and the Ministry of Housing and Reconstruction would have to provide for the subsidy for a given unit only once in its budget. Exhibit II.2 provides an example of this process.

In the example the potential home owner has requested a loan of 3,000 L.E. at the subsidized interest rate of 3 percent. This loan will involve payments of 12.65 L.E. per month for thirty years. The lender is willing to make a loan of this type at an interest rate of 6.5 percent. The effective interest rate which the lender earns is derived from two sources. One is the monthly payment which he receives and the second is fees or lump sum payments received at the time the loan is originated. In this case, a lump sum payment of 998.93 L.E. combined with the monthly payment of 12.65 L.E. will provide the lender with a return of exactly 6.5 percent effective interest rate over the life of the loan. The government wishing to subsidize the home purchaser, pays the 998.93 L.E. The borrower pays an effective 3 percent interest rate, the government pays a one-time subsidy payment and the lender earns an effective 6.5 percent return.

EXHIBIT II.2

TANDEM PLAN FOR
SUBSIDIZED INTEREST RATES



[a]Payment necessary to amortize 3,000 L.E. loan over 30 years at 3% interest.

[b]The fee paid by the government is just sufficient to give the lender a yield of 6.5% on his loan of 3,000 L.E. given that payments are based on amortization schedule of 3%.

This method of providing interest rate subsidies does not jeopardize future housing production or subsidy programs. No future payments of governmental funds are required to support existing units and there is no possibility of the program being jeopardized by having insufficient funds to support existing units.

Using the suggested tandem approach the interest rate subsidy becomes equivalent to a one-time capital subsidy. Table II.2 shows the capital subsidy resulting from a divergence in the actual cost of money and the rate at which money is lent. For example, by going to the table, it is shown that if mortgage money is lent at 3 percent when the actual cost of such funds is 7 percent, the implied capital subsidy is 285.05 L.E. This interest rate subsidy is equivalent to a 28.5 percent capital subsidy.

The Ability to Pay and Interest Subsidy

In addition to recognizing the total capital subsidy associated with interest rate subsidies the present program of providing the same interest rate subsidy to each subsidized household should be reexamined. The present approach to interest rate subsidies can be replaced by a program which bases the interest rate subsidy on the household's ability to pay. The subsidy based on the ability to pay can be adjusted from time to time as the ability to pay changes.

Table II.3 provides a comparison of subsidies based on the ability to pay approach and the straight subsidy. The table examines the subsidization of a household purchasing a dwelling unit costing 2,250 L.E. A downpayment of 15 percent or 338 L.E. is required. The amount to be financed is 1,912 L.E. and it is assumed that the basic cost of mortgage money in the unsubsidized market is 6.5 percent and that a thirty-year term is available. Under the straight interest subsidy, the loan is made to the household using a 3 percent mortgage having a level yearly payment of 97.55 L.E. for the thirty-year period. Under the ability to pay alternative the mortgage payment is based on 15 percent of the household income until a maximum interest rate of 6.5 percent is reached. The example assumes that the original income of the household is 800 L.E. per year, by 1980 this has risen to 900 L.E. and by 1986 that it has risen to 1,000 L.E. per year. Under the 3 percent mortgage, the payment remains constant over the entire life of the loan. Using the ability to pay approach, the original payment is set at 15 percent of income or 120 L.E. per year which provides an original effective interest rate on the loan of 4.69 percent. In 1980 when the household income is reevaluated, the payment

TABLE II.2

MONTHLY SUBSIDY PER 1,000 L.E.
FROM LENDING BELOW THE COST OF MONEY

(Assumes 1,000 L.E. Loan, 20 Year Maturity)

Interest Rate On Mortgage	Actual Cost of Money				
	6%	7%	8%	9%	10%
3%	1.62	2.21	2.82	3.45	4.10
4%	1.10	1.69	2.30	2.94	3.59
5%	.56	1.15	1.76	2.40	3.05
6%	0.00	.59	1.20	1.83	2.49
7%		0.00	.61	1.24	1.90
8%			0.00	.63	1.29
9%				0.00	.65
10%					0.00

TABLE II.3

INTEREST RATE SUBSIDY
STRAIGHT SUBSIDY VERSUS ABILITY TO PAY

House Price Without Subsidy	2,250	L.E.
Down payment @ 15 percent	338	L.E.
Amount Financed	1,912	L.E.
Annual Mortgage Payment @ 6.5%, 30 Years	1,46.42	L.E.

Date	Income	Housing Budget	Straight 3% Mortgage	Mortgage Based on 15% Income Max. 6.5% Rate
12-76	800	120	Payment = 97.55 LE	Original Payment = 120 LE Original Rate + 4.69%
12-80	900	133	Payment = 97.55	Unpaid Bal.= 1781.54 Payment raised to 135 Interest = 5.85% Remaining Maturity = 26 years
12-86	1,000	150	Payment = 97.55	Unpaid Bal. = 1567.56 Payment raised to 142.27 Interest rate = 6.5% Remaining Mat. = 20 yrs.

COMPARATIVE RESULTS

	No Subsidy	3% Mortgage	Variable Subsidy
Payments Received	30 @ 146.42	30 @ 97.55	4 @ 120 6 @ 135 20 @ 142.27
Total Payments	4,392.48 L.E.	2,926.46 L.E.	4,135.40 L.E.
Subsidy Expended	0	1,466.02	257.08
Units Supported per 1,000 L.E. Subsidy	---	.68	3.89

is raised to 135 L.E. per year providing a 5.85 percent effective interest rate on the remaining 26-year loan. In 1986 when the household income is again reevaluated, the loan payment is raised to 142.27 L.E. providing an effective interest rate of 6.5 percent, the same as that existing in the unsubsidized mortgage. This rate continues for the balance of the life of the mortgage. The lower portion of the table shows that in the unsubsidized case, the total payments received under the loan would be 4,392.48 L.E. Under the straight 3 percent subsidy approach, only 2,926.46 L.E. is received and the subsidy amounts to 1,466.02 L.E. Under the variable subsidy, 4,135.4 L.E. is collected and the subsidy amounts to 257.08 L.E. The final line in the exhibit shows that per 1,000 L.E. of public funds available, only .68 units could be supported under the straight subsidy, while under the subsidy based on the ability to pay, 1,000 L.E. would support 3.89 housing units. In the example the modified plan would support 372 percent more units than the straight subsidy program.

Rental and Capital Subsidies

The Government of Egypt is presently providing public housing subsidies by renting and selling units at below market prices. Recent rental levels in public housing units have been 1.5 L.E. per room per month plus 1 L.E. for the common areas. A three-room apartment would rent for 4.5 L.E. for the three rooms plus 1 L.E. for the hall and common area making a total of 5.5 L.E. per month. In addition to the low rental rates, collections from public housing occupants are not pursued rigorously. As a result, a second level of subsidy exists in the form of non-payment or delayed payment on the part of the dwelling unit occupants. Governmental sources indicate that in many cases, the payments collected from occupants were not sufficient to provide proper maintenance services for the project involved.

Minimization of Subsidy and Recovery of Subsidy Payments

Deep interest rates or capital subsidies are granted to nearly all individuals able to obtain dwelling units.

Because of the present subsidies involved per unit, it is not possible for Egypt to provide housing of the presently produced size and quality for a significant portion of the population. By appropriate modification to the subsidy programs, more housing can be produced with the available public and private resources available in the nation. A modified program should be based on the following principles:

1. Housing subsidy should not be used as a general income supplement.

2. Households should recognize the cost of housing services and be given incentives to conserve these resources.

3. Subsidies should be limited to the difference between the ability to pay and the minimum quality housing unit which the government is willing to advocate for a given household.

4. Subsidies should be reviewed periodically and reduced where the ability to pay has increased.

Appendix III

THE ADMINISTRATIVE FRAMEWORK FOR HOUSING AND LAND DEVELOPMENT

by Mona Serageldin

A. The Central Level: The Ministry of Housing and Reconstruction

The Ministry of Housing and Reconstruction, MOHR, groups under the same organizational structure, functions formerly carried out by the Ministry of Housing and Public Utilities as well as other public authorities. To these are added the planning and implementation responsibilities for reconstruction in the Canal Zone and other regional development projects in remote areas, transcending the geographic boundaries of individual governorates.

The duality of MOHR is not as clearly evident in the organization chart shown on Diagram III.1 as it is in reality.

Housing has well-established traditions and bureaucracies. Reconstruction was only recently set up and has more flexibility. It can overcome red tape and resilience to change, adopt new programs and experiment with organizational structures.

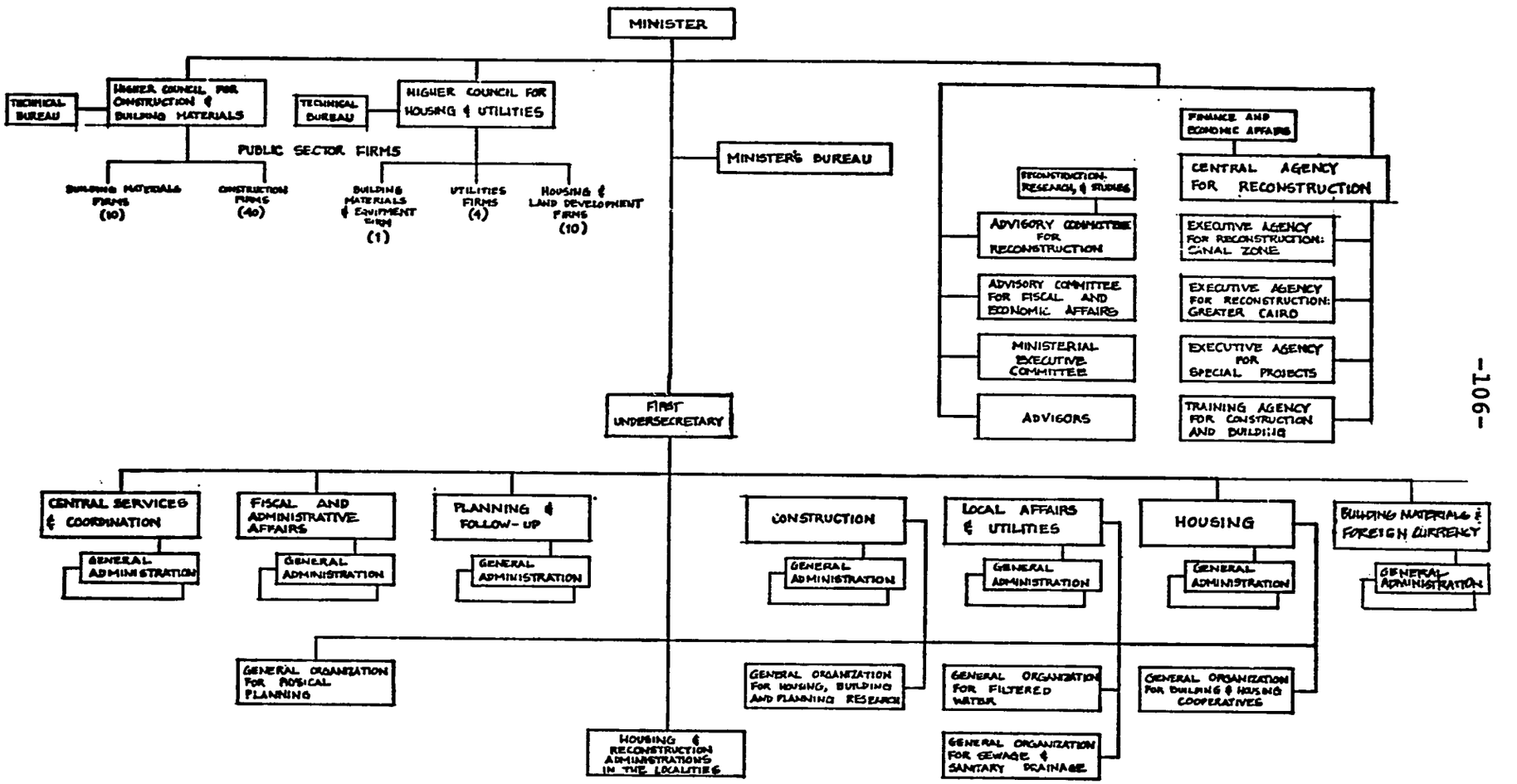
They have separate allocations in the national budget, and develop and submit separate plans and requests for funds. Even the 1976-1980 development plans were independently drawn.

With the notable exception of the Canal Zone, their activities overlap geographically and functionally. Since reconstruction is also involved in the provision of housing and utilities, the current method of creating reconstruction zones for carrying out housing projects financed through the reconstruction budget, outside the Canal Zone area, seems at best artificial.

The functions of the former Housing Ministry are now carried out by the seven specialized administrations headed by Undersecretaries, namely: 1) Housing; 2) Local Affairs and Utilities; 3) Construction; 4) Planning and Follow-Up; 5) Building Materials and Foreign Currency; 6) Fiscal and Administrative Affairs; and 7) Central Services and Coordination.

Diagram III.1

MINISTRY OF HOUSING AND RECONSTRUCTION
ORGANIZATION CHART
1976



The First Undersecretary of State for Reconstruction supervises and coordinates policy and program implementation in these different administrations.

To this framework are added five general organizations dealing with specific fields of activity. Of special interest to housing are:

1. The General Organization for Physical Planning which is entrusted with drawing up regional development plans and ensuring their implementation in cooperation with the relevant central and local authorities.

2. The General Organization for Building and Housing Cooperatives which grants loans to housing cooperatives and provides them with technical assistance and administrative support, such as helping them secure their allocations of building materials.

3. The General Organization for Housing, Building and Planning Research which is responsible for studies and research on building materials and techniques.

The functions of the reconstruction branch of the Ministry are carried out through the three executive agencies -- one for the Canal Zone, one for Greater Cairo, and one for other projects. Recently, a special agency for the administration of the Ministry's new manpower training program for the construction trades has been set up. The work of the executive agencies is supervised and coordinated by the Central Agency for Reconstruction.

In addition, the Ministry draws on the expertise of special advisors, committees and consultants.

The executive arm of the Ministry are the 65 public sector firms involved in land development, housing construction, general contracting and the manufacture and distribution of building materials and equipment which fall under the jurisdiction of the Ministry. They are grouped under two supervisory councils -- one for housing and utilities and the other for construction and building material.

Public sector firms enjoy relative freedom of governance and operations, but the Ministry can adjudicate work to them by direct order rather than through competitive bidding. This practice started as an expedient method for the implementation of projects in remote areas. However, its wide use cannot be condoned since it has contributed in no small way to the huge inflation in construction prices.

B. The Local Level

The current system of local administration was first introduced in 1960 in an effort to decentralize government. It emphasized the role of the local council as a democratic means of self-government by giving them legal personality and financial autonomy. Their funds are derived from the transfer of certain taxes to the local level as well as budget allocations for the services they supervise.

1. The Governorate

There are two local councils -- one elected and one appointed. The executive arm for the implementation of national plans and programs at the regional level is the Governorate executive council headed by the Governor and composed of regional representatives of the various central ministries. The functions of the Governorate councils include:

a. Establishing social, education, cultural and health services;

b. Promoting economic production and investment;

c. Administering and supervising government services and projects within its jurisdiction;

d. Supervising transportation networks;

e. Establishing and managing local public utilities;

f. Supervising city and village councils within the boundaries of the Governorate; and

g. Executing projects on behalf of city and village councils.

The link between MOHR and the local authorities are the Housing and Reconstruction Administrations attached to the Governorate executive councils.

It is the responsibility of these administrations to direct and supervise the different housing programs, including industrial housing, carried out in the Governorate. Foremost among these is the MOHR publicly-assisted Housing Loans Program.

Local authorities use the services of public or private contractors and can choose the type of housing they wish to build in accordance with national allocation policies.

2. Towns and Villages

City councils are composed of elected and appointed members, the latter mainly ex-officio. Their functions include: 1) supervision of the administration of social, education, cultural and health services; 2) supervision of local transportation; 3) supervision of public utilities including water, sewerage and electricity; and 4) supervision of physical planning, land development and building activities. The link between the MOHR activities at the regional and local levels is the Technical Administration attached to the city council.

The responsibilities of the city councils in the housing field are enormous, since they are entrusted with the implementation of the various laws governing housing and land development, including: subdivision regulations; control over the building process in terms of allocation of housing types and building materials; administration of building permits; supervision of building activities including new construction, alterations, additions and conversions, heightening, repair and demolition of structures; and administration of rent control legislation.

The failure of local authorities to curb building violations and control illegal activities is not surprising. Their legal powers are great indeed, but adequate means of enforcement are lacking in terms of technical staff and budget appropriations. For example, local councils are empowered to provide utilities in areas subdivided and built up in violation of the law at the expense of property owners. Similarly, local councils are empowered to prevent the deterioration of the building stock by undertaking urgently needed structural repairs at the expense of property owners in cases when the latter refuse to carry out the work themselves. The enforcement of this law implies an adequate professional staff to supervise development and to inspect buildings and determine needed repairs. Furthermore, it implies the availability of financial resources to allow the locality to contract the work to be done, pay the contractor first, then secure reimbursement from property owners through normal judicial channels under the provisions of civil law. Even in Cairo Governorate where the situation is most critical, there has been no budget appropriation for these line items in recent years.

Traditional mud bricks are still made in the suburban areas around Cairo using silt from the Nile Valley irrigation system. Production of mud bricks is now discouraged because the silt is needed for agricultural purposes.

Mud bricks are made by mixing the silt with straw, donkey dung, and water in a shallow pit. The mixture is then placed by hand in a wooden frame. The frame is removed and the bricks are left to dry in the sun. There is still evidence of mud brick construction dating from 4000 B.C. using this same method.