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Since 1971, the Office of Housing of AID has been conducting preinvestment surveys in countries where housing investment guaranty programs are anticipated in order to provide the background and framework for its intervention. These surveys are, in fact, increasingly sophisticated analyses of the shelter sector of each country. Each report is intended to provide the Office of Housing with the information necessary to enable it to answer three primary questions about a specific country:

- . What is the country's capacity to undertake a large-scale housing program?
- . What is the effective demand for housing at a given price level?
- . What is the country's capacity to repay a foreign loan?

To paraphrase the introduction to the scope of work for a recent survey, its objectives are to determine the need for housing at all socio-economic levels of society, to determine the ability of each socio-economic group to pay for housing; to assess the capabilities of the Government to plan and manage large scale housing programs and projects; to analyze the impact of large scale foreign borrowing on the country's economy and its ability to repay; and to assess the ability of the country to absorb large sums of money into the shelter sector industries.

These objectives have been realized with varying degrees of success. Some of the more recent surveys, in particular, provide broad panoramas of the country housing sectors. Some of the earlier ones are more limited in scope and cover only a part of the sector.

These reports provide valuable orientation for anyone becoming involved in housing sector in one of these countries. They should also be useful for comparative studies of housing programs and policies on a regional or world-wide basis.

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**OFFICE OF HOUSING**

**Zaire Shelter  
Sector Analysis**

**January 1975**

**AGENCY FOR INTERNATIONAL DEVELOPMENT**

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I. A. Findings

During 1974 an estimated 500,000 persons were added to the urban population of The Republic of Zaire. The 10 largest cities in Zaire are growing at an annual rate of about 9%, with the growth rate of Kinshasa, the capital, estimated at almost 11%. By 1980, according to one GOZ estimate, one third of the country's population will be urban, one-fourth will be living in the 10 largest cities, and one-eighth will be living in Kinshasa.

The Republic of Zaire is not yet ten years old. The first priority of the present government was to establish the authority of the central government, after half a decade of strife during which two-thirds of the country, including its most productive regions, were under the control of breakaway regimes. Subsequent focus has been on classic developmental objectives: monetary stabilization, transportation, attraction of off-shore private investment, and Zairianization of cadres. Although the ruling Party's 1967 declaration of objectives included housing for all citizens "in the best conditions possible", GOZ intervention in the shelter sector has been at best on an ad hoc basis. A number of significant efforts have been undertaken, but coordination among the various GOZ agencies has not been organized, and some projects appear to have been undertaken without all of the necessary technical and financial preparation. No program has been formulated for dealing with housing for low-income families or the proliferation of squatter settlements.

A number of GOZ agencies have significant responsibilities in the Shelter Sector:

Department of Public Works:

City Planning

Provision of streets and sewers

National Housing Office (ONL)

Department of Real Estate

Attribution of all land (now declared GOZ property)

Management of land, tax collections

Registry of Titles and Liens

Department of Social Affairs

Elaboration of a national housing policy

Rural aided self-help housing

CNECI (Caisse Nationale d'Epargne et de Credit Immobilier) - The National

Housing Bank

Savings and loan activities

Project development and execution

The absence of an organized GOZ housing construction program has increased the difficulties of CNECI. Recipient of a \$10 million HG loan, CNECI is empowered to accomplish three goals:

- a) Carry out itself the operations of a pilot thrift and mortgage institution:
- b) Encourage the creation of, supervise, and provide liquidity for a national system of private thrift and mortgage institutions;  
and
- c) serve as the developer of middle and low-income housing projects.

Within a short period of time, CNECI has done an excellent job of collecting savings and putting together a very complex housing project, and has energetically tackled its many problems. Its future role appears to be that of a national housing bank and not that indicated in (b) above. It has been obliged, however, to concentrate on the problems of a 1,100 unit housing project. CNECI therefore has not been able to focus on its own development as a financial intermediary and is weakened by lack of secondary cadres.

The construction industry, now being nationalized, has been dominated by expatriate firms. Overhead costs are excessive and Zairois personnel have not been integrated into management. ONL which has already been serving as a national construction company, appears by comparison under-financed and under-equipped. The vast majority of the homes in Kinshasa are built over a period of years using self-help techniques. As a result, there is no body of small local contractors with the skills and incipient organization which could form the basis of a home-building industry.

Costs are high, and increasing rapidly. Even attempts to achieve greater self-sufficiency in construction materials may result in higher costs. In order to amortize a recent new cement plant, GOZ fixed cement prices country-wide at almost double the previous level. High costs are aggravated inland by distances, transportation difficulties, and the necessity of transferring between steamer and rail and back again as goods move farther inland.

As is frequently the case, high costs are accompanied by low incomes. Median income in Kinshasa is Z 52 a month, permitting monthly housing expenditures of Z 13. Median incomes in other cities are even lower: Z 45

in Lubumbashi (and possibly other mining centers) and Z 27 in Kisangani. These incomes allow recipients to spend Z 11 and Z 7 a month, respectively, on housing.

In contrast, the smallest house of modern construction costs Z 2-3,000 even if built by the owner and considerable more when builder's and developers overheads are added on. Monthly payments under any realistic terms would far exceed the above figures and would more likely be at least Z 25.

Another major constraint has been the set of problems associated with land and with security of tenure, involving a complex of problems beyond the capacity of the responsible technical agencies. All land belongs to GOZ, and unoccupied land may be allocated upon application to GOZ. Upon completion of the required improvements, a Zairian citizen receives certification of his right to permanent occupancy. This certificate is registered and hence may be sold or mortgaged. However, no city plan exists, and therefore no legal subdivisions have been laid out since 1959. Without legal parcels of land there can be no building permit, no registration of real rights or liens, and hence no security for mortgage lending.

Despite these constraints, there has been a tremendous amount of building by households in Kinshasa, representing minimum investment of perhaps Z 3-600 and up to Z 1500 or more over a period of two or three years. Possibly one-third of the 1974 population of Kinshasa live on legal lots. Two-thirds live in concrete block houses, in illegal subdivisions, unserved by public utilities. Although the subdivisions are illegal, they are laid out in the traditional grid, street alignments are respected, and lot lines are clearly delineated.

Whereas in mining centers like Lubumbashi and Mbuji-Mayi there has been significant, if declining, construction of workers' housing by employees, most urban housing development has been extra-legal.

Finally, Zaire's capacity to deal with these problems is also conditioned by the country's dependence on copper, which provides 25% of GDP and 80% of export earnings. Until 1971, more than half of government revenues came from one copper company. Declining world copper prices have adversely affected both GOZ revenues and its debt-servicing capacity, so that in the context of developing a national housing policy GOZ is unlikely to offer much in the way of subsidy and has begun to study very closely the terms of the proposed off-shore loans.

I. B. Recommendations

1. Coordination of GOZ Housing Activities

It is recognized that Zaire is a young country and that many priority problems other than housing have demanded the attention of the government. Ad-hoc housing projects have been undertaken, but these have suffered from a lack of policy framework or coordination with other sector activities. During the Team's visit to Zaire, a proposal was made to the GOZ that it create a top level Task Force on Housing to address the questions of national housing policy and the coordination of the various programs now being undertaken by government agencies.

Recommendation No. 1: That the Government of Zaire establish a Presidential Task Force to address the immediate questions of the nature and extent of GOZ involvement in the housing sector and to take the initial steps towards the development and implementation of a national housing policy. It should recommend action to clear up constraints which now hinder effective action in the shelter sector and elaborate recommended GOZ basic priorities in this sector.

The Presidency should monitor policy implementation and, on a continuing basis, coordinate the activities of the various technical departments.

2. Development of a Housing Program for Low-Income Families

The Team determined that the median family income in Kinshasa at this time is Z 52. In Lubumbashi it is Z 45, and in Kisangani Z 27.

Recommendation No. 2: GOZ should establish as a major policy objective the preparation of legal subdivisions with infrastructure and security of tenure for home construction by low income families. Legal requirements for improvement must take into consideration the economic capacity of this target group.

3. Land Tenure

The orderly development of Zairean cities is hampered by the present land ownership and transfer regulations. Land cannot be subdivided and attributed until master plans have been developed and adopted for the cities. Without legal land attribution, there is only the quasi-legal "titre d'occupation precarie", which provides no security for a lien and cannot be transferred. The team believes that the removal of these barriers to implementation of GOZ's basic land policy should be a major short term goal. In this way the substantial construction energies of the Zairois could be encouraged and directed in support of policy rather than being left outside it.

Recommendation No. 3: The GOZ should assure rapid completion of the city master plans, or identify areas where no major change in land use is contemplated. Illegal subdivisions should be legitimized so that titles can be established and financing made possible against valid liens, thereby both speeding up development and providing increased real estate tax revenues. Areas for future low income residential growth should also

be platted. A major effort must also be directed towards speeding up building permit, title and lien registry and other procedures.

#### 4. The Status of CNECI

Given its limited resources and even more limited pool of experienced personnel, CNECI has been hampered in its development as a financial intermediary by the necessity of concentrating its attention on the planning and construction of Cite Salongo.

Recommendation No. 4: The GOZ should define CNECI's role and either limit it to a financial intermediary role or provide it with the financial and manpower resources to fulfill a multiple role.

#### I. C. Country Background

Zaire (the former Belgian Congo) is Africa's third largest country by area and fourth largest by population. 905,000 square miles in area, about the size of the U.S. east of the Mississippi River, it lies on the Equator. One-third of the country is in the Zaire River Basin, hot and humid tropical rain forest. The southern third is savanna, where most of the country's wealth is located. Other regions are the northwest lowlands, the northern savanna (dry, sparsely populated), the eastern highlands along the Great Rift land system, and a small coastal plain along Zaire's 25 mile wide frontage on the Atlantic Ocean.

Population in 1974 is estimated at about 24 million, very unequally distributed, composed of some 200 ethnic groups speaking as many dialects.

Many organized kingdoms, some covering extensive areas, existed in the country at the time of the first European contacts by the Portuguese in 1482, and some of these lasted well into the time of intensive European penetration in the late 19th century.

At the 1885 Berlin Conference among the European colonial powers, the Congo was allocated to King Leopold II of Belgium, whose claim was based on famed U.S. newspaperman-employer Henry Stanley's second voyage of exploration, during which he signed 450 treaties with chiefs recognizing Leopold's claim. From 1885 - 1908, the Congo Free State was a personal fief of Leopold. It became the Belgian Congo as a result of a growing number of scandals, and remained a colony until 1960.

After independence, centrifugal forces, exacerbated by poor communication, caused a collapse of central government authority, which at one time controlled only one-third of the new nation. Breakaway regimes were established in the most productive sections of the country, and recovery from half a decade of costly internecine warfare is far from complete.

The present Government was organized in late 1965 by the Army under the leadership of Lt. Gen. Mobutu, its major task being to unify the country. The government is a strong presidential form, highly centralized, with a 420-member unicameral legislature. President Mobutu's Popular Movement of the Revolution (MPR) is the only political party.

Administratively, the country is divided into eight provinces and one autonomous district, Kinshasa, as follows:

<u>Province</u>	<u>Est. 1974 Population</u>	<u>Capital</u>
Kinshasa (autonomous district)	1,991,000	-
Equateur	2,633,000	Mbandaka
Haut Zaire	3,542,000	Kisangani
Shaba (formerly Katanga)	3,073,000	Lubumbashi
Kivu	3,721,000	Bukavu
Kasai Occidental	2,010,000	Kananga
Kasai Oriental	2,687,000	Mbuyi-Mayi

<u>Province</u>	<u>Est. 1974 Population</u>	<u>Capital</u>
Bandundu	2,851,000	Bandundu
Bas Zaire	1,658,000	Matadi

Zaire's mineral resources are its almost exclusive source of wealth; primarily copper, of which it is one of the world's largest producers, but also industrial diamonds, manganese, gold, cobalt, zinc and others. The formerly Belgian-owned copper company, nationalized in 1967, provided by itself one-half GOZ revenues and one-half of its export earnings.

Monetary GNP totaled Z 1.3 billion in 1973 (\$2.7 billion) following an average annual growth rate, net of inflation, of 6% over the previous five years. Growth rate has since slackened as a result of the drop in copper prices.

Developmental assistance to Zaire has come from a number of sources, dropping in the late sixties, but increasing to \$85.5 million in 1971, about the 1966 level. Technical assistance represented about one-third, rising to almost 40% in 1971. The share of project assistance has risen, both absolutely and relatively, to about 35% in 1971, while balance of payments aid has been sharply reduced.

Largest bi-lateral donor was the U.S., but is now Belgium. In 1973, U.S. dropped to sixth place among bi-lateral donors, behind Belgium, Canada, Italy, West Germany and Denmark. Largest by far among multi-lateral donors has been the European Development Fund, followed by the UN and IDA. AID was a major source of Project Loans in 1968-72, a position now being assumed by IDA. AID DL and grant activity most recently has been concentrated in the transportation sector. Disbursements totalled \$11.3 million in FY1971, \$8.2 million in FY 1972, \$4.3 million in FY 1973, and \$9.7 million in FY 1974. HG disbursements totalled \$500,000 in FY 1973 and \$3.2 million in FY 1974. Estimated DL and grant disbursements in FY 1975 will be \$3.0 million, plus possibly another \$5.3 million under the HG program.

## II. ROLE OF GOVERNMENT IN HOUSING

The present Government of Zaire, although it has not elaborated an official Development Plan, has clearly had a number of generalized developmental objectives, such as:

- a. Internal security and establishment of the authority of the central government.
- b. Monetary stabilization
- c. Improvement of transportation and communications infra-structure.
- d. Attraction of private investment from abroad, particularly in mining and in manufacture of import substitutes.
- e. Preparation and advancement of Zairian cadres (20-25% of the national budget for education, nationalization of industry, etc.).

Despite the statement of the 1967 Declaration of N'Sele: "Good housing is an absolute condition for the solidarity of family ties .... All citizens (must be) housed in the best conditions possible," shelter has been approached on an ad hoc basis.

### A. THE GOVERNMENT AS ENTREPRENEUR

#### 1. The Office for African Housing (OCA)

During the Colonial period, government-sponsored housing projects were the responsibility of the Office for African Housing (Office des Cités Africaines) - OCA, organized in 1952. Its first project, undertaken that year, was the erection, at a cost of Z. 75,000, of 1,105 prefabricated housing units. (These were to have been torn down in 1967, but were instead rehabilitated by the OCA's successor agency in 1966 to last another ten years).

During the colonial period 1952-59, a total of Z. 47,925,000 was budgeted for O.C.A., just about the total called for in the

1949 Development Plan.

Construction was by force account, and many of the units were pre-financed by the Fonds d'Avance, which had been organized by the Colonial government in 1929, and were sold through lease purchase. The basic structure was a twin or row-house unit, 35 - 55 M2 in size and costing Z420 - 660, with full infrastructure and community sanitary facilities.

A total of 62,000 units were developed. almost half of those were in Kinshasa, with the largest concentration (about one-fifth) in the copper-mining Katanga (now Shaba) Province.

Housing Construction: 1952-59

Kinshasa (City)	27,753
Shaba (Province)	13,037
Haut-Zaire	5,947
Bas-Zaire	4,351
Equateur	3,950
Kivu	2,469
Bandundu	2,173
Kasai Oriental	1,186
Kasai Occidental	<u>1,147</u>
TOTAL:	62,013

Because of unsettled conditions during the first five years of Independence (1960-65), OCA constructed a total of only 28 housing units during that period.

Today, a total of 9,718 housing units remain under management by OCA's successor agency, the National Housing Office (Office National de Logement - ONL), located in four cities:

Kinshasa	3,060 Units
Kisangani	2,194
Bukavu	2,573
Lubumbashi	<u>1,891</u>
TOTAL:	9,718 Housing Units

OCA determined that an economic rental on its units would require an annual payment equivalent to 7.6% of its total investment representing a monthly payment of almost Z3 for the cheapest unit at a time when the minimum wage in Kinshasa was Z9 a month. However, as a social measure, annual rents were set at 4% of total investment, the remaining 3.6% to be paid by GOZ as an annual subsidy. Rents on these units in Kinshasa today may be as low as Z 1.40 a month.

After Independence, the subsidies were not paid, and disturbed conditions made collections very difficult. The massive deficit accumulated was inherited by ONL.

OCA RENT COLLECTIONS AND DELINQUENCIES: 1960 - 1965

	<u>Amount Due</u>	<u>Collections</u>	<u>Percentage Delinquents</u>
1960	Z32,611	Z12,559	61%
1961	66,365	24,968	62%
1962	66,233	55,504	16%
1963	65,319	32,161	51%
1964	78,308	47,755	39%
1965	<u>69,421</u>	<u>36,754</u>	<u>47%</u>
TOTAL:	Z378,257	Z209,701	44.6%
	<u>-209,701</u>		

Z168,556 Accumulated Delinquencies

2. The National Housing Office (ONL)

Created in 1965, organized in 1966, and reorganized in 1967, ONL

inherited the liabilities and assets of both OCA and the Fonds d'Avance. It has acted chiefly as GOZ's construction agency, performing technical studies and executing projects by force account.

It has carried out specific projects for GOZ, including development of housing projects, and in recent years also has contracted for construction jobs like any commercial firm.

Two housing projects have been complete by ONL:

Limete-Sud	200 units	Upper Income
Concession Reghini	450 units	Economic

The Limete-Sud apartments were built with GOZ advances totaling Z.950,000. ONL sold these units to the Fair Authority. The economic units on the Reghini site in Lemba, adjacent to Cité Salongo were financed with a five year advance from the Social Security System. When longer term financing could not be found, the units were sold to the Army.

Development costs for the Lemba units was Z1.2 million, and the units ranged in price from Z.3,000 - 6,000. This was to have been the first phase of a 7,300 - unit project consisting of housing ranging from economic to luxury on 208 has., representing a total investment of Z.50 million. Financing has not been forthcoming, and no work has been done after completion of the 350 - unit first phase.

In the absence of GOZ budgetary support, ONL has turned into more or less of a construction firm, competing with the large and usually better equipped and financed expatriate companies. For instance, it had the contract for the infrastructure for a portion of the HG financed Cite Salongo Project, and another for work on the Sports Stadium in preparation for the Foreman-Ali fight. At the time of the team's visit, its future was being discussed by GOZ in connection with Government policy in the entire, and now nationalized, construction industry.

3. Office of the Presidency

During the last few years, about half of GOZ direct investment in development projects has been executed by the Office of the Presidency, rather than by the technical department concerned, and housing is no exception.

Housing-Related Projects by Office of the Presidency:

1967-70

<u>Year</u>	<u>Project</u>	<u>Development Cost</u>
1967	Cité OAU (guest housing for organization of African Unity Conference)	Z. 1.0 million
	Army Housing	1.2 million
1970	Party Convention, Hotel and housing complex at N'Sele	5.6 million
1970	Lubumbashi housing projects (182 units)	.8 million
TOTAL:		8.6 million

The majority of the investment has been associated with special purpose projects, usually for elements (Army, Party) significant in ensuring political stability.

The Lubumbashi housing consisted of two projects, Cité Mobutu and Cité Zaire, with costs ranging from Z2,400 to 3,900.

Two years ago, the Presidency contracted to have built in Kinshasa 450 units costing about Z15,000 each for army officers. Located towards the limits of urban development, the units have never been accepted, because many of them lost their roofs in a windstorm.

Another small project was carried out by the Ministry of Public Works, using force account, to construct 200 units of disaster relief housing. Constructed of concrete block, without finish, they cost Z 2,000 with no infrastructure.

4. The Proposed National Construction Company (ENC)

When the GOZ nationalized the construction industry in 1973, the legislation called for organization of a National Construction Company (Enterprise Nationale de Construction - ENC). At the time of the team's visit, there was considerable speculation as to the exact nature of the activities of the ENC and how and to what extent it would absorb the ONL.

II. B. The Government as Financier

1. Fonds d'Avance

Organized by the colonial government in 1929 for the city of Leopoldville, and subsequently extended to serve the entire country, the Fonds loaned money to 'advanced' Congolese for home construction completion and improvement, and for the purchase of houses built by OCA.

Starting with initial loans valued at 3 million Belgian francs (equivalent Z. 30,000) in 1931, the fund increased until about Z.5 million a year was budgeted the last two years before Independence.

After Independence, until its portfolio was absorbed by ONL, the Fonds made no new loans.

Additional financing, particularly for larger families, was provided by the King's Fund (Fonds du Rois) established in 1955 at the time of a visit by Kin Badouin.

2. CNECI - The National Savings Bank

CNECI, the Caisse National d'Epargne et de Credit Immobilier, was created in 1971, and opened its doors in 1972, in response to an initiative by the Office of Housing; it has been the Borrower and Implementing Agency for a \$10 million HG program.

CNECI was established to initiate a national savings system and to utilize its savings to finance housing. Its enabling legislation permitted

it to develop either as the national savings institution itself, with branches throughout the country, or eventually to spin off its operating agencies to become an agency providing supervision and liquidity.

Capitalization of Z 2 million was to be provided by the GOZ. The Government actually paid in half, but at the time of the team's visit had neither paid in the second Z 1 million, nor contributed an additional Z 500,000 requested by CNECI and A.I.D..

The CNECI savings program developed quite rapidly during its first two years, with deposits totaling more than Z 2 million from 53,200 depositors. These have been invested in some 320 loans totaling about Z 1.8 million.

CNECI has suffered from all of the administrative and organizational difficulties that normally affect new institutions in developing countries; and its preoccupation with the construction difficulties - and they have been substantial - associated with its major effort to develop the 1,100 unit Cite Salongo housing project financed under the HG program, has left it little excess capacity for resolution of its numerous developmental problems as a savings institution.

### 3. Housing Allowances

The country's minimum wage philosophy, which was instituted in Kinshasa with a 1922 decree and extended over the entire country by Decree of May 26, 1951, identified housing allowances as one of three components of minimum wage rates.

These components are identified as:

- a. Minimum daily pay;
- b. An allocation for food which should enable the worker to satisfy his hunger, and is set in terms of the retail cost on the local market of sufficient food to provide a certain calorie intake, which varies

in accordance with the type of work; and

c. Provision of "suitable housing and necessary sleeping furnishings", either in kind or through allowances.

Some of the enclave industries, such as transportation, mining or refining, have constructed company towns, or as in forestry, provided more temporary lodging in barracks.

Housing allowances in the private sector vary from as little as Z 1 to Z 5 per month for employees of smaller-sized firms, to Z 10 - 15 a month for employees in the larger and better organized industries.

GOZ employees benefit generally from a more generous level of remuneration, and housing allowances, are also more important. For upper-level servants, these range up to as much as one-fifth to one-third of the basic salary.

## II. C. Support and Regulatory Activities

### 1. Housing Policy - The Department of Social Welfare

The Department of Social Welfare, to which ONL was originally attached, has a small Directory of Housing, one of whose statutory functions is the elaboration of the country's general housing policy. The Division of Housing Policy has two sections, one devoted to financing, the other to contracts and associations. The Division currently is working up a proposed action program for dealing with urban and rural housing, and is preparing to recommend establishment of a National Housing Council to act as a steering committee grouping representatives of the various technical and financial services involved in housing.

The other Division is concerned with housing promotion. One section is to study construction materials. The other provides technical assistance to rural self-help housing projects, of which it has undertaken four in the northwest Kivu province.

In general, the Housing Division staffing appears meager for the role assigned it.

## 2. Urban Planning

Master plans are prepared in the Urbanization Office of the Ministry of Public Works. Many date from the colonial administration and are now being revised, including Lubumbashi and Kisangani. Plans for development of new areas in Bandundu, Mbandaka, Nananga and Mubuji-Mayi are also underway.

Plans for Kinshasa are still under study. They were begun by the French Urbanization Mission which has now been absorbed into the Urbanization Office of Public Works. It was expected that new plans would be completed and approved in early 1975. Delays have been caused by difficulties in determining the amount of expropriation and demolition appropriate for proper improvement of circulation and neighborhood access. Until the plan has been approved, however, the issuance of any building permits has been halted.

New developments in Kinshasa will most likely be in the Ndjih area along the road to the airport and beyond. Utilities and major access to the city already follow this route and a series of satellite communities will branch off of it as is already happening spontaneously. A resettlement scheme is being developed in this area at Mpsa.

## 3. Building Codes and Permits

The master plans include proscriptions and regulations as to lot sizes and set-backs as well as the type of construction for each area of the city. Applications for building permits are made at the Hotel de Ville and plans are reviewed by Public Works, the Urbanization Office, and the health service. Electrical installations are inspected by the electric company SNEL during construction and then tested on completion. The water company REGIDESO inspects the property before construction starts to assure

that water connections can be made. The Direction de la Comptabilite et des Marches of the Ministry of Finance reviews construction contracts for public projects, and Public Works establishes standard general conditions and specifications which, in principle, also regulate private contracts.

4. Aerial Surveys

The Institut Geographique prepares aerial surveys of cities on a periodic basis. The most recent survey of Kinshasa was made in 1972.

5. Training

The center for training of Urban Technicians in the Ministry of public Works provides seminars and courses up to a year long to improve the skills of technicians working at the sub-professional level in urban agencies. Professional level technicians are offered training abroad through the French urban planning center, SMUH.

III. The Housing Sector

A. The Construction Industry

1. Structure and Capacity

In November 1973, the President announced the creation of a national construction company to Zairianize the building industry and its profits. Firms based in Kinshasa were required to submit financial statements as of the end of 1973 and implementation was expected in 1974. Details of the restructuring have not yet, however, been made public by the Commisar of Public Works. It is understood that most construction firms will continue individual operation, but the form of participation and control by the national company has not yet been defined.

a. Structure

The industry has been dominated by a small group of large builders controlled by expatriate interests often carried over from companies established during the colonial administration. In a Government study of an estimated 80% of the businesses in Zaire in 1970, sixty-one construction firms, not including artisinale builders, were surveyed. Tables III A-1 and III A-2, drawn from the study, summarize the structure of the industry. Seven firms, (indicated by \* in Table III A-2) or 11% of the total, had 31.6 million Z or over 73% of the total business for that year. They averaged 4.5 million Z and almost 2000 permanent employees. Financial statements submitted by those that were interested in the contract for the Cite Salongo housing project showed that all were Belgian, established as early as 1949 with assets in 1971 ranging up to 10 million Z. Individual enterprises, on the other hand, which were 49% of the construction firms surveyed (66% of those identified as being specifically in housing and building) had only 1.6 million Z or less than 4% of the total business for that year. They averaged less than 55,000 Z and 44 permanent employees.

TABLE III A-1 STRUCTURE OF THE CONSTRUCTION INDUSTRY (1970)  
Survey of 61 firms - not including artisanal builders

No. and type of firms:

		<u>Roads</u>	<u>Buildings</u>	<u>Painting, elec., plumbing</u>	<u>Other construction</u>	<u>Total</u>	<u>Percentage Distribution</u>	<u>Distribution All sectors</u>
<u>REGIONAL DISTRIBUTION</u>								
(including branches)	<u>No. of firms</u>							
Kinshasa	30	4	12	7	8	31	36.0	26.2
Matadi	4		4		2	6	7.0	8.7
Bandundu	3		4			4	4.7	5.2
Mbandaka	3	2	2			4	4.7	7.8
Kisingani	4	2	2	1		5	5.8	16.3
Bukavu	2		5			5	5.8	12.2
Lubumbashi	13	6	15	3	3	27	31.4	18.1
Kananga	2		3			3	3.5	2.9
Mubuji Mayi			1			1	1.1	2.6
	<u>61</u>	<u>14</u>	<u>48</u>	<u>11</u>	<u>13</u>	<u>86</u>	<u>100%</u>	<u>100%</u>
<u>LEGAL STRUCTURE</u>								
S.A.R.L.(corporations)		2	4	2	6	14	23.0	17.6
S.P.R.L.(partnerships)		6	7	2	1	16	26.2	25.9
Individual enterprises			23	4	2	29	47.5	49.0
Other legal forms			1		1	2	3.3	7.5
		<u>8</u>	<u>35</u>	<u>8</u>	<u>10</u>	<u>61</u>	<u>100%</u>	<u>100%</u>
<u>DATE OF ESTABLISHMENT</u>								
Before 1930		1	1			2	3.3	2.9
1930 -1940							0.0	2.4
1940 -1950			1	1		2	3.3	6.8
1950 -1960		2	8	3	5	18	29.5	24.3
1960 -1967		2	12		3	17	27.9	30.8
1967 -1970		2	8	4	2	16	26.2	16.9
Indeterminate		1	5			6	9.8	15.9
		<u>8</u>	<u>35</u>	<u>8</u>	<u>10</u>	<u>61</u>	<u>100%</u>	<u>100%</u>
<u>ANNUAL BUSINESS</u>								
Under 10,000 Z			1	1	1	3	4.9	7.2
10 -25,000			7	1		8	13.1	11.6
25 -50,000	1		7	3	1	12	19.7	13.3
50 -100,000			4	1	1	6	9.8	21.0
100 - 250,000			8		3	11	18.0	20.4
250 - 500,000	1		3		2	6	9.8	10.3
500 - 1,000,000	3			1	2	6	9.8	6.0

TABLE III A - 1 continued

	<u>Roads</u>	<u>Buildings</u>	<u>Painting, elec., plumbing</u>	<u>Other construction</u>	<u>Total</u>	<u>Percentage Distribution</u>	<u>Distribution All sectors</u>
<u>ANNUAL BUSINESS</u>							
Over 1,000,000	3	4	1		8	13.1	9.3
Indeterminate		<u>1</u>			<u>1</u>	<u>1.8</u>	<u>0.7</u>
	<u>8</u>	<u>35</u>	<u>8</u>	<u>10</u>	<u>61</u>	<u>100%</u>	<u>100%</u>
<u>PERMANENT WORK FORCE</u>							
Under 20	1	6	2	2	11	18.0	39.5
20 - 50		8	4	3	15	24.6	23.1
50 - 100		10		1	11	18.0	13.9
100 - 500	5	6	2	4	17	27.9	16.9
500 - 1,000						0.0	0.3
Over 1,000	2	4			6	9.8	3.7
Indeterminate		<u>1</u>			<u>1</u>	<u>1.7</u>	<u>0.3</u>
	<u>8</u>	<u>35</u>	<u>8</u>	<u>10</u>	<u>61</u>	<u>100%</u>	<u>100%</u>

SOURCE: Department de l'Economie, Enquete sur les Entreprises 1969 - 70

TABLE III A - 2 PRODUCTIVITY IN THE CONSTRUCTION INDUSTRY  
Survey of 61 firms - not including artisanal builders

	<u>Roads</u>	<u>Buildings</u>	<u>Painting, elec., plumbing</u>	<u>Other const.</u>	<u>Total</u>	
<b>a. TOTAL ANNUAL BUSINESS</b>						
S.A.R.L. (corporations)	6,961,951*	15,939,354*	2,096,550	1,673,283	26,671,148	
S.P.R.L. (partnerships)	3,968,342	1,420,585	109,734	362,390	5,861,051	
Individual enterprises		1,289,334	105,438	193,370	1,588,142	
Other legal forms		8,709,921*		115,315	8,825,236	
<b>Total</b>	<b>10,930,293</b>	<b>27,359,194</b>	<b>2,311,722</b>	<b>2,344,358</b>	<b>42,945,567</b>	
<b>b. PERMANENT EMPLOYEES</b>						
S.A.R.L.	3,164*	7,789*	522	312	11,787	
S.P.R.L.	1,465	777	84	32	2,358	
Individuals		1,000	79	225	1,304	
Others		2,737*		32	2,769	
<b>Total</b>	<b>4,629</b>	<b>12,303</b>	<b>685</b>	<b>601</b>	<b>18,218</b>	
<b>c. AVERAGE NO. EMPLOYEES</b>					<u>Average</u>	<u>Average All sectors</u>
S.A.R.L.	1,582*	1,947*	261	52	842	735
S.P.R.L.	245	111	42	32	147	102
Individuals		44	20	113	45	51
Others		2,737*		32	1,385	716
<b>Total</b>	<b>579</b>	<b>351</b>	<b>86</b>	<b>60</b>	<b>299</b>	<b>290</b>
<b>d. AVERAGE BUSINESS</b>						
S.A.R.L.	3,480,976*	3,984,839*	1,048,275	278,881	1,905,081	1,761,194
S.P.R.L.	661,390	202,941	54,867	362,390	366,376	368,527
Individuals		56,058*	26,359	96,685	54,764	88,015
Others		8,709,921		115,315	4,412,618	2,851,595
<b>Total</b>	<b>1,366,287</b>	<b>781,691</b>	<b>288,965</b>	<b>234,436</b>	<b>704,026</b>	<b>663,430</b>
<b>e. PRODUCTIVITY(a'/.b)</b>						
S.A.R.L.	2,200*	2,046*	4,016	5,363	2,263	2,435
S.P.R.L.	2,709	1,828	1,306	11,325	2,486	3,622
Individuals		1,289*	1,335	859	1,217	1,743
Others		3,182		3,604	3,187	3,983
<b>Total</b>	<b>2,361</b>	<b>2,224</b>	<b>3,375</b>	<b>3,901</b>	<b>2,357</b>	<b>2,856</b>

\*Seven largest builders

SOURCE: Department de l'Economie, Enquete sur les Entreprises 1969 - 70

b. Major Builders

The extent and the limited competition of the large builders enable them to set the practices and standards of the industry. The Government being the principal client, they are regulated somewhat by the Cahier des Charges des Travaux Publics, a set of fixed general conditions and materials references included in all contract documents. While profit levels in road and public works construction according to figures from the 1970 survey are over 20%, in building construction they are less than 5%. High prices, at least in house building, are due more to the structure of the economy generally, and heavy overhead costs. The established firms do not have a monopoly in the sense that new builders have been able to enter the field including firms associated with European and American companies. The new builders have not, however, achieved any lower prices.

Recent housing experience of both new and established firms is not extensive as major housing developments since independence have been limited. There has been faulty work and poor contractor performance on some, however, and none of the builders specializes in housing or has developed any notable efficiency.

c. Small Builders

Of the smaller firms, fifteen Zairois have been identified by the CNECI as qualified builders for homes built or improved through its loan program. Some have expatriate foremen and engineers on their staff, and some operate blockmaking or other businesses as well. Their capitalization is limited. The largest of those recognized by the CNECI have assets on the order of 100,000 Z.

Their performance has been satisfactory on individual jobs, but bids on parcels of the CNECI's contemplated Inga Fani project were unrealistic and indicated weakness in cost estimating and presumable therefore

TABLE III A - 3: BREAKDOWN OF MATERIAL, LABOR, OVERHEAD, AND PROFIT COMPONENTS OF CONSTRUCTION COSTS  
Shown as percentages of total

	<u>Roads</u>	<u>Buildings</u>	<u>Painting, elec., plumbing</u>	<u>Other const.</u>	<u>Total Average</u>	<u>Average all sectors except mining industry</u>
A. MATERIALS:						
1. local	33.7	34.8	16.7	7.8	30.5	20.4
2. imported	4.5	14.5	35.7	22.2	13.5	16.0
total	38.2	49.3	52.4	30.0	44.0	36.4
B. IMPORT TAXES	1.5	7.8	5.6	5.7	5.6	6.8
C. SERVICES + Transport	6.3	3.9	2.6	8.2	5.0	10.2
D. BANKING CHARGES	0.1	0.1	0.0	0.3	0.1	0.3
E. TOTAL INTERMEDIATE CONSUMPTION (A+B+C+D)	46.1	61.1	60.6	44.2	54.7	53.7
F. LABOR:						
1. skilled	7.4	9.8	5.2	4.9	8.6	3.8
2. unskilled	6.2	7.8	3.4	5.1	6.9	8.2
3. temporary	0.6	0.8	0.9	0.0	0.7	0.5
subtotal	14.2	18.4	9.5	10.0	16.2	12.5
G. MANAGEMENT PERSONNEL						
1. African	0.4	0.6	0.4	0.7	0.5	2.6
2. expatriate	3.8	8.0	7.4	14.0	6.7	7.4
subtotal	4.2	8.6	7.8	14.7	7.2	10.0
H. TOTAL LABOR COMPONENT (F + G)	18.4	27.0	17.3	24.7	23.4	22.5
I. AMORTIZATION OF CAPITAL INVESTMENTS						
1. buildings	0.4	0.3	3.1	0.4	0.4	3.0
2. transport vehicle	4.3	1.7	4.0	0.7	2.3	3.8
3. equipment	4.2	4.2	3.3	0.8	4.0	2.5
4. others	1.9	0.0	0.0	0.0	0.4	0.3
total	10.8	6.2	10.4	1.9	7.2	9.6
J. OTHER INDIRECT COSTS						
1. financing costs	0.4	0.3	0.1	0.7	0.3	1.2
2. taxes	3.3	0.6	0.3	0.7	1.3	4.9
3. insurance	0.3	0.2	0.1	0.6	0.3	0.5
total	4.0	1.1	0.5	2.0	1.9	6.6
K. TOTAL INDIRECT COSTS (I + J)	14.8	7.3	10.9	3.9	9.1	16.2

TABLE III A - 3 continued

	<u>Roads</u>	<u>Buildings</u>	<u>Painting, elec., plumbing</u>	<u>Other const.</u>	<u>Total Average</u>	<u>Average all sectors except mining industry</u>
L. NET PROFIT	20.7	4.6	11.2	27.2	12.7	7.6
M. TOTAL VALUE-ADDED (H+K+L)	53.9	38.9	39.4	55.8	45.3	46.3
N. TOTAL CONSTRUCTION COST (E+M)	100.0	100.0	100.0	100.0	100.0	100.0
(A+F)						
O. TOTAL MATERIAL + LABOR	52.4	67.7	61.9	40.0	60.2	48.9
P. TOTAL OTHER COSTS	47.6	32.3	38.1	60.0	39.8	51.1
Q. P/.O	90.8	47.7	61.4	150.0	66.1	104.5

SOURCE: Department de l'Economie, Enquete sur les Entreprises 1960 - 70

TABLE III A - 4: HOUSING EXPERIENCE OF MAJOR BUILDERS

Auxeltra-Beton:

94 units averaging 11,850 Z completed  
600 units averaging 3,300 Z under construction

Safricas:

6150 units averaging 780 Z completed 1957-59

Compagnie de Constructions Congolaise (CCC):

1150 units built 1957-60  
80 villas built 1951-59

Zaireal:

1000 units averaging 3,500 Z completed 1974  
500 units averaging 3,300 Z under construction

Dumon and Vander Vin:

196 units averaging 4,950 Z completed 1971

Dumez:

450 units averaging 10,700 Z completed 1974

Kalikak:

Several small project complete and under construction

Source: C.N.E.C.I.

in efficiency of management. This is borne out by the Government survey of businesses. Line E of Table III A - 2 drawn from the survey's figures on total annual business and the number of permanent employees, shows that productivity, as defined by the value of annual output per worker, of individual enterprises in an average 1217 Z/worker or only slightly better than half of the 2263 Z/worker of large corporate firms. It might be argued that the difference only reflects more labor intensive methods in smaller firms, but since prefabricated components and other labor-saving techniques are not common even on large jobs they probably do not affect measures of productivity. The employment of temporary labor is not significant (see Table III A - 8) but as its extent is greater for the smaller firms the difference in productivity, if included, would be somewhat larger.

The smaller firms are primarily lacking the capital and the experience to handle larger jobs. Small housing projects or the breaking up of large projects into small parcels within their scope could be one way to help them gain management experience. They would be dealing with a contract for multi-unit construction in a concentrated area with greater opportunities for efficiencies than scattered single unit jobs. A great deal of control, coordination, and probably technical assistance would be needed and initially, contracts should probably not be any larger than their current annual production. Builders with businesses of 50 to 100,000 Z/year, for example, would probably not be able to handle any more than 10 to 20 5,000 Z houses. If successful, their capital and capacity would slowly build up. The Office de Promotion des Petites et Moyennes Entreprises Zairois (OPEZ) has been established to help with this kind of development of small businesses. Eventually some would achieve management skills that with capital inputs would enable them to gear up to larger projects presently dominated by expatriate firms. All this would take some time.

d. The ONL

Though the Office Nationale de Logement (ONL) was set up to develop and manage Government housing schemes (see Section 3 E.2.), it has been operating more as a general contractor on diversified public jobs and as such is the only large Zairois construction firm. It built 500 units averaging 6,600 Z between 1965 and 1972. More recent work has included office structures at the airport and parts of the new stadium. It has not, however, lived up to expectations and some of the discussions of the new National construction company relate to the experience with the ONL and its role in the sector. Job management will be the key hurdle in the effectiveness of the new company and Zairianization of the industry generally. The goals can be achieved if large builders, under the new company, have profit incentives to keep management at its current levels and at the same time accelerate counter-part training with progressive turnover of responsibilities based on experience. This too will take some time and short range cost savings should not be expected. Some of ONL's problems on recent jobs, for example, may be due to unrealistically low prices.

e. Artisanal Builders

Almost all housing in the popular sector is built by the owner, his family and his friends. A 1967 study of construction in squatter areas of Kinshasa by the Institute de Recherches Economiques et Sociales (IRES) indicated that in about half the cases the owner-builder employs professional masons to help with the work and almost always employs professional carpenters to do the roof. Entrepreneurs who undertake the whole job, however, have not really developed. The level of skills needed for this kind of construction is not high and the capacity of owner-builders depends almost entirely on their means.

f. Other Builders

A substantial volume of construction, particularly in housing, is undertaken directly by private companies and government agencies using their own employees on force account. The University, for example, has its own construction division employing 1300 people. Its work has included dormitories, housing, commercial and service facilities, even a nuclear reactor building. Similarly much of the company housing and facilities related to mining complexes in the interior were built by passing or supplementing the work of regular construction firms. Missionary posts too have undertaken their own building programs. Some are beginning to launch self-help housing schemes for its parishioners.

The repartition of the total volume of construction is reflected in the sales of CIZA, the major cement manufacturer. Table III A-5 shows relative cement consumption if sales to suppliers and manufacturers of cement products are set aside assuming that their supplies and products are purchased more or less in the same proportions as direct sales to builders, individuals, companies, government agencies and religious groups.

TABLE III A - 5

REPARTITION OF CONSTRUCTION\*

	<u>Percentage of Total Sales</u>		<u>Percentage of Direct Sales</u>
Suppliers	41.8	Builders	58.4
Manufactures of Cement Products	8.2	Individuals	21.0
Direct Sales to Consumers	50.0	Companies	5.8
		Government	12.6
		Religious Groups	<u>2.2</u>
TOTAL	<u>100.0</u>	TOTAL	100.0

Source: Conjoncture Economique

\*As indicated by CIZA Cement Sales (1970)

g. Contractual Practices

Both publicly bid and negotiated contracts are common. As practiced in Zaire, they heavily favor the builder. The completeness of drawings and contract documents varies widely. Reference is generally made to the Cahier General des Charges which sets general conditions and materials specifications for public works contracts. Overhead costs including import taxes and a large amount for expatriate personnel are high (see Table III A-3) running up to 50% of direct costs. Profit margins are about 5% on house construction, but go significantly higher on other work. Builders generally require a 20% advance and utility companies 50% or more. Builders will provide a bank guaranty on the advance. Utility companies will not.

The contract may stipulate a retention, generally 10%, of each payment due builder which serves as a performance guaranty (retenue de garantie) or builders may provide instead a bank guaranty (caution definitif), again generally 10%, of the contract total. In either case, the guaranty is held for one year after completion of the work, and if no latent defects have been evidenced, the guaranty is released.

All contracts include formulas for extra payments due builder for inflationary cost increases measured by indices published by Public Works and IRES, a division of the University (these increases are plotted in Table III A-11). Increases are calculated each month as follows:

TABLE III A - 6

Computation of Inflationary Increases

	Local Materials	32%	
	Imported Materials	17%	
	Exchange Rate	24%	
total work (x)	Local Labor	10% (x)	percentage increase
executed	Expatriate Per.	4%	in relevant index
during the	Transport (Deisel Fuel)	3%	since bid submission
month			

Source: CGDG

h. Total Capacity

The total volume of construction declined in 1972 from its high of 73.1 million Zaires in 1971. This was primarily due to completion of the first phase of the Inga Hydroelectric project, and temporary suspension of the authorization of building permits in Kinshasa pending revision of the Master Plan. Table III A - 7 summarizes the volume of work from 1970-72 and the relation of the construction sector to the economy. Methods of calculating investments and value added were changed in 1970 and figures on volume before that date would not be comparable. Levels of cement consumption,

however, shown on the same table do give an indication of long range trends in the industry. During the period of economic upheavals of the 1960's, public investments and the volume of commercialized construction fell and did not fully recover pre-independence levels until 1970. The slump was buffered somewhat, at least in the building materials sector by the growth of squatter settlements. Construction volume picked up again as the economy stabilized and from 1968 to 1972, cement consumption, spurred by the Inga Dam construction, grew more than 60%. Excess cement production in 1972 due to the dip in construction volume noted in Table II A-7 was exported. In 1973 and 1974 construction volume picked up again with several new important projects.

The major builders have the capacity to continue this growth, but management of these firms is dependent on expatriate personnel (see Section III.2.). With the creation of the National Construction Company and Government efforts to increase Zairois control, continued growth will depend on maintaining current management levels while accelerating training and integration of competent Zairois. Current inflation trends (see Section III.3.) may also have a profound effect on the industry.

## 2. Availability of Labor

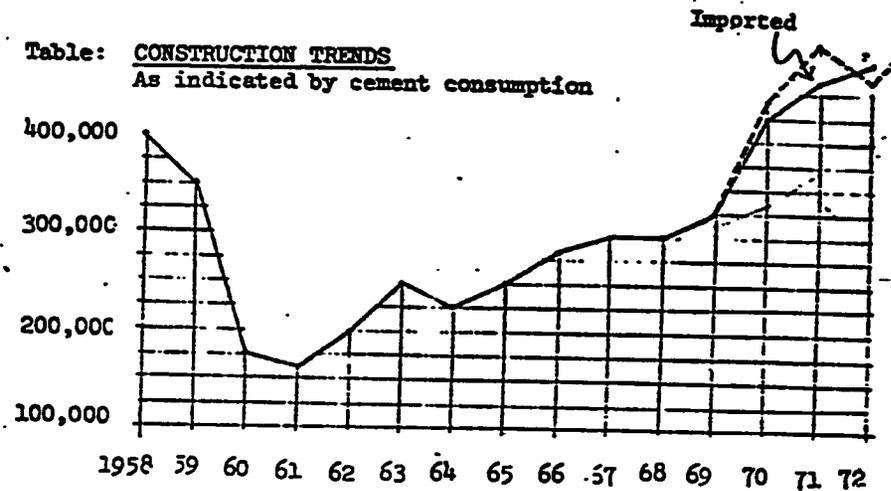
The labor force of the country is large, and while upgrading the level of skills needs to be continued, there have not been serious shortages of skilled workers in the building trades. Though 2% are expatriates, these are generally specialists, masons and carpenters being drawn from the artisanal sector as needed. A more important problem for the industry is a shortage of experienced supervisory personnel and integration of competent Zairois into the management of building firms.

In 1970 less than one third of the supervisory personnel were African while almost two thirds were in other sectors of the economy. Less than 20% were in management positions occupied by more than 40% Africans in

**TABLE III A - 7 INVESTMENTS IN CONSTRUCTION**  
Relation of the sector to the economy

	At 1970 prices			At market prices			volume index 1970 = 100		price index 1970 = 100	
	1970	1971	1972	1970	1971	1972	1971	1972	1971	1972
A. Investments in construction + public works (million Z)	64.5	73.1	66.0	64.5	83.9	72.2	114.4	102.2	114.8	109.4
B. Total investment (million Z)	199.8	243.7	271.8	199.8	264.1	307.0	121.9	136.0	108.4	113.0
C. A as a percentage of B	32.3	30.0	24.3	32.3	31.8	23.5				
D. Value added by construction + public works (million Z)	30.0	34.3	30.7	30.0	39.4	33.6	114.4	102.2	114.8	109.4
E. Value added by artisanal construction (million Z)	15.0	17.2	15.3	15.0	19.7	16.7	114.4	102.2	114.8	109.4
F. Gross domestic product	362.8	1026.7	1053.5	962.8	1032.4	1140.8	106.7	109.4	100.6	108.3
G. D + E as a percentage of F	4.7	5.0	4.4	4.7	5.7	4.4				

Table: CONSTRUCTION TRENDS  
As indicated by cement consumption



Source: Conjoncture Economique

Source: Bank of Zaire

TABLE III A - 8 SKILLS, EMPLOYMENT, AND WAGES IN THE CONSTRUCTION INDUSTRY(1970)  
Survey of 61 firms - not including artisanal builders

	-----Roads-----		---Buildings---		Painting, -elec., plumb.-		--Other const.-		---Total or Average-----		
	<u>African</u>	<u>Expat.</u>	<u>African</u>	<u>Expat.</u>	<u>African</u>	<u>Expat.</u>	<u>African</u>	<u>Expat.</u>	<u>African</u>	<u>Expat.</u>	<u>Total</u>
<b>A. Repartition of Employment</b>											
Directors	5	46	14	55	1	12	10	22	30	135	165
Foremen	42	67	98	228	7	20	8	4	155	319	474
Skilled	2,033	70	4,956	79	261		112	1	7,362	150	7,512
Unskilled	2,366		6,872	1	384		444		10,066	1	10,067
Total	4,446	183	11,940	363	653	32	574	27	17,673	605	18,218
<b>B. Average Wage (Z per month)</b>											
Directors	130	378	146	534	78	480	81	478	108	467	796
Foremen	71	271	64	365	77	255	43	294	63	337	1,408
Skilled	25	363	22	351	25		18	563	22	358	2,616
Unskilled	22		16		18		14		18		2,191
<b>C. Total Wages (thousand Z)</b>	1,273	732	2,752	1,684	160	130	133	147	4,318	2,693	7,011
<b>D. Repartition of Employment</b>											
Directors	0.1	1.0	0.1	0.4	0.1	1.8	1.7	3.7	0.1	0.8	0.9
Foremen	0.9	1.5	0.8	1.9	1.0	2.9	1.3	0.7	0.9	1.7	2.6
Skilled	43.9	1.5	40.3	0.6	38.1		18.6	0.1	40.4	0.8	41.2
Unskilled	51.1		55.9		56.1		73.9		55.3		55.3
Total	96.0	4.0	97.1	2.9	95.3	4.7	95.5	4.5	96.7	3.3	100.0
<b>E. Repartition of Wages</b>											
Directors	0.4	10.4	0.6	8.0	0.3	23.8	0.4	51.1	0.6	10.9	11.5
Foremen	1.8	10.9	1.7	22.7	2.2	21.1	1.1	5.7	1.7	18.6	20.3
Skilled	26.6	15.2	28.7	7.8	25.4		18.8	2.7	28.4	9.3	37.7
Unskilled	34.7		30.7		27.2		20.2		30.5		30.5
Total	63.5	36.5	61.7	38.3	55.1	44.9	40.5	59.5	61.2	38.8	100.0

TABLE III A - 8 continued

F. Temporary Employment	---Roads---		---Buildings---		Painting, -elec., plumb.-	---Other const.--	---Total or Average-----		
	<u>African</u>	<u>Expat.</u>	<u>African</u>	<u>Expat.</u>	<u>African</u>	<u>Expat.</u>	<u>African</u>	<u>Expat.</u>	<u>Total</u>
Man-months	4,321		5,768		856				
Wages (000)	64		129		15	35	10,980		10,980
% of C.	5.0		4.7		9.4	0.5	208.5		208.5
						0.4	4.8		3.0

Source: Department de l'Economie, Enquete sur les Entreprises 1969 - 70

other sectors. Because of the exceptionally high costs of expatriates who earn on an average about 5 times more than Africans in the same category, total expatriate costs represent almost 40% of total labor costs even though in all they make up a little more than 3% of the permanent work force.

Some progress is being made, but training programs will have to be accelerated if the industry is to achieve the same levels as the rest of the economy. In the long run, the disparity could prove a restraint on the capacity of the industry. As costs rise, the number of expatriates will probably not increase, but unless well trained Zairois are given experience, they will not be able to keep up with the growing pace of construction.

TABLE III A - 9

Growth in Integration of Africans (1969-70)

	<u>Construction Sector</u>		<u>Average All Sectors</u>	
	<u>Africans</u>	<u>Expatriates</u>	<u>Africans</u>	<u>Expatriates</u>
<u>Directors</u>				
1969	14.4%	85.6%	43.9%	56.1%
1970	18.2	81.8	44.9	55.1
<u>Supervisors</u>				
1969	30.4	69.6	61.4	38.6
1970	32.7	67.3	62.8	37.2
<u>Total Employment</u>				
1969	96.4	3.6	97.4	2.6
1970	96.7	3.3	97.5	2.5
<u>Total Wages</u>				
1969	53.6	46.4	56.7	43.3
1970	61.2	38.8	60.8	39.2

Source: Department de l'Economie, Enquete sur les Entreprises 1969-70

The construction sector generates over 20,000 jobs. It is estimated that housing projects typically being built provide 1300 man months of employment per 100 units or about 1000 man months per million dollars of investment.

### 3. AVAILABILITY OF MATERIALS

A good variety and supply of materials are available in Zaire, at least in Kinshasa, and recent investments in new facilities assure continued growth though shortages are still common. The cost of materials, however, is rising alarmingly.

#### a. Local Materials

Zaire has a number of workable calcium deposits for the manufacture of cement. The most significant is at Lukala, midway between Kinshasa and Matadi on the railroad line between the two centers. The plant was opened in 1920 by a company now named CIZA and has been expanded several times. In 1970 it was producing at its capacity of 320,000 tons per year, and in 1971, 62,000 tons had to be imported (See Table III B-11). In 1972 a new production line was added that doubled the plant's capacity to meet demands of the lower Zaire - Kinshasa area which absorbs 65% of the country's output. Occasional shortages still develop, however, and builders must purchase in bulk and stockpile. Individuals are not always able to buy, and public projects take priority on supplies.

Plants at Lubudi in the region of Lubumbashi; Likasi and Kabumba also in the Shaba area; and Katana near Bukavu have sufficient capacity to meet the needs of the eastern portion of the country and export some to Rwanda and Burundi.

To meet future needs and take advantage of export markets, the Government created a National cement company (CINAT) with a 300,000 ton capacity

plant opened in 1974 at Kimpese in the lower Zaire region. It was built with a 97 million DM investment by the West German group Klockner. Controlling interest of 51% is held by the Government. To amortize the investment, the wholesale price of cement was raised in October 1974 from 19.66 to 36.10 Z/ton.

Sand is taken from river beds when water is low. Builders will often quarry stone and gravel themselves if a site is located near the job. In Kinshasa good supplies come from Kinsuka on the river near Kinshasa or Kasangulu 30 km from town on the railroad. While abundant enough, the cost of transportation has been forcing up prices. Sand cost 3150 Z/m<sup>3</sup> in October 1974 and gravel 4920 Z/ton, up 60% and 40% respectively over the previous year.

The largest manufacturer of concrete block, SOLIDUS, can produce 15,000 blocks a day but is not always able to meet Kinshasa's demand, and numbers of small entrepreneurs make block around the city. A manufacturer in Lubumbashi supplies block to that city. Many builders avoid shortages by making block themselves either in their yards, or more often, on the job site. SOLIDUS also produces concrete piping and other shapes. It has no real competition. Dumez has recently set up an operation to make precast concrete panels. Cement tiling is made by several firms.

BRIKIN is the only manufacturer in Kinshasa of brick and clay products. Though producing about 20,000 tons per year, it does not meet demand. Brick is more expensive than concrete block at 27.5 Z per 1000 for 5 x 9.5 x 19.5 cm bricks. It is one of the few materials however, whose price, in 1974, had not yet gone up. There are also brickworks at Kolwezi and Lubumbashi. Clay brick is made artisanally in the eastern part of the country and is widely used in popular housing there.

The new steel plant at Makulu, 8 km northeast of Kinshasa can produce 125,000 tons per year of wire, reinforcing bar, small shapes; and 50,000 tons of galvanized sheeting for roofing. It is hoped the plant will eventually be

able to hold steel prices down, which rose 80% in 1974 from 229 Z per ton to over 411 Z. The plant cost 60 million Z, however, and was financed partially by Italian supplier's credits. The company, SIDERNA, is a state corporation. Imported sheeting is used by several other firms to make both galvanized and aluminium roofing, but costs have not been lower than imported metal roofing.

The most popular roofing material is asbestos-cement, produced in Zaire since 1948 using asbestos imported from Canada and cellulose from Swaziland. Protected after Independence by import restrictions, production grew at the two companies, Eternit du Zaire (Kinshasa) and Cimshaba (cement manufacturer in Lubumbashi), to a total 2.3 million m<sup>2</sup> in 1971, but with cement shortages, the decline in construction and renewed competition from galvanized and aluminum roofing, consumption fell to 1.8 million m<sup>2</sup> in 1972 and 1.9 million in 1973 or only 40% of their combined 4.7 million m<sup>2</sup> capacity. Prices increased 46% in 1974 from .48 Z per m<sup>2</sup> to .70 Z and can be expected to go up again because of cement increases.

Exports of wood and plywood have been declining due to increasing shipping costs and difficulties of transportation from forest areas to the sea. Though the volume consumed in Zaire is considerable (about 500,000 m<sup>3</sup> in 1971), its use has been limited for the most part to roof framing, formwork, ceilings, windows, doors, and furniture. This is partly due to its cost which because of fuel increases, rose more than 50% in Kinshasa during 1974 from 27 Z to 44 Z per m<sup>3</sup> for rough-sawn lumber. More, however, needs to be done to exploit wood's potential particularly in housing. Two plywood plants are located in Kinshasa. Paints and varnishes are made locally using imported bases.

b. Imported Materials

The principal materials imported are: cement, when demand exceeds local production; reinforcing bars; aluminium and galvanized steel

sheeting for metal roofing; asbestos and cellulose for asbestos cement roofing; asphalt; chemical bases for paints, varnishes and plastic products; sanitary fixtures, glazed tiles, window glass, electrical equipment, and hardware. Total direct imports of building materials are fairly constant at under 7 million Z or 10% of total investments in construction in 1970. The total import component in construction, however, including indirect imports as shown in Table III A-3 was about 30% of total materials used in 1970 or about 15% of the final cost of construction. Imports are up from the sixties when restrictions and the decline in construction volume reduced them as low as 1.3 million Z. Before Independence, imports of building materials had reached 4.7 million Z.

TABLE III A - 10: DIRECT IMPORTS OF BUILDING MATERIALS  
AS A PERCENTAGE OF TOTAL INVESTMENTS IN CONSTRUCTION

	<u>1970</u>	<u>1971</u>	<u>1972</u>
A. Imports	6.48	6.50	6.97
B. Investment	64.50	83.90	72.20
% of A:B	10.0	7.7	9.7

Source: Bank of Zaire

c. Suppliers

There are about 20 import houses dealing in building materials and about 30 distributors, not including manufacturers, who also sell imported products and major builders who import their own or buy materials directly from local manufacturers. Artificial shortages sometimes develop in the supply chain contributing to higher materials prices and adding substantial warehousing costs to builders' overhead.

d. Costs of Materials

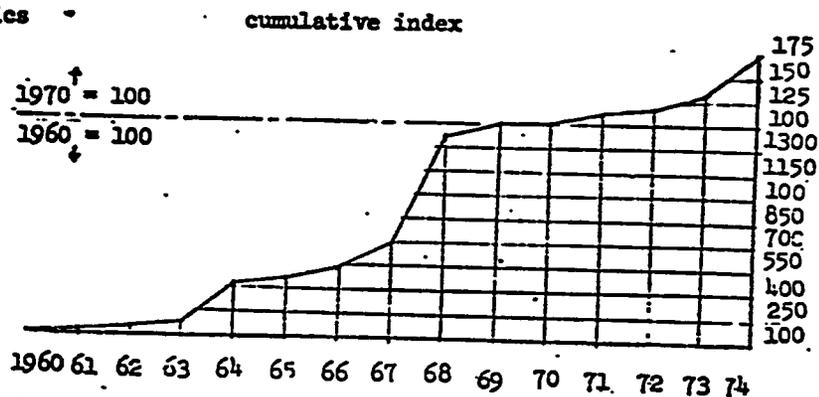
Wholesale price of local materials, already high, rose altogether more than 18% during the latter part of 1973 and more than 67% during 1974.

**TABLE III A - 11: EVOLUTION OF CONSTRUCTION COSTS**  
percentage increases in published indices (Kinshasa)

Weight <sup>1</sup>	1970	1971	1972	1973	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	1974
15 cement	3.3	-	6.2	39.9	-	-	-	-	-	-	-	-	-	83.6	83.6
2 sand	-	-	-	-	-	57.5	-	-	-	-	-	-	-	-	57.5
2 gravel	-	49.2	32.0	-	-	-	-	-	-	-	-	-	-	-	36.3
11 wood	4.7	1.5	-	-	-	47.8	-	-	-	-	-	36.3	-	-	36.3
2 asbestos-cement	-	-	3.0	-	-	-	-	-	-	-	5.3	4.8	-	-	57.9
											46.3	-	-	-	46.3
32 local materials	3.2	3.6	1.1	18.7	-	20.0	-	-	-	-	4.7	3.9	-	39.2	67.8
17 imported materials	4.8	18.8	1.4	19.7	-	12.7	-	-	-	6.6	1.3	0.2	-	-	25.0
24 exchange rate	-	9.7	3.3	3.8	-	-	-	-	12.9	0.9	-	-	-	-	15.0
10 local labor <sup>2</sup>	20.1	32.0	-	-	-	-	-	-	-	-	-	-	-	-	-
4 expatriate labor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3 transport (Diesel fuel)	-	30.1	-	63.8	-	-	-	-	93.9	-	-	-	-	-	93.9
90 total	3.8	10.7	1.6	12.1	-	8.6	-	-	7.0	-	1.5	1.6	-	12.5	32.4

Source: Mercuriale des materiaux, Department des Travaux Publics  
IRES and INS indices on imported materials  
Bank of Zaire report on exchange rates

- Notes:
- Weights according to Cahier General des Charges standard formula for inflationary adjustments of building contracts
  - Labor index based on minimum legal wage increase anticipated early 1975



Source: 1970-74 Table above  
1960-70 thesis study by Christophe Lusendi

Imported materials went up more than 19% in 1973 and 25% in 1974. Prices rose even more sharply after independence, but that was due to economic uncertainties and in 1968 inflation was levelling off. The current increases cannot be entirely attributed to world-wide economic condition, though these are certainly the most important factor. Costs are exceptionally high. There is a lack of product competition, with generally only one important manufacturer or importer in an area. To some extent, local markets are too small to support the variety that is needed, and overhead costs are high.

Prices are controlled by the Government. Manufacturers, importers, and distributors must set prices according to legislation stipulating formulas for the calculation of base costs and profit margins. Increases in major items, cement for example, must be approved in advance. Other increases can be made subject to submission of justifications and control by the Government.

A commission including representatives of manufacturers, importers, and major contractors meets monthly with representatives of the Department of Public Works to set wholesale prices which are published and are the basis of building contract prices and increases. Not all materials are included, however, and bids are made on the basis of in-place costs, not materials prices.

TABLE III A - 12: PUBLISHED WHOLESALE INDEX OCT. 1974  
Mercuriale des Matériaux (Kinshasa)

1. sand	delivered to site	3.150 €/m <sup>3</sup>
2. uncut stone	delivered to site	4.673 €/m <sup>3</sup>
3. cement P.A.N.	ex-Gare KIN/EST	36.100 €/ton
4. reinforcing 22 m/n	delivered to site	400.080 €/ton
5. brick 5x9.5x19.5	ex-usine	27.500 €/1000
6. galv. roofing 0.476mm	ex-usine	1.372 €/m <sup>2</sup>
7. asbestos-cem. 5m/m	ex-usine	0.708 €/m <sup>2</sup>
8. rough cut hard wood	delivered to site	44.000 €/m <sup>3</sup>
9. cut-back R.C.2	ex-depot	106.600 €/ton
10. gasoil-Diesel	ex-depot	149.682 €/ton
11. gasoline	ex-depot	44.060 €/200 liters
12. gravel 8/15	delivered to site	4.920 €/ton

Source: Department des Travaux Publics

TABLE III A - 13: MATERIALS COSTS: LUBUMBASHI, KISINGANI  
as compared to Kinshasa = 100

	<u>Lubumbashi</u>	<u>Kisingani</u>
1. sand	250	100
2. stone	107	169
3. cement	112	198
4. reinforcing	115	157
5. brick	48	N.A.
6. galv. roofing	157	N.A.
7. asbestos-cem.	155	N.A.
8. wood	133	148
9. cut back	100	N.A.
10. gasoil	173	N.A.
11. gasoline	112	N.A.
12. gravel	125	83
average	124	142

Source: Mercuriale de Matériaux, Department des Travaux Publics

4. BUILDING METHODS AND COSTS

Basic construction is of hollow cement block with wood roof framing covered by either galvanized or asbestos-cement sheets.

a. Squatter housing

A study by the Institut de Recherches Economiques et Sociales in 1967 indicates that the basic house built initially is 35 m<sup>2</sup> with two or three rooms. Foundations are minimal with no concrete, often simply one or two rows of hollow cement block. Floors are cemented, though sometimes left bare at first and covered later. Walls are usually left unplastered at first, though almost always finished later. An interior partition generally supports the roof at the ridge with minimal framing. Two doors and four small windows were most common. Only a few are glazed and sometimes only the frame is put in at first with cloth coverings. Cooking is done outdoors and a pit privy is shared. Some hired labor is used on walls and roof. Most work is done by

the owner and his family. The study found that in 1967 it cost about 60 Z minimum to build or less than 2 Z per m<sup>2</sup>. Using the same quantities updated to 1974, costs the minimum construction costs are 250 Z or about 7 Z per m<sup>2</sup>.

TABLE III A - 14: BASIC SQUATTER CONSTRUCTION  
35 m<sup>2</sup> hollow cement block (minimum costs)

cement - 45 sacks of 50 kg at 2 Z per sack	=	90 Z
reinforcing - 50 kg at 0.4 Z per kg	=	20 Z
wood - 2.5 m <sup>3</sup> at 10 Z per m <sup>3</sup> (used)	=	25 Z
roofing - 40 m <sup>2</sup> at 1.4 Z per m <sup>2</sup> (with attachments)	=	55 Z
doors - 2 at 5 Z each	=	10 Z
windows (unglazed) - 4 at 2.5 Z each	=	10 Z
masons - 2 for 25 days at 0.50 Z per day	=	25 Z
carpenters - 2 for 10 days at 0.50 Z per day	=	10 Z
miscellaneous		<u>5 Z</u>
total basic construction		250 Z
minimum lot cost		<u>50 Z</u>
		300 Z

b. Improved construction

The basic construction is eventually improved with plastering, better doors and windows, false ceilings, improved floor, and paint. These finishes are estimated at 150 Z. Many houses are built at the start with better foundations, a floor, and in some cases a light bond beam. These improvements add considerably to the durability of the house. Their added cost is estimated at 100 Z. Thus the basic investment in a squatter unit can be estimated at 3-600 Z or 10-15 Z per m<sup>2</sup>.

Families will typically build the basic unit to the back of the lot. They will then add extra rooms for rental purposes and later a larger "permanent" house to the front of the lot. The size and costs of these additions depend on the income of the family. They range up to 100 m<sup>2</sup> and at 1974 prices will cost 1,000-1,500 £ or more.

A study by Peace Corps volunteers in 1971 of spatial patterns in the Kitambo area of Kinshasa indicates the planning and living requirements that are developed by these families. The drawing on the next page is typical of the units they studied. The initial construction is at the back of the lot.

They found that houses are built around hierarchical family relationships, the importance of outdoor living, and provision for income earning rental units. Nuclear families have separate lodging from extended families and, in the households surveyed, male students 15-20 years had a separate room. W.C., shower, and kitchen areas are shared, however, by all of the families including unrelated renters. The outdoor areas, focused on a shade tree, house most of the activity. Cooking areas are located immediately adjacent to outdoor living spaces. Considerable wasted and neglected space was found between houses set back from lot lines.

Designing housing programs to these probably obvious, but nevertheless basic patterns is too often missed. Planners and clientele alike strive for unrelated preconceptions of "modern" housing.

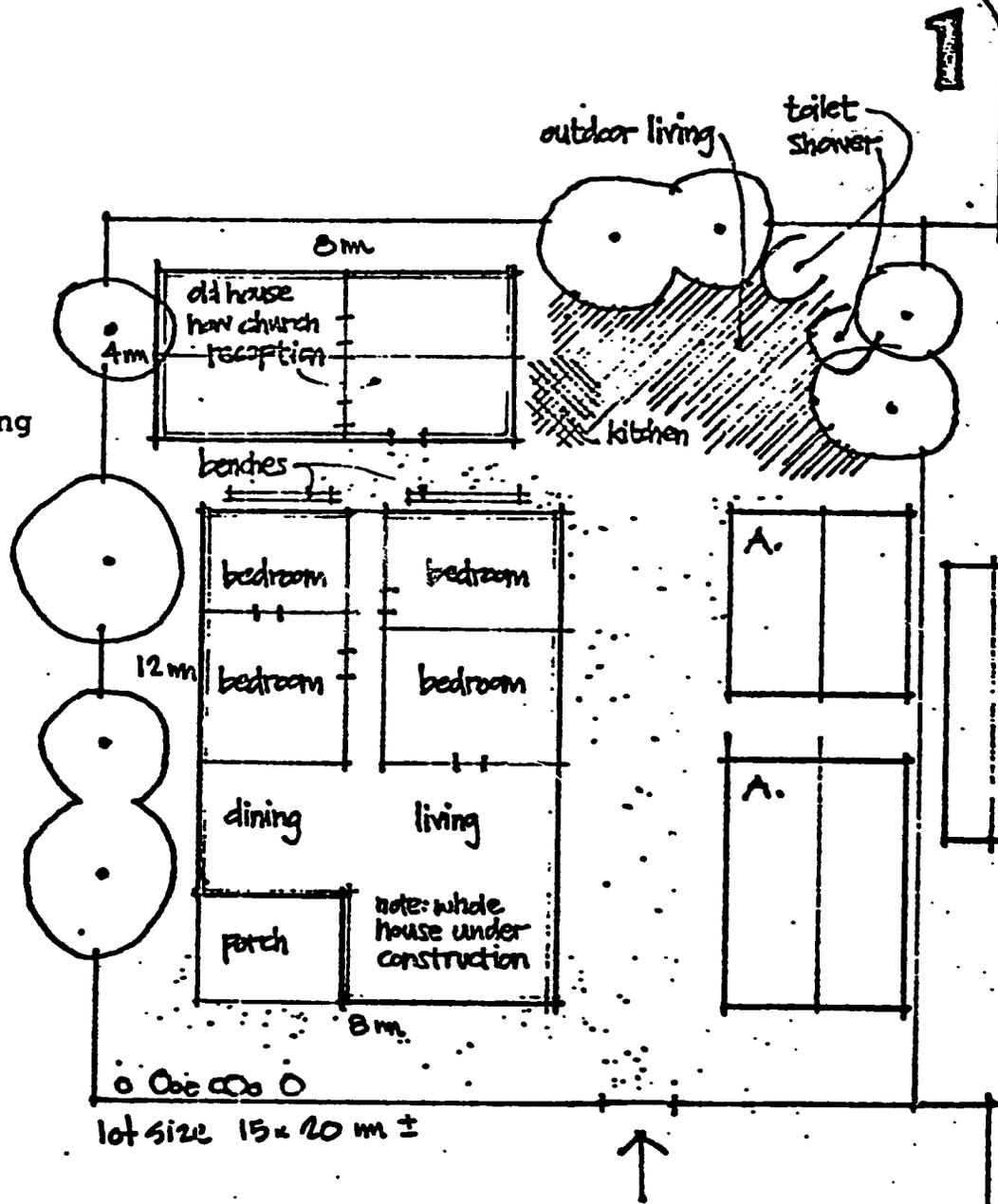
#### Modern construction

Better built houses have more substantial foundations sometimes reinforced, concrete slabs, better quality materials and sometimes better workmanship. The main difference, however, is size and finishes. A three bedroom 60 m<sup>2</sup> is considered the minimum size. A four bedroom 100 m<sup>2</sup> unit

III A - 15

- head of household lives in main house
- houses "A" are rented
- interior doors are left open during the day
- curtains are used for indoor privacy when interiors are open
- parents are in back left bedroom with their babies in the room next to theirs
- older children sleep in rooms across hall
- a son/student has private room
- all families jointly use outdoor spaces

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- houses "A" are rented
- interior doors are left open during the day
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can be, and usually is, built eventually to the front of lots as described in the last section. The smaller units cost 2-3,000 Z in 1973, and considerably more with the higher prices of 1974. Houses built by a contractor cost an additional 25-30% with his overhead.

Three bedroom 65 m<sup>2</sup> units being financed at Cité Salongo by the CNECI were costed at 3,400 Z by the builder in 1973 or over 50 Z per m<sup>2</sup>. 24% of this was for local labor, and 43% for materials. Builders' overhead represented 28.5, including 10.5% for expatriate personnel, and his profit 4.5%. About two thirds of the cost is for the basic shell and one third for finishes. These figures compare with averages for the building industry shown in Table III-3. If expatriate personnel is included in builders' overhead the total overhead and profit comes to 33% of final cost or a 50% mark-up on construction costs, which partially explains the high prices of construction. To the builder's cost must be added CNECI overhead and financing costs.

The unit compares favorably nevertheless with similar housing projects recently completed. Housing built several years earlier (1970) by the University using its own construction office cost 5,000 Z or over 50Z per m<sup>2</sup> excluding any overhead. The houses built by the ONL at Lemba Sud are even more, and larger units recently completed by Dumez for the military cost over 10,000 Z excluding urbanization.

Due to inflation, a 65 m<sup>2</sup> 3,400 Z unit at 1973 prices would cost 30% more to build in 1974 and might be expected to rise another 20% in 1975 to over 75 Z per m<sup>2</sup> before urbanization and financing costs.

TABLE III A - 16 BREAKDOWN OF CONSTRUCTION COSTS  
Cite Salongo Project 1973 prices (65m<sup>2</sup> unit)

	<u>Quantite</u>	<u>Prix unitaire mandeuvre</u>	<u>Prix unitaire materiaux</u>	<u>Cout</u>	<u>% du total</u>
<b>1. fondations et dalle de sol</b>					
deblai	15.91 m <sup>3</sup>	0.37		5.88	0.17
remblai	16.24 m <sup>3</sup>	0.30		4.87	0.14
compactage	69.73 m <sup>2</sup>	0.07		4.88	0.14
semelles beton	3.24 m <sup>3</sup>	4.72	11.48	52.49	1.54
acier	0.16 ton	15.00	250.00	42.40	1.25
blocs plein	2.66 m <sup>3</sup>	3.10	10.45	36.03	1.06
dalle de sol	7.71 m <sup>3</sup>	6.22	11.48	136.47	4.01
chape de sol	64.28 m <sup>2</sup>	0.31	0.28	37.93	1.12
divers				28.59	0.85
s/t		133.04	216.50	349.59	10.28
<b>2. murs en elevation</b>					
blocs creux/15	20.99 m <sup>3</sup>	3.11	7.51	218.90	6.44
blocs creux/10	2.78 m <sup>3</sup>	6.15	9.86	44.51	1.31
beton	1.10 m <sup>3</sup>	15.22	14.22	32.38	0.95
acier	0.075 ton	15.00	250.00	19.88	0.58
divers				13.76	0.41
s/t		102.64	226.79	329.43	9.69
<b>3. toiture</b>					
pannes	53.80 m	0.11	0.46	47.77	1.40
eternit avec faitieres et tire fonds	65.00 m <sup>2</sup>	0.39	1.91	149.97	4.41
planche de rive	28.00 m	0.12	0.34	12.88	0.38
s/t		37.68	172.94	210.62	6.19

TABLE III A - 16 continued

	<u>Quantité</u>	<u>Prix unitaire maind'oeuvre</u>	<u>Prix unitaire matériaux</u>	<u>Coût</u>	<u>% du total</u>
4. <u>revêtements mureaux</u>					
cimentage	283.00 m <sup>2</sup>	0.45	0.18	176.80	5.20
crepis tyrolien	73.00 m <sup>2</sup>	0.30	0.07	27.11	0.80
divers				4.37	0.13
s/t		150.26	58.02	208.28	6.13
5. <u>menuiseries</u>					
fenetres	4	6.33	15.67	88.00	2.59
portes int.	4	5.79	13.84	77.72	2.29
portes ext.	2	7.01	17.34	48.70	1.43
divers				6.32	0.19
s/t		63.52	157.22	220.74	6.50
6. <u>electricité</u>	18 prises gloves	6.20	6.82	234.39	6.89
7. <u>plomberie</u>	21.5 m	0.34	1.50	39.77	1.17
8. <u>sanitaires</u>	4 unités			161.70	4.76
9. <u>égouts</u>	19.5 m	0.11	0.52	105.55	3.10
10. <u>plafonds</u>	76 m <sup>2</sup>	0.62	1.28	143.92	4.23
11. <u>peintures</u>	400 m <sup>2</sup>	0.22	0.33	220.00	6.47
12. <u>profilage/talutage</u>	90 m <sup>2</sup>	0.08		7.22	0.21
13. <u>allée en concasse</u>	2 m <sup>2</sup>	1.52	4.93	13.22	0.39
s/t		292.51	633.26	925.77	27.22

TABLE III A - 16 continued

	<u>Prix unitaire mandeuvre</u>	<u>Prix unitaire matériaux</u>	<u>Cout</u>	<u>% du total</u>
A. Total Coûts Directs	779.65 34.74%	1,465.78 65.26%	2,244.43	66.01
14. <u>frais généraux et profits</u>				
mandeuvres expatriées 15.97% A			358.33	10.54
autres frais généraux directs 11.65% A			261.52	7.69
frais généraux indirects 13.55% du total			388.04	11.41
profits 4.55% du total			147.98	4.35
s/t 1.50% de A			1,155.87	33.99
		TOTAL	3,400.00 52.3 z/m <sup>2</sup>	100.00

Source: CNECI

d. Urbanization

Infrastructure costs in Zaire are even more difficult to control. Only a few construction firms have the capacity to do even small projects; maintenance of heavy equipment, expensive to begin with, is very high; there is almost no choice of materials or suppliers, and services are installed by utility companies with absolute monopolies.

Full services for the CNECI project at Cité Salongo designed by a Canadian engineering firm with about 20 units per hectare cost over 1,400 Z per unit or almost 30,000 Z per hectare at 1973 prices.

Streets are 6-9 m wide with 10-27 m rights of way. They occupy 25% of the site. Paving is a 12-15 cm madadam base with a double penetration of asphalt between light concrete curbs. The 6 m road cost 20 Z per linear meter. Altogether streets cost 4,450 Z per hectare or 14.5% of the urbanization. Roadway widths and rights of ways could be reduced, but paving specifications are not excessive. Unpaved streets in Kinshasa with proper soil conditions and good drainage hold up well. Poorly drained unpaved streets are almost impassable during rains.

Besides electricity, storm drainage was the most expensive part of urbanization of the Cité Salongo project at 18.5% of the total. The system of cement gutters with block and reinforced concrete collectors cost 4,680 Z per hectare. Careful site selection is needed where natural grading and the absorption properties of soils can be used to reduce requirements. With the heavy rains, good drainage is essential to the viability of low cost projects.

Full water distribution with 80-200  $\phi$  mains and 30-60  $\phi$  secondary lines cost overall 22 Z per linear meter, or 237 Z per house, excluding meter installation. The World Bank estimates that a standpipe to

serve 1000 persons with a cemented platform and areas for laundrying would cost about 1,000 Z.

The Cité Salongo project is adjacent to one of the few city sewer lines which permitted sewage disposal by concrete collectors at a relatively low 1,560 Z per hectare or 76 Z per house. The soils in many parts of the city are sandy and percolate well. Simple pit privies for houses without water service cost 25 Z if done by the owner, 50 Z if done by a contractor. For houses with a water connection, a septic tank with a 15-person capacity costs about 200 Z. Larger tanks are estimated as follows: 20-25 persons 375 Z; 30-35 persons 400 Z; 100 persons 450 Z; and 150 persons 500 Z all at 1973 prices - 30% more in 1974.

Electric distribution is most expensive at 22% of total cost or 6,800 Z per hectare for buried installation excluding meters. The ratings required for power transforming equipment may need to be reexamined for low cost housing projects.

### III. B. Land

#### 1. Tenure

Legislation passed in 1970 declared all land to be the exclusive and inalienable property of the State, either as public domain or as private domain. The public domain is that land devoted to public use or service. Private domain is all other land, which can be allocated by the state for private use and development.

The process of adapting existing documentation and procedures to the new legislation is still under way, and the following description does not always reflect the inevitable lag between legal intent and politico-administrative practice.

The Government may attribute land for private use either permanently (concession perpetuelle) or for a specified period of time (concession ordinaire). Attribution can be free or against payment of a fee. Generally speaking, any concession of land is subject to an obligation on the part of the beneficiary to develop or improve the land (mise en valeur) within a specified period of time.

The legislation stipulates the rights of Government to terminate its concession of land, including permanent concessions, and the indemnity due the beneficiary in the event of condemnation.

Permanent concessions are limited to physical persons who are Zairian citizens. This is the primary method of allocating land for residential use. The beneficiary of a permanent concession has the right to transfer, rent, mortgage or alienate in all or in part his concession.

Ordinary concessions of land are generally limited to 25 years and may take the following terms:

(a) land lease (emphyteose) - the right to have the full benefit from undeveloped land on condition that the grantee improve it, maintain the improvements, and pay rent to GOZ.

(b) superficie - the right to benefit from state property and to dispose of the trees and other plants growing on it.

(c) usufruct - the right to exploit land, which, however, must be conserved in its original state. Rentals are stipulated by the legislation at one-quarter of the revenue.

(d) usage - the right of a family to benefit from the land, those concessions being limited to a 15 year term.

All concessions, transfers, liens and easements on the property must be registered with the Real Estate Registrar (Conservateur des Titres Immobiliers), which is a part of the Department of Real Estate (Affaires Foncières).

The legislation also provides that all existing valid titles and property rights granted previously be reregistered in the form appropriate under the new law.

Primary responsibility for administration of the law is assigned to the Department of Real Estate, which handles both Registration (Real Estate Registrar), and administration of public lands (Service of Real Estate Titles). Other Government Agencies also are involved, among them:

- Land Survey Division of Public Works Department  
(prepares sub-divisions, provides surveys)
- Municipality or Sub-Regional Government of Ministry of Interior  
(accepts applications for land, ultimately issues authorizations).
- Health Service of Public Health Department (participates in review of building Permits)
- City Planning Service (also reviews building permits).

## 2. Transfer and Registration of Land.

Under the law, the actual management of the State's domain may be entrusted to the public administration itself, to public establishments (primarily regional development agencies entrusted with provision of infrastructure)

as an inducement to private investment and to special purpose, mixed public - private real estate or industrial development companies, granted a 25 year ordinary concession by GOZ in order to realize a specific program of investment. At least 50% of the capital of these corporations must be held by GOZ and/or Zairian citizens. The GOZ share may be in the form of land, which may be valued at not less than 10% or not more than 25% of the capital stock. (GOZ may own more than 25% of the capital, but any amount over this figure must be in cash).

If such real estate developers were created, they could "sell" (i.e. concede) lots only after they had been subdivided, surveyed and provided with water, electricity and interior service roads. Provisions of infrastructure must be complete within from two to five years; and the concessions granted by the developer may not exceed a term of 25 years, starting with the completing of infrastructure.

Attribution of land by GOZ itself follows a hierarchy of authorities in accordance with the importance of the land to be allocated.

Competent Authorities for Urban Land Distribution

<u>Size of Property</u>	<u>Authority for Distribution</u>
100 ha or more	law enacted by National Legislative Council
50 - 100 ha	Presidential Ordinance
10 - 50 ha	Ministerial decree ( <u>arrete</u> )
less than 10 ha	by order of the Regional Commissioner
less than 2 ha	In Kinshasa this can be delegated to the Chief of the Division of Lands
less than 20 ares	in other urban centers this can be delegated to the Real Estate Registrar

There is also a so-called "title of uncertain occupancy" (titre d'occupation preciaire) which is issued by the Municipality to residents of unofficial subdivisions without utility service. (It was previously called the tenants book - Livre de Logeur). This form of registration does not involve an obligation to pay taxes, but neither can it be registered. Hence, it provides no security for a lien, nor can it be legally transferred. This is the document used for areas of Kinshasa developed since 1959.

"Home ownership", (i.e., the permanent attribution of a parcel of land) is limited to Zairian citizens. When the concession is of unimproved land, it is made in the form of a lease, usually of three years, with an option to convert into a permanent concession if the following conditions are met:

- (a) Effective occupancy must be within six months:
- (b) The nature of the improvement, the value of the investment, and the delay granted for completion of the improvement must be approved by GOZ.
- (c) Construction of the improvement must start within 18 months.

While the nature of the required improvement may vary from one subdivision to another, it is generally expressed in terms of covering a percentage of the lot, with a permanent concrete block structure.

According to the law, GOZ may cancel its lease with option to convert into permanent concession, if the occupancy and start of construction options are not honored upon three months legal notice (mise en demeure).

In urban areas, the Land Survey Division of the Department of Public Works prepares lots available for attribution which must in turn be approved by a number of other GOZ agencies. These are available for consultation at the local offices of the Town Planning Section, Real Estate Department, Real Estate Registrar, and Sub-Regional Administrator. Lot lines and dimensions are indicative; final dimensions will be determined by the official Metes

and Bounds Survey. If, as a result of the official survey, there is a difference of more than 5% in the required fees, those based on the survey will supersede those in the contract.

Applications are made in Kinshasa, at the Real Estate Department and in other urban centers at the local office of the Real Estate Registrar. The law states that no one may be granted additional unimproved land in the same district, if he has not completed improvement of a previously allotted parcel.

During the period he is awaiting completion of the legal formalities, the beneficiary may, at his own risk, survey and fence his property.

The procedures can be lengthy, and it can take as long as nine months to follow the various steps necessary to obtain:

- (i) attribution of a parcel of land (assuming one is available);
- (ii) preparation of an acceptable set of construction plans and specifications, and
- (iii) issuance of a building permit. (Actually, at the present time, building permits are unobtainable, except in Kinshasa, and then by special authorization of the Mayor's Office, as a result of a 1972 decree stopping issuance of building permits in Zaire pending completion of master plans for the various urban centers).

Registry of the lease or right of occupancy may take as long as six months. If financing should be available, registry of the mortgage could take a year.

Collection of fees is required at every check-point along the bureaucratic path, and these may add up to 10% to the cost of the house.

Issuance of occupancy lease	1%
Architects fee	3%
Building permit	3%
Registration of lease	2%

Miscellaneous fees	1%
S/T	<u>10%</u>

If mortgage financing should be sought, the prospective home owner must expect additional fees totaling 11% of the value of the mortgage, exclusive of whatever fee must be paid the lender:

Registration of Mortgage	8%
Life Insurance	2%
Fire Insurance	1%
S/T	<u>11%</u>

A conventional mortgage must be registered to assure a valid lien and must be in the form of a contract drawn up by a notary or other officer qualified to establish a legal document (acte authentique). However, unless otherwise stipulated, any real estate sales contract incorporates an implied mortgage guaranteeing fulfillment of the contract conditions.

A mortgage cannot cover a capital of less than Z. 25. The holder of a first mortgage may foreclose to get payment from sale of the property, but may not seize and hold the property himself.

Mortgages are ranked in order of the date of registration. Liens registered the same day share the same rank.

Registration is valid for no more than 15 years. Mortgages for more than this term must be renewed prior to expiration of the 15 years.

### 3. Availability.

Land, being the property of the state, is theoretically available to Zairian urban residents, and to real-estate developers. However, land must be first subdivided for lots to be attributed, and these subdivisions, of course, must be in accordance with the city's land use master plan. Catch 22: there is no master plan.

Therefore, there have been no legal subdivision in Kinshasa and the other urban centers since the colonial period. However, para-statal housing developers, such as ONL or CNECI, can obtain tracts from municipalities by special dispensation ratified by the Real Estate Department.

The population of Kinshasa in 1958 was 388,000. It now stands at 1,990,000 of whom, perhaps, 65,000 live within the 1958 neighborhoods. The rest, some 1,300,000 persons, or a city more than three times the size of colonial Kinshasa, have been sheltered in permanent homes built on illegal subdivisions. The pattern of development in Kinshasa has not been uniform or contiguous. The city sprawls along level areas and ridges. There are still substantial interstitial areas suitable for projects well within the present limits of urban growth, and also large reserves of army-owned lands whose potential use could be reevaluated. Land is available to the East, which is now the main direction of city growth.

#### 4. Land Costs

Although GOZ does not alienate its underlying fee, there is a definite cost to the right of occupancy of the land. Established by Ministerial Decree 11/149 of October 18, 1971, land prices per M2 for sale of legal lots for residential are fixed at from as low as Z 0.02-1/2 to Z 7.50 per M2 in the downtown area. The price varies in accordance with the neighborhood, with larger lots in a given neighborhood costing more per M2.

The following table sets for the official price of land per M2 in various sections of Kinshasa:

TABLE III-B-1

## OFFICIAL LAND PRICES IN KINSHASA FOR SELECTED TYPES OF NEIGHBORHOODS

Size of Lot	Price per M2					
	Downtown and "Ambassadorial" Residential	Close-in High-Standing Residential	Pre-Independence Neighborhoods with Utility Services	Old Sites + Services Project	Inlying Squatter Areas	Outlying Areas
up to 30m2	≥ 0.20					
30-50M2	0.50	≥ 0.10	≥ 0.15 to 0.25	≥ 0.15	≥ 0.15 to 0.10	≥ 0.02-1/2
50-75 M2	0.75	) 0.20 to			)	) 0.05 to
75-100	2.00	) 0.30			)	) 0.07-1/2
100-150 m2	(	)	larger size lots not available		)	
150-200 M2	( 5.00	)			)	
200-250 M2	( 7.50	) 0.50 to			)	
more than 250 m2	(	) 0.75			)	0.10
	(	) 0.60 to				
	(	) 1.00				0.25

Source: Arrêté 71/149 of Oct. 18, 1971

The land price is paid after termination of the three-year lease and completion of the improvements. For the initial three years, occupancy is in the form of a lease with option to convert into permanent concession; the occupant pays an annual-increasing rental to GOZ.

During the first year: 8% of land price

second : 10%

third : 12%

Today lots are attributed only exceptionally in this way because very few legal lots are available. The Team was quoted an annual rent of Z 120 for a 1500 M2 hillside lot adjacent to a paved street in an outlying area about 20 km from the center of town.

The same decree also sets a legal ceiling price for the private sale of occupancy rights. The private price is inevitably four times the price set by GOZ.

#### 5. Taxes

Real estate taxes are assessed only on legal lots, and therefore the majority of parcels in Kinshasa are not on the tax rolls.

There is a property tax assessed lots in legal subdivisions with utility services after completion of improvements. The tax varies by region. In Kinshasa, it is set at Z 0.50 per m2. Collections, the team was told, are irregular.

There is a small fee collected annually on the "Tenants Books", which provides evidence of officially-recognized illegal occupancy. Collection of this fee is ensured because a receipt of payment is required as a condition precedent to issuance of any other legal paper or permit, of which there are a plethora.

Taxes on improved real estate also include income taxes on derived revenue.

- Income from rents, a progressive tax ranging from 20% on first Z.1,000 to 60% on incomes of more than Z.7,000

- Capital gains, interest 20%.

### III. C. Community Services

Missionaries operated almost all the available educational facilities in the pre-independence era and today, GOZ still entrusts a major educational role to the churches - Catholic and Protestant, as well as some of the larger syncretic cults. Country-wide, 80% of the primary and 50% of the secondary level pupils are taught in schools built, and by teachers hired by the churches. GOZ requires that the curriculae be secular and that certain standards be met. If these standards are respected, GOZ officially recognizes the school and subsidizes its operating expenses, including salaries. (Since the team's visit, the GOZ has taken steps to universalize elementary education in state-run schools.)

Church health clinics and social centers have also been common, but GOZ has increasingly assumed this responsibility. The Department of Public Health provides out-patient clinics and dispensaries. The Department of Social Welfare builds and staffs neighborhood centers which offer the usual programs of alphabetization, home-making and health instruction for women, etc.

### II. D. Housing Finance

The flow of savings into housing finance in Zaire takes place in the context, first, of a policy of detailed regulation of both lending and borrowing operations of credit institutions, and second, of a relatively un-specialized and undeveloped financial market. Despite the close regulation by the Banque du Zaire, the low official priority attached to house finance (outside CNECI), and the fact that housing mortgages are short-term, together with the high interest rates, a major volume of credit, nevertheless, does appear to be

flowing into housing through a variety of institutions, supporting a high level of middle and upper-class home construction in the main cities.

The principal regulation of the Banque du Zaire that affects housing finance is the system of commercial bank reserve requirement ratios, established in July, 1972, replacing the previous system of direct credit allocation controls. In the case of housing loans of one or more years' maturity, the reserve requirement is a prohibitive 100%, but banks are allowed instead to deposit in one of the specialized financial institutions. These financial institutions, in turn, are obligated to accept all outstanding commercial bank mortgages before making any new loans of their own. The effect of these regulations has been to make banks operate as brokers in home finance, and to channel new housing credit through the specialized institutions.

The financial institutions that make mortgage loans include (i) MOBIMO, a wholly-owned subsidiary of the Banque Commerciale Zairoise, organized in 1962, with a capital of Z 350,000, (ii) SOFIDE (Societe Financiee de Developpement), a new government-developed bank with IBRD financial assistance, (iii) CADEZA (Caisse Generale d'Epargne du Zaire), and (iv) INSS, (Institut National de Securité Sociale), created in 1961 to provide basic welfare services, but having control over considerable investible resources generated chiefly by pension fund contributions. All these institutions lend at commercial terms - rates of 12% plus various cost-raising charges that vary by client and market conditions - and commonly at short terms. Loans brokered through commercial banks at present are being offered on about five-year terms, and for under 40% of the house value. The total amount of credit provided cannot be estimated from available data since the figures do not distinguish commercial and business from residential real estate.

III. E. Public and Private Institutions

1. CNECI - (Caisse Nationale d'Epargne et de Cr dit Immobilier)-

the National Savings and Housing Bank

(a) Description and Organization

(i) Description

CNECI is an independent state corporation under the general supervision of the Presidency. Created by ordinance N 71-080 of September 1, 1972, it is empowered to act in three general areas:

- as a pilot thrift and mortgage institution, accepting savings from the general public and providing mortgage loans to individuals;

- as a national housing bank responsible for stimulating the creation, chartering and supervising a national system of private thrift and mortgage institutions; guaranteeing deposits of up to Z. 5,000 in these private institutions; and as a source of liquidity by purchasing mortgages, making medium and long-term advances, and elaborating a program of adjustable interest rates on savings and mortgages; and

- as a housing developer.

A.I.D.'s purpose in encouraging the formation of CNECI was essentially two-fold:

to develop an institution that could stimulate creation of a national thrift and mortgage system and to operate such an institution on a pilot basis; and

- to develop housing for low income families.

In its original authorization of the HG program, A.I.D. stated that the institutional objective was the more important.

(ii) Organization

CNECI's governing body by statute is composed of a President, appointed by the Chief of State, and six Administrators, also

appointed by the Chief of State, four of whom are specifically designated by law to represent the Bank of Zaire, the Ministry of Finance, Urbanism and Real Estate, and the National Labor Union.

The Chief Executive Officer is the President-Director General. Sections include:

Credit (Loans)  
Savings  
Technical  
Legal  
Accounting  
Personnel  
Cité Salongo Development

In general, because of difficulties in finding adequate supervisors, most Department Heads report directly to the Director-General.

There are two expatriate technical assistants, a UN expert assigned to the Technical Section, and an AID counterpart-funded management advisor from the U.S. Foundation for Cooperative Housing.

CNECI has its main office and one branch in Kinshasa and branches in Lubumbashi and Kisangani. Staff totals 129, distributed as follows:

	<u>Professional</u>	<u>Others</u>
Kinshasa	18	78
Lubumbashi	3	15
Kisangani	2	13
	—	—
	23	106

(b) Programs and Operations

(i) Savings

Initial public response to CNECI's savings campaign was substantial, and at the time of the team's visit savings totaled Z.2,125,154 in 53,200 accounts.

CNECI Savings Growth

<u>Year</u>	<u>Net Increase</u>	<u>Total</u>
1972 (4 mths) Z.	258,983	Z.258,983
1973	680,526	939,509
1974 (Oct.)	1,185,645	2,125,154

Savings were distributed as follows:

	<u>No. of Accounts</u>	<u>Savings</u>
Kinshasa	35,512	Z. 1,738,413
Lubumbashi	13,923	347,288
Kisangani	<u>3,715</u>	<u>39,453</u>
	53,200	2,125,154

Interest rates paid on savings accounts are the following:

Passbook accounts	3%
Regular accounts 3 months	4%
6 months	4.5%
Term deposits 6 months	5%
12 months	6%
Bonds	8%

About two-thirds of the accounts are regular passbook.. Turnover is high, indicating that for many persons the convenience of CNECI's procedures, so necessary for successful operation, has resulted in their using CNECI as a depository for current income.

(ii) Cité Salongo Housing Projects

A major impact project and initial revenue source to CNECI is the 1,100-unit Cité Salongo Housing Project. Initially scheduled to get under construction in 1973, it actually started a year later. It is scheduled for completion at the end of 1975.

At the time of the team's visit, the construction status of the project was as follows:

Units completed	67
Units under construction	379

The complexities involved in undertaking a project of this size have caused numerous construction difficulties, and a major portion of CNECI's energies have been absorbed with housing project development, leaving little time for the top management staff to concentrate on the equally perplexing and difficult problems involved in the creation of a financial institution.

Price escalations have also had a serious effect on sales prices, which will continue to rise because of further increases as yet unevaluated at the time of the team's visit. The effect of these increases on the market for the Cité Salongo Project was earlier evaluated by A.I.D. with the conclusion that, given that completion of the project is critical to the survival of CNECI, and given that the major thrust of the HG Program, as authorized, was establishment of the financial institution, A.I.D. would have to sacrifice realization of its secondary objective - low-income housing - in so far as the Cité Salongo Project was concerned.

(iii) Loan Programs

Proposed House Completion Loans

In order to meet its vocation of assisting low-income families, CNECI was to undertake on a trial basis to make loans for the purchase

of materials, which would be used by owners to finish houses on which they started construction, but were unable to complete on a cash-and-carry basis. The trial program ran into numerous legal and technical difficulties and was abandoned.

Regular Loan Programs

CNECI makes loans for purposes of home construction, and more frequently, for completion. The borrower is required to produce evidence of title (or a preliminary lease agreement with GOZ), a building permit and a certificate from his employer. Security is in the form of a registered mortgage and a life insurance policy. CNECI accepts monthly payments of up to one third of income, the legal maximum that can be attached for non-payment. Average loan term is eight years. Interest rate is 12%, calculated on an annual declining balance.

As of September, loan commitments totaled Z. 2,178,244, of which Z. 1,873,516 had been disbursed.

CNECI LOAN PROGRAM

	<u>No. Loans</u>	<u>Commitments</u>	<u>Disbursements</u>
Kinshasa	240	Z 1,907,009	Z 1,631,381
Lubumbashi	80	271,235	242,135
Kisangani	-	-	-
Totals	320	Z 2,178,244	Z 1,873,516

(c) Collections and Delinquency Experience

CNECI collection procedures in Kinshasa are under the general supervision of their counsel, who reviews monthly each file and so verifies the collection activities of the Credit Department.

Follow up procedure calls for a letter from the Credit Department when the account is a month late. A second letter follows if the

account is not settle in 15 days. After another 15 days, i.e., after two months - the account becomes delinquent, and CNECI's counsel himself writes the delinquent that the case is being transfered to an attorney for action in the Courts.

First requirement for legal action is a letter from the lawyer formally setting a deadline for payment (mise en demeure). In September, 1974, CNECI sent its first group of 10 delinquents over for legal action. All paid up after receipt of the mise en demeure. A second group of 10 delinquents was forwarded the following month, with no results reported at the time of the team's visit.

The major excuse given by the first group was the failure by their banks to handle expeditiously their instructions that CNECI's payments be deducted automatically each month. These orders to debit are often refused by the commercial banks, or the actually transfer of funds delayed for several months. CNECI had hoped to set up an automatic deduction system, at either employers or banks to facilitate collections. The unwillingness of either group to cooperate has not improved collections.

Delinquent, Payments, CNECI Loan Portfolio, 30 Sept. 1974

	<u>Kinshasa</u>	<u>Lubumbashi</u>
	(as of November 15)	(as of September 30)
Payments Due	Z 285,723	Z 45,456
Amount late and Delinquent	100,808	25,009
Percent Delinquent	35%	55%
Number of Accounts	240	78
Number Late (2 months).	24 - Z 5730	17
Number Delinquent	97 - Z 95,078	30
Three Months	24 - 12,743	7
Four Months	8 - 5,959	14

	<u>Kinshasa</u>	<u>Lubumbashi</u>
5 - 9 Months	45 - 38,420	6
More than 10 Months	20 - 37,954	3

(d) Sources of Financing

(i) Capital

GOZ subscribed Z.2 million capital. Half has been paid in from A.I.D. counterpart funds; the balance will be paid in during 1975. In addition, an AID consultant has recommended that GOZ increase CNECI capitalization to Z. 2.5 million.

(ii) Savings

Savings growth has been impressive, and in the long run is intended to provide the major source of CNECI financing. Initially, of course, savings by themselves are not sufficient to finance any significant number of houses, and the more than 1:170 ratio of loans to depositors - i.e., average deposits of Z. 40 as against a loan average of Z. 6,800 still very low.

Savings are expected to increase, although not at the rate originally projected earlier this year, but they will not begin to provide a sufficient source of loanable funds until the institution has been collecting on its loan portfolio long enough to begin to realize a substantial amortization of its loan capital for relending.

(iii) Borrowings

Thus far, A.I.D. has guaranteed a \$10 million loan for the Cité Salongo Project, and CNECI has requested additional financing. Because of the project's increased cost, CNECI believes it will be necessary to relend on many of the houses at the same term as the HG loan, rather than on the 15-year term originally contemplated thereby losing the benefit that would accrue from rolling-over the loan. It would seem that for the short term to medium term, borrowings will have to be a major source of mortgage funds.

(e) Technical and Management Evaluation

CNECI at the present time is attempting both to carry out a very complicated and large construction program and to organize itself as a financial intermediary.

It suffers from a significant structural defect: the absence of second-level management cadres. While this is a defect endemic to developing institutions, the difficulties CNECI has encountered have been compounded by the fact that it must simultaneously engage in two different undertakings, each one by itself requiring a major managerial effort.

CNECI is committed to successful execution of the Cité Salongo Project. Politically, it feels it needs this project to survive, and the team is inclined to share this evaluation. Therefore, the problems of Cité Salongo have to take first priority.

CNECI's technical section is competent enough to review individual loans and participate in project development but not staffed up or experienced enough to assume full responsibility for putting together a large-scale program. It has worked successfully with small builders on single unit jobs.

Management studies conducted by A.I.D. have highlighted CNECI's administrative and organizational weaknesses. Some of these --over-investment in fixed assets, high administrative costs, and too generous staffing-- are in a sense politically inevitable, given the general ambiance that accompanies organization of a new institution in Zaire. These can be gradually overcome as the organization expands and as activities and income grow to become compatible with fixed costs, provided management can resist the inevitable temptation to indulge in more of the same. Other structural weaknesses have been identified with respect to delegation of authority, accounting methods, and controls, work flow, internal reporting and supervision. The Director General

has expressed recognition of these difficulties, but the time and attention necessary to devote to this sort of problem is not available, given the exigencies of the construction program.

CNECI expected LEM to complete in February, 1975, codification of records on savings, on taxes, and on the Cité Salongo lease-purchase portfolio. This may help overcome the absence of current information necessary for effective management, the lack of which has seriously handicapped loan servicing, for instance.

CNECI, most importantly, needs a strong, experienced deputy to serve as controller. The team agrees with the Director-General that this will help it to respond adequately to the various management recommendations that have been made.

In this connection, the institutional development of CNECI probably requires a decision as to its long-term functions. CNECI appears to be evolving into a state housing bank that will carry out savings and loan operations itself, rather than as the regulatory agency for a system of independent institutions. At the same time, given the status of the home building industry itself, it also was forced into assuming an entrepreneurial function. Preoccupation with construction has hindered institutional development. It would appear preferable that this function be performed by others.

Alternatively, and this appears to be the present drift of GOZ intentions, CNECI may also have to assume the role of a national housing agency involved in construction and management. In this event, the team believes a substantial additional infusion of capital and increase in technical assistance will be necessary.

One further consideration should be noted; low income programs are high risk and administratively costly. It is doubtful whether CNECI, in whatever form it takes, could or should undertake such an operation.

2. ONL - the National Housing Office

(a) Description and Organization

(i) Description

ONL is a public agency under the general supervision of the Commissioner of Public Works. Created by decree in 1965, from the merger of the old Office of African Cities and the Fonds d'Avance, it was empowered to perform technical service and to execute housing projects in accordance with GOZ policy.

It has been assigned generally three roles:

- To administer a patrimony of rental housing units inherited from the colonial era;
- To study, carry out, develop and sell and/or manage planned housing projects; and
- To carry out specific construction projects for other parties.

(ii) ONL, under its Director General, is organized into three Departments: Administrative, financial (including rent collections) and technical.

Its main office is in Kinshasa, and there are branch offices in Kisangani, Bukavu and Lubumbashi. ONL has representatives in all of the country's sub-regions.

Staff totals about 1,900 persons, both office and a large staff of construction laborers.

ONL Personnel

	<u>Professional and Clerical</u>	<u>Laborers</u>
Kinshasa	270	850
Kisangani	100	400
Bukavu	70	30
Lubumbashi	40	20
Sub-regional-	100	-
representatives	-----	-----
	580	1,300

Technical staff in Kinshasa consists of two civil engineers, four architects, and various trainees.

(b) Programs and Operations

(i) Construction

Funded by advances from GOZ, ONL operations included the following:

- 1966: Rehabilitation of 1105 prefabricated housing units erected in 1952 by the old OCA.
- 1967: Sewer repairs, rehabilitation of gendarme and police housing, construction and repairs of schools.
- 1968: Start construction of 100 apartment units (300 rooms) for the Kinshasa International Fair; various small GOZ building projects.
- 1969: Complete Fair buildings, Kisangani orphanage.

In subsequent years, ONL undertook various construction projects financed by others, including 350 economic housing units, financed by sale of apartments to the Fair Authority and sold to the Army, and most recently, rehabilitation of the Kinshasa Sports Stadium, infrastructure for a portion of the HG-financed Cité Salongo project, etc.

(ii) Management

ONL inherited management of 9,718 rental housing units

constructed by OCA in Kinshasa, Kisangani, Bukavu and Lubumbashi. It also is responsible for collections on the balance due on the Fonds d'Avance - financed units throughout the country.

It sold the two housing projects it constructed to the Fair Authority and to the Army, and at the present time, has no plans to undertake any more management responsibilities.

ONL's management experiences have not been happy. To begin with, it inherited an operation which could be amortized only with the help of government subsidies, and these have not been paid since independence. Secondly, during the five/six years between independence and organization of ONL, collections were poor because of unrest and communication difficulties. Finally, with monthly rents set at about Z.1,40 for the Fonds and OCA units, the administrative difficulties and costs involved in the collection of thousands of these tiny accounts throughout the country, have been too high.

(c) Collection and Delinquency Experience

The following table shows ONL's experience in collecting on the lease-purchase and rental units it inherited from the colonial period during its first four years.

ONL Collections and Delinquencies: 1966 - 1969

<u>Year</u>	<u>Amount Due</u>	<u>Collections</u>	<u>Percentage Delinquent</u>
1966	Z. 76,847	57,819	24.7%
1967	90,048	55,942	37.9%
1968	146,718	87,710	43.6%
1969	184,366	148,366	19.5%
	-----	-----	-----
Total	Z. 497,979	Z.344,837	30.8%

- 344,837

Z. 153,142 Accumulated Delinquencies

This compares with the overall 44.6% delinquency rate of ONL's predecessors during the first six years of independence.

(d) Sources of Financing

ONL's only real sources of financing are construction advances from either GOZ budget or third parties, its lease-purchase portfolio being so constructed as to operate only at a loss.

GOZ budgetary advances to ONL have been limited, and in the last three years, have ceased entirely. On the other hand, third party construction work has proven its only reliable source of funds, with contract work totaling about Z. 600,000 in 1973 and Z. 800,000 to 1 million estimated for 1974.

GOZ Budget Advances to ONL: 1966 - 1969

1966	Z. 233,000
1967	350,000
1968	598,500
1969	899,650

(e) Technical and Management Evaluation

In terms of managing its housing portfolio, ONL was set an an impossible task. The housing, although cheap and heavily subsidized, was attributed primarily to civil servants, themselves a relatively privileged class. The rents were set absurdly low, and by the late sixties, were much lower than rents in slum areas. (OCA housing cost Z. 1.40 a month; rents in the traditional African quarters in 1967 were quoted in the Household Budget Study at Z. 2.75 in the old city, and Z. 2.55 in the new city, and averaging Z.3 in the extension zones). Thus, ONL, even if it could reduce delinquencies, could never recover a sufficient capital to finance new projects at the current cost of construction.

As a construction company, it seems to lack sufficient qualified secondary level management personnel, construction supervisors, etc.,

while appearing relatively over-staffed on other levels. In comparison with expatriate construction firms, it appears under-capitalized and under-equipped.

It has only just started construction projects in cities other than the capital, and the team had no opportunity to assess its performance as a national organization.

#### IV. Effective Demand for Housing

##### A. Urban Housing Need and Conditions

###### (i) Housing Needs

The population of Zaire's 78 urban centers is estimated by GOZ to be growing at an annual rate of 8.2 percent; the population of the 10 largest cities (population of 100,000 or more in 1970), is growing at an annual rate of about 9 percent. About 500,000 persons are expected to be added to the urban population this year. This with the 2.8 percent annual rate of population growth for the country as a whole. At this rate, three-quarters of the country's total population growth is occurring in its urban centers, and about 55 percent in its 10 largest centers. In 1958, these major cities represented about 7 percent of the nation's population, of which Kinshasa itself represented 2.5 percent. By 1970, these percentages had grown to a total of 17 percent for all urban centers and 7 percent for Kinshasa. By 1980, according to a GOZ estimate, more than one Zairian in three will be an urban resident, one in four will live in one of the 10 largest cities, and the population of Kinshasa will constitute 12.8 percent of the total.

The following table shows GOZ estimates of the growth of the urban centers and of the population of the 10 largest cities.

TABLE IV-A-1

POPULATION GROWTH IN ZAIRE AND URBAN CENTERS

	<u>1974</u>	<u>Percent</u>	<u>1980</u>	<u>Percent</u>
Zaire	24,165,770	100	28,680,423	100
79 Urban Centers	6,351,574	26.2	10,206,508	35.6
10 Major Cities	4,379,000	18.1	7,316,000	25.5
Kinshasa	1,991,000	8.2	3,682,000	12.8

POPULATION OF MAJOR CITIES IN ZAIRE

<u>City</u>	<u>1970 Pop.</u>	<u>Growth Rate-%</u>	<u>1974</u>	<u>Estimated Pop. 1980</u>
Kinshasa	1,323,000	10.8	1,991,000	3,682,000
Kanaga	429,000	8.6	597,000	980,000
Lubumbahi	318,000	7.1	434,000	654,000
Mbuji-Mayi	256,100	6.9	335,000	500,000
Kisangani	188,000	6.3	226,000	325,000
Likasi	146,400	6.7	189,000	270,000
Bukavu	134,900	7.6	181,000	280,000
Kikwit	112,000	7.5	149,000	230,000
Matadi	110,400	6.6	143,000	210,000
Mbandaka	107,900	5.5	134,000	185,000
Totals	3,125,200		4,379,000	7,316,000

Sources: Demographic Perspectives of Zaire (Provisional) -  
National Institute of Statistics, 1972  
Socio Economic Studies of Kisangani, Lubumbashi  
by University of Zaire.

Kinshasa is the most rapidly growing center, as may be expected. Its growth appears to be a function of an unusually high rate of natural increase, as well as the expected rural-urban migration. Studies for Kinshasa (exclusive of two neighboring communes) indicate an immigration rate of 6.0 percent, in addition to a significantly high rate of natural increase of 4.5 percent.

While much of Kinshasa's immediate post-independence growth has been attributed to the greater security to be found in the capital during the uneasy 1960 - 1965 years, Kinshasa primarily represents a major source of employment. During the immediate post-independence years, according to a 1967 GOZ study, despite an actual reduction of jobs available in the primary and secondary sectors, total employment increased by 43,500 jobs or 38 percent, as a result of the more than doubling of employment in the tertiary sector, by government and service industries.

TABLE IV-A-2 NUMBER OF JOBS IN KINSHASA 1955 - 1967

	<u>1955</u>	<u>1967</u>	<u>Difference</u>
Primary Sector	3,355	2,980	- 370
Secondary Sector	56,690	47,050	- 9,640
Tertiary Sector	51,679	105,210	+53,531
	<u>          </u>	<u>          </u>	
Total	111,724	155,240	

Other studies have shown that 45 percent of the country's manufacturing now is located in the capital, and its citizens account for more than one-fifth of household spending.

A study of family budgets in Kinshasa, published by the University of Zaire in 1973, indicated an average household size of 5.9 persons. However, the sample on which the study was based also showed an average of 8.14 persons living on each parcel of land, indicating that a substantial number of persons had not yet found independent housing for themselves. The following table

indicates the estimated number of new housing units per year required in the immediate future for each of the ten largest Zairian cities to meet projected demographic growth in accordance with two different assumptions;

- a. A new housing unit for each household
- b. A new housing unit for each group housed on one parcel of land, with provision for renting units to individuals not yet able to establish their own independent households.

TABLE IV-A-3 ANNUAL HOUSING NEED IN TEN LARGEST ZAIRIAN CITIES (EST)

<u>City</u>	<u>Estimated 1974 Population</u>	<u>Growth Rate</u>	<u>Annual New Housing Units Required</u>	
			<u>(a) Per Family of 5.9 Persons</u>	<u>(b) Per Parcel of 8.14 Persons</u>
Kinshasa	1,991,100	11.8%	36,400	26,400
Kanaga	597,000	8.6%	8,700	6,300
Lubumbashi	434,000	7.1%	5,200	3,780
Mbuji-Mayi	335,000	6.9%	3,950	2,800
Kisangani	226,000	6.3%	2,400	1,750
Likasi	189,000	6.7%	2,150	1,550
Bukavu	181,000	7.6%	2,300	1,700
Kikwit	149,000	7.5%	1,900	1,350
Matadi	143,000	6.6%	1,600	1,150
Mbandaka	134,000	5.5%	1,250	900
<b>Totals</b>	<b>4,379,000</b>		<b>65,750</b>	<b>47,680</b>

Officially-sponsored housing is negligible in the face of these quantitative needs. Virtually no housing was produced during the early and middle sixties; and GOZ, ONL and HG supported housing in the last five years has totaled only a few hundred units, most of which are special purpose, with the exception of the 1,100 units now under construction with HG financing.

## 2. Housing Conditions

### (a) Kinshasa

Like most large colonial centers, Leopoldville, (now Kinshasa) consisted of two cities; The European commercial, governmental and residential bridgehead on the bank of Stanley Pool, and the African city, carefully separated from the European nucleus by a green belt of park, zoo, and market place. With the vast expansion of the African city, Kinshasa has developed with the following residential zones, as described in the 1967 GOZ Socio-Demographic Study of Kinshasa.

#### (i) Types of Residential Zones

##### Zone I: Residential

The old European residential neighborhoods, in which almost all of the white population lives but which is now more than half African in occupancy; housing is in apartments, and single family detached homes with full utility service.

##### Zone II: The Old African City

Neighborhoods squeezed in between the green belt protecting the European downtown and a second open belt of various public uses (the old airport, etc.,) located close to the industrial area along the river upstream from downtown. Walled, intensively developed concessions, with up to 80% lot coverage noted in the study.

##### Zone III: The New African City

Neighborhoods immediately to the south of the second green belt, the areas of growth following the Second World War.

Housing in Zones II and III is in walled concessions, on basic 20 x 20 lots often laid out 20 to a block. The concessions themselves are very intensively developed, with a main structure and frequently one or even two substantial dependencies, the entire concession representing a sub-

stantial investment. Main streets are paved and have covered storm drainage, side streets are neither paved nor drained. A water tap is on each lot, metered if in use; and electricity is available throughout.

Zone IV: Planned Developments

Housing developed during the 50's by the colonial housing agency OCA in the major direction of growth to the south. These are the neighborhoods best equipped, outside of Zone I, with basic infrastructure; paved streets, water, sewers and electricity.

The housing is almost all semi-detached or row, some two-story row. It includes the original 1,100 prefabricated units created in 1952. Units are smaller than non-project homes and do not have easily defined courtyards. Many have chimneys, indicating provision for cooking inside. Common sanitary facilities are grouped at the rear of lots. Most of these units were originally occupied by government workers under lease-purchase agreements at negligible monthly payments. It is to be assumed that the vast majority of them are now subleased at market rates.

The study also includes in this zone a satellite sites and services area east of the city towards the airport. This neighborhood was laid out with substantial open spaces, and is now provided with community facilities (school, court house, social center, bus service). A main loop through the area was paved and drained. Side streets were not paved but were provided with open storm sewers and were in much better condition than the unpaved streets in any other neighborhood visited by the team.

Lots are provided with water taps but the majority did not appear to be metered, indicating that residents preferred either to carry water from the nearby water courses or to buy it from a neighbor with a metered, and therefore, working tap. \*

Most residents had completed and roofed their homes, but

plaster and paint were little in evidence. Secondary structures appeared limited to stores or storage sheds. WC's were often seen on a front corner of the lot, near the gutter.

Zone V: The South Extensions

Areas to the south, southwest and particularly southeast, occupied illegally sometimes by organized ethnic groups, during the tremendous surge of immigration to Kinshasa starting in 1959. The neighborhoods are laid out in a grid. Thoroughfares are paved and lighted; side streets are neither paved nor drained and are of varying widths and conditions. Where the terrain is uneven, erosion has made some of the side streets impassable for vehicles. Towards the outer limits of development, space is left for streets, and some even have home-made street signs; but they have not been graded. Lots are generally 400 M2; many are numbered.

In the in-lying sectional antennas and electric lights were observed, although no electric lines were visible; and some lots had water faucets, although not all were metered.

Lots have been improved with completed concrete block structures, with secondary living structures observed in the in-lying areas which have been occupied longest.

There are community facilities, but few public open spaces.

Zone VI: Out-Lying Extensions

Widely separated areas along the periphery of urban growth, occupied, also illegally since 1960. Undergoing similar growth are areas lying in the interstices between the various zones which were unoccupied at the time the study was made in 1967.

Streets are neither paved nor drained. Erosion is a problem in hilly areas.

In one neighborhood the team was told some individuals had

obtained metered water taps and sold water to residents. Others obtained water from nearby streams.

Neighborhoods on flat terrain were developed with concrete block houses. Development appeared much slower in hilly, less desirable areas, where many one-room concrete block structures were observed. In one district which appeared to be just starting development, board or corrugated metal shacks appeared to provide evidence of occupancy, while building materials were assembled on the lots, and some concrete block homes had been started. In some undeveloped areas, boundaries were indicated with minimal fences or plantings.

Obviously Zones V and VI are the areas of greatest demographic growth, and even in 1967 these areas, which lack basic services, already contained 40.5% of the city's population. These, together with the 19.2% of the city's population living in the crowded and unsanitary old African City, total three-fifths of the residents of Kinshasa who in 1967 lived in neighborhoods lacking basic sanitary facilities. Only about one-fifth of the African population lived in neighborhoods with adequate infrastructures. Today of course, the percentage is much less.

TABLE IV-A-4 Population of Residential Zones in Kinshasa, 1967

<u>Zone</u>	<u>Population</u>	<u>Percentage</u>	<u>Number of Parcels</u> *	<u>Percentage</u>
I	18,260	3.3%	6,613	5.9%
II	166,590	19.2%	11,646	10.5%
III	152,300	17.6%	12,719	4.4%
IV	167,510	19.4%	22,014	19.8%
V	175,480	20.3%	26,725	24.0%
VI	<u>175,320</u>	20.2%	<u>31,461</u>	28.3%
Totals	865,460		111,179	

\* The study identified lots, or concessions, rather than individual houses.

A concession usually contained the house and some secondary structures often

(ii) Type of Construction

In 1967, the vast majority of the city's housing - 78% - was of concrete block with, for the most part, fibrocement roofing. Only about one-sixth of the units (17.5%) were traditional wattle-and-daub (en pisé) with vegetal or - increasingly-metal roofs. Less than 5% were jerry-built shacks of metal sheeting, planks and miscellaneous materials.

A visual survey by the Team, especially of the more recently settled areas, indicated that virtually all the housing is now of concrete block - although blocks are of widely varying quality. Roofs in the newer areas have a tendency to be metal, rather than fibrocement, a market response to the sky-rocketing price of cement. .

Traditional wattle-and-daub has almost disappeared. Perhaps 5% of the units are shacks thrown up during a preliminary period of land occupancy.

(iii) Housing Densities and Overcrowding

As might be expected, residential densities decrease as one moves from the interior to the exterior of the city. However, the size of dwelling units also decreases and therefore the data tend to show more occupancy per room in the outlying, recently built up sections than in the old neighborhoods.

TABLE IV-A-5 Housing Conditions by Residential Zone in Kinshasa: 1967

<u>Zone</u>	<u>Population Per ha</u>	<u>Families-Persons Per Parcel</u>		<u>Housing Units Per Parcel</u>	<u>Rooms Per Parcel Median Mode</u>	
I	36	-	5.10	-	-	-
II	194	3.67	14.13	3.65	8.64	4
III	154	2.33	10.76	2.41	7.10	4
IV	125	1.26	7.63	1.19	5.10	5
V	68	1.32	6.62	1.40	3.6	2
VI	58	1.17	6.40	1.18	3.6	2

TABLE IV  
A - 6: Number of Persons Per Room By Size of Housing Unit in Kinshasa: 1967

<u>Zone</u>	<u>1-room</u>	<u>2-room</u>	<u>3-room</u>	<u>4 and more rooms</u>
I	no data given: Team Estimates for entire Zone - 0.58			
II	3.64	2.27	2.04	1.51 - 1.97
III	6.56	2.65	2.28	1.43 - 1.82
IV	5.57	3.32	2.28	1.30 - 1.78
V	4.28	2.54	1.97	1.21 - 1.84
VI	4.52	2.55	1.73	1.37 - 1.51

Some comments on the above data are in order. Despite the greater overall densities in the older areas, per room occupancy was generally less. According to the 1967 survey, half the population in the African cities lived in parcels with 10 or more rooms, and hence at lower room occupancy levels than in the extension zones, where about 40% of the residents lived in one - or two - room units at a considerably higher rate of over-crowding.

The relatively low overall densities in the extension zones (V and VI) may be attributed to the large number of unfinished units. It is to be assumed that these densities by now more closely approximate those of the planned developments.

(iv) Tenure

The tenure question is quite confused. Most of the parcels are owner-occupied. However, in the older neighborhoods the majority of the heads of the primary household in the concession are tenants, indicating that the owner who built the housing on the lot is no longer economically active, except as a landlord.

TABLE IV-A-7 Tenure and Tenancy, Kinshasa, 1967

<u>Zone</u>	<u>Parcels Occupied by owners</u>	<u>Household Heads who are Tenants</u>
I	no information	no information
II	71.5%	62.0%

<u>Zone</u>	<u>Parcels Occupied by owners</u>	<u>Household Heads who are Tenants</u>
III	69.5	51.6
IV	78.5	23.4
V	83.5	27.8
VI	86.5	17.8

TABLE IV-A-8 (v) Water and Sanitary Facilities

Percentage of lots with Water and WC, Kinshasa, 1967

<u>Zone</u>	<u>Lots with Water</u>	<u>Average Distance to Water for lots without</u>	<u>Lots with WC</u>
I	n.a.	n.a.	99.4%
II	89.8%	69 M	37.3
III	92.8	23 M	51.9
IV housing projects	97.0 )		( 95.0
sites and services	90.0 )		( 20.0
V	27.8	152 M	13.6
VI	17.8	178 M	8.5

According to a WHO-IBRD Survey, only 37% of the city of Kinshasa was directly served by water in 1972. The sewerage network is minimal, and many of those built for the housing projects during the Fifties have become obstructed.

GOZ is currently negotiating a major water system expansion project with the Common Market Development Fund.

Garbage collection, if done, is by private firms.

(b) Lubumbashi

The country's third largest city and capital of the copper-rich Shaba Province, Lubumbashi grew from a town of 27,000 in 1940 to its estimated 1974 population of 434,000. A sprawling, disjointed agglomeration, literally in the shadow of the smokestack of the original copper smelter, the city has the

only functioning traffic signals in the country and a considerable stock of company housing. The following is based on some summary findings from a socio-economic survey in 1973 and a brief visual survey by the Team.

(i) Types of residential zones

Zone I: Residential

There are two neighborhoods in this zone. Housing is primarily single-family detached, with both luxury villas (by any standard) and quite substantial but less exuberant villas for cadres, it having been the policy of the copper company to house salaried employees in a neighborhood environment rather than in the clearly demarcated projects reserved for workers. (An exception is the mining companies planned community, which contains housing suitable for lower-level executives as well as for workers). This zone also includes a small project built by the tobacco monopoly, consisting of two rows of 4 and 5-room bungalows costing Z 4,000 exclusive of infrastructure, which were provided by the company, and are now being sold under lease-purchase arrangements by the company to its employees in the Z 80-120 salary range. Down payments and monthly payments are withheld from paychecks.

Zone II: Old African City

Located next to the copper mill, the so-called Kinya neighborhood was developed during the colonial era essentially along sites-and-services principles. Workers built their own homes on relatively small lots laid out on the traditional grid and provided with foundations by the local authorities -- the so-called Grévisse method, named after the Belgian Administrator who originated it. The area was also provided with basic infrastructure: paved streets, water, sewers and street lighting. Workers thus were able to become homeowners at a relatively early stage, unlike the majority of the city's workers who live in company housing they must vacate upon retirement.

Many of the houses have one or more rear additions which are rented.

Rents in privately-owned housing range from Z 5 - 10 per room per month for a room with water available in the courtyard. Rents for rooms with water and electricity were quoted to the Team at Z 15 - 20 a month.

#### Zone III: Housing Projects

While company housing also is located in the first two Zones, the Ruashi neighborhood appears predominantly composed of these projects, constructed throughout the years in a variety of styles and containing numerous examples of approaches to the provision of low cost, limited maintenance workers' housing. Most of the housing consists of twin units, including twin one-room units, although there are some low and free-standing housing as well. An early experimental OCA project includes some two-story brick units on brick foundations, some with foundation-to-roof cracks, others collapsed. The newest project is the GOZ's Cité Mobutu. The roads and storm drainage for another 500 lots have been installed; GOZ has requested CNECI to undertake development.

The city's two major employers provide housing for 90% of their employees. Those who do not receive housing get an allowance equal to 25% of their salary, plus 15% of the allowance for each child. Medium-sized employers provide housing only to their higher cadres (about 10% of their work force), and since Zairianization, the tendency has been to decrease the amount of housing provided.

#### Zone IV: Extensions

The Katuba neighborhood was laid out in 20 x 20M lots beyond a marshland blocking extension of the original African City. It contains a lower quality of housing, much of it with flat roofs and the usual rental extensions built onto the rear of the houses.

It also contains a number of so-called "servants quarters," row housing with a roof sloping to the rear. In this neighborhood, many of these

The Katumba extensions are laid out in larger lots and the streets traced but not paved, unlike the earlier neighborhoods. In addition to considerable poor housing, the extensions also contain a few middle-class units.

In discussions, the Team was told that much squatter construction is undertaken by workers attempting to build homes for retirement.

Zone V: The City Annexes

This zone, the most recently under development, has no infrastructure. Much of the soil is black clay and presents a drainage problem.

TABLE IV-A-9 Population of Residential Zones of Lubumbashi (EST) 1973

<u>Zone</u>	<u>Population</u>	<u>Percentage</u>	<u>No. Parcels</u>	<u>Percentage</u>
I	83,845	20.7%	11,074	25.1%
II	92,383	22.8%	8,004	18.1%
III	65,848	16.2%	8,767	19.8%
IV	106,801	26.3%	10,333	23.4%
V	<u>36,754</u>	9.0%	<u>6,082</u>	13.8%
Totals	405,638		44,203	

(ii) Type of Construction

Much construction is of brick, the clay soil lending itself to this. Costlier construction is of hollow tile fired bricks, but there appears to be a substantial supply of artisanal fired bricks for lower cost housing. Poorest units are often of sun-dried earth block.

(iii) Density

The only data available are on population per lot by neighborhood from the 1973 survey. Where we have combined neighborhoods in one zone, densities are given for both neighborhoods.

TABLE IV-A-10 Residential Densities per Parcel in Lubumbashi, 1973

Zone I	7.0 to 8.4 persons per lot
Zone II	13.5 to 16.1
Zone III	7.5
Zone IV	10.3
Zone V	<u>6.0</u>
Citywide average	9.2

(iv) Water and Sanitary Facilities

The WHO-IBRD Study published in 1964 indicated there were 18,235 private connections in Lubumbashi and 27 public standpipes and estimated that 52% of the city's population had water service.

Pressure is insufficient, and some neighborhoods are without water at peak periods.

Lubumbashi has an existing sanitary sewage system, including some non-functioning treatment plants, which could service a large portion of the city, had maintenance been kept up.

(c) Other Cities - Water and Sewage

Based on survey data, the following levels of water service are maintained in the other major cities of Zaire:

TABLE IV-A-11 Level of Water Service in Major Cities, 1972

<u>City</u>	<u>No. Private Connections</u>	<u>No. Public Standpipes</u>	<u>% Pop. Served</u>
Kananga	3,854	67	9
Mbuji-Mayi	1,180	14	5
Kisangani	5,604	39	36
Likasi	6,354	6	44
Bukavu	6,701	20	43
Kikwit	1,366	9	14.5
Matadi	3,547	44	42

In Kananga, the country's second largest city, the main catch-basin for the water supply is located downstream from the city.

Kisangani, Bukavu and Mbandaka are without sanitary sewers. In Matadi, because of an unusually impermeable subsoil, the city has had to resort to communal comfort stations.

#### IV. B. Popular Housing

Two-thirds of the present population of Kinshasa, and probably a greater proportion of the residents of other urban centers, live in the unofficial housing sectors. These areas of the city have been subdivided, for the most part along the traditional grid, copying the layout of the old African cities, in which, according to the 1967 socio-demographic study, two-thirds of the residents of Kinshasa have at one time lived.

These subdivisions were prepared by moonlighting surveyors, usually from the Land Survey Service, for the traditional chiefs whose tribal land lay in the path of city development. A grid of interior streets was laid out and respected, and the position of the legal occupants was authorized after the fact by issuance of the so-called "Lodger's Book" (Livre de Logeur), and which has been replaced under present legislation by the "titre d'occupation preciaire." These extra-legal neighborhoods were organized into communes and incorporated into the city in 1968.

The pattern of migration into Kinshasa is comparable with that of other African centers studied by the Team: first place of residence is with a relative or acquaintance from the same village. (Therefore, whereas the African cities used to serve as ports of entry, today this function is spread throughout any of the city's established neighborhoods). The new arrival receives free lodging until he finds a job. Then he moves into a 5 x 6 m (two room) rental unit in a secondary structure in someone's courtyard.

The absolute minimum rental figure quoted the Team was Z 5, more often, Z 6 per month for a unit without water or electricity, located in an outlying section of town, up to Z 10 to Z 15 for the same type of unit without services but more conveniently located nearer to the center of town.

Rents of the 30 m2 unit on a serviced lot were quoted to the Team at Z 15.20 per month.

The Team also was told that rentals for homes in the old housing projects - larger and in better-serviced neighborhoods - rose with news of the doubling of cement prices from Z 40 to Z 50 per month. (These projects were built by the colonial authorities in the late fifties for African government employees and sold under lease-purchase for payments as low as Z 1.40 a month).

There also appears to be something of a sales market for existing housing in the African cities. The Team was quoted a price of Z 7,000 for a 3-room, 50 m2 concrete block house, plus a three-room secondary structure that should throw off gross monthly rentals of, say, Z 45-60 (Three units x Z 15 - 20 per month) on a 400 m2 serviced lot.

Squatting, that is the opening up of new areas to development, is undertaken primarily by persons who have lived two or three years in the city and who are knowledgeable about what needs to be done. Squatting is not done by new arrivals. The Team was told that considerable squatter development is undertaken for speculative purposes by already established residents.

The procedure is to purchase a lot in an unofficial subdivision from a traditional chief, a less direct proposition than it used to be when tribal ownership was not illegal, or from the local civil administrator. A temporary shack is thrown together, primarily as a physical sign of ownership. The lot may be fenced in with a strand of wire or plantings. Sometimes the shack is inhabited, more often not. After a year or so, as more and more signs of future occupancy appear and as the authorities do not move to demolish the shacks, serious

Construction takes at least one or two additional years. A study of squatting in Kinshasa in the early sixties indicated that 39% of the units started in the sample area were completed in one year and 13% in two years. On the other-hand 44% were still not completed after six years.

TABLE IV-B-1 Construction Starts and Completions in Sample Blocks of Squatters Zones of Kinshasa 1960-1965

	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>Total</u>
Starts	148	120	210	226	345	399	1448
Completions	72	88	90	130	225	209	814 (56%)
In 1 yr.	(72)	(50)	(66)	(78)	(157)	(140)	563 (39%)
13 Mos. - 2 Yrs.		(38)	(15)	(33)	(51)	(50)	187 (13%)
25 Mos. - 3 Yrs.			(9)	(14)	(10)	(13)	46 ( 3%)
37 Mos. - 4 Yrs.				(15)	( 3)	( 2)	20 ( 1%)
49 Mos. - 5 Yrs.					( 4)	( 3)	7 -
61 Mos. - 6 Yrs.						( 1)	1 -

The Team was quoted a wide range of land prices, usually Z 20 - 50 for a 400 M2 lot, but prices of up to Z 100 for the same size lot were also heard, particularly for close-in land.

(For luxury housing, purchase of 600 m2 in an extra-legal subdivision for Z 600 compares with an official lease at Z 120 per year for 1500 m2 in essentially the same peripheral neighborhood.)

Construction takes place in stages: The owner does much of the work himself with help from his friends and some hired labor. A 1967 study by IRES found that in 65% of the cases the owner, building at the rate he is able to save for materials, required up to a year to complete; 27% required 2 years; and 8% required 3 to 6 years.

Out-of-pocket cost of a smaller house in an area without services may be Z 300 - 600, plus Z 200 for a septic tank.

Rental units are added at a cost of, say, Z 300 each.

The squatter, depending on his means and inclinations, may construct a 300 m<sup>2</sup> unit in the back of the lot, in which he will live. He then adds one or two rental units, so that he has a three-unit row on the rear of the lot. Rental income will enable him to speed up construction of his home, and he will rent the third unit when he has moved up.

Others concentrate on building the main structure, particularly those whose revenues permit it. According to the 1967 socio-demographic study, the proportion of tenants living on each lot diminished radically as one left the African cities (62% in the old city, 52% in the new city) and reached the peripheral areas (28% in the southern and 18% in the outlying extensions).

Many Zairians are members of "likelemba," small mutual savings societies of 5 - 10 persons who pay a monthly contribution. Each month one of the members, in rotation, is given the money. Little clubs are formed generally by persons who work together. They are particularly popular among women, for whom the proceeds represent a small capital to invest in stock for trading. The proceeds are used by men chiefly to buy construction materials.

Loan sharks - ironically referred to as "banque Lambert" - after the Belgium Bank - are not generally resorted to in popular home construction.

These are individuals who make personal loans, usually among low-income employed persons, at an effective rate of 15% per month, repayable at pay-day and usually collected in person by the lender at the pay office. Another indication of the implied interest rate on the curb market may be the fact that a "Lodgers Book" (i.e. the right to occupy an illegal lot) recently sold for Z 100 cash or Z 60 down and another Z 60 within a year, for a total of Z 120, representing an annual interest rate of 50% on the deferred Z 40 payment.

#### IV. C. Current Income Levels and Effective Demand For Housing

The following table shows the distribution of income for Kinshasa, Lubumbashi and Kisangani. The figures, which are based on family budget surveys

carried out in 1969 (Kinshasa), 1972 (Kisangani) and 1973 (Lubumbashi), have been extrapolated to represent income levels in October 1974.\* The extrapolations were based on information regarding trends in wage levels, and in the cost of living of lower income families. The income figures are relatively good statistical estimates, and they are comprehensive in coverage. The survey included stable salaried wage-earners as well as families supported by self-employment or casual work; "expenditures" were defined to include savings invested in houses and in bank deposits; and the incomes include special payments such as housing allowances and payments in kind.

TABLE IV-C-1 Income Distribution in Kinshasa, Lubumbashi and Kisangani, Oct.1974

<u>Average Monthly Family Income (Zaires)</u>	<u>Percent of Total Population</u>		
	<u>Kinshasa</u>	<u>Lubumbashi</u>	<u>Kisangani</u>
under 30	15	21	56
30 to 39	16	24	12
40 to 49	18	10	10
50 to 59	19	15	9
70 to 119	19	24	7
120 and over	14	6	6
	<u>Zaires per Month</u>		
Median Income	52	45	27
<u>Target Group</u>			
1. Income Range (35th to 50th percentiles)	43-52	34-45	20-27
2. Possible housing expenditure (25% of income)	11-13	9-11	5-7

\* See Annex 1 "Note on the Derivation of the Income Estimates".

The target group (poorest 50% of the population) in Kinshasa consists of families who now earn less than Z 52 per month. In Lubumbashi and Kisangani, the figures are Z 45 and Z 27 respectively. The Kisangani figures are probably more representative of the remaining urban areas in Zaire (e.g., Bukavu, Matadi) because Lubumbashi incomes reflect the relatively high wages of a mining center.

Real incomes within the target group are likely to remain unchanged, or, at best, to grow slowly over the next 4 to 6 years. Present real income levels will therefore be acceptable estimates of base period payment capacity for any shelter projects initiated during the next few years.

The effective demand for shelter is the willingness and capacity to pay. It is limited primarily, of course, by the low incomes of target group families. The effective demand for housing provided in a given new location and carrying long term mortgage commitments is generally less than estimates of housing need based on population growth and family sizes, or of potential housing demand based on average current expenditure on shelter. Effective demand for such housing is limited by (i) the instability of much income: about 45% of target group income is obtained from less secure casual jobs or self-employment; such instability creates difficulties in maintaining steady long-term mortgage payments; and (ii) by the high incidence of small-scale entrepreneurial activity which means that for many families, savings have a high opportunity cost--at least during periods of purchase or expansion of small businesses--and (iii) the need to live near jobs, particularly for those with small businesses, which limits the ability to take up housing opportunities in new locations.

Data on these various determinants of effective demand are very incomplete, and limited to Kinshasa. The average monthly expenditure on housing (rent, land purchase, and construction) by the target group was estimated

by the survey to be only Z 2.5 (at current prices), or about 8% of total income. This figure, however, appears to miss much of the expenditure on land and construction. A more correct estimate would put housing expenditures at about three times that level--Z 6, or 18% of total income. This average, however, represents very different expenditure levels by different groups: about one-third of the families were renters, paying rents between Z 4 and Z 5. Another third were in the process of house construction, spending in the order of Z 14 per month. A final group were existing homeowners, who are now spending negligible amounts on housing.

The fact that renters constitute a larger proportion of families with above median incomes than of target group families (38% vs. 33%) suggests that considerations other than income level; i.e., factors such as job-security, location, and other demands on savings capacity, are major determinants of the choice between renting and construction. Unfortunately, there is no information which would allow one to estimate the number of families who would switch from renting to house purchase, if long-term credit, permitting lower monthly payments, was made available. A more certain source of effective demand are those families who, over the next few years, would join the house-builders group even without long-term credit or subsidized terms. However, for these families also, location, and the degree of need for flexibility with regard to the timing of outlays (self-construction is highly flexible in this regard) will partly determine the demand for long-term credit house or site purchase programs.

## V. Economic Considerations

### A. Recent Performance:

The economy of Zaire has displayed significant real economic growth over the recent past; over the period 1968-73, the average annual rate of growth of real gross domestic product was 6.7%. Real growth was lower in 1973, at 6.4%, and it appears that 1974 will also record a rate of growth lower than the average

of the preceding five years. Similarly, while the average annual rate of price inflation, as measured by the GOP deflator, was not especially high over 1968-73 at 5.7%, the rate of inflation in 1973 was 10.0%, and the 1974 rate will probably be somewhat higher than 1973's. Consumer prices have risen at substantially higher rates since 1971, rising by 13.9% between 1971-72 and by 24.9% between 1972-73. Given world economic conditions, however, such inflation rates are not especially surprising.

V. B. Structural Developments:

Structurally, the economy of Zaire continues to be oriented strongly toward the mining sector, although the relative contribution of manufacturing to real gross domestic product has increased significantly, though not substantially, over recent years. In absolute terms, however, real gross domestic product attributable to manufacturing has grown from Z 40.4 million in 1969 to Z 60.0 million in 1973. Moreover, the Zairois economy continues to be increasingly export-oriented; in 1968 prices, exports of goods and non-factor services accounted for 40.7% of gross domestic product in 1969 and for 43.3% in 1973. It tends to follow, therefore, particularly given relatively small agricultural and manufacturing sectors, that the economy is also import-dependent to a significant degree.

TABLE V-B-1  
GROSS DOMESTIC PRODUCT  
(Millions of Zaires)

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	<u>GDP CURRENT PRICES</u>	<u>GDP 1968 PRICES</u>	<u>GDP PER CAPITA U.S. DOLLARS</u>	<u>GDP DEFLATOR</u>
1968	728.5	728.5	.	100.0
1969	902.4	794.6		113.6
1970	1026.2	871.6		117.7
1971	1088.6	918.8		118.5
1972	1171.1	956.3		122.5
1973	1370.2	1017.5		134.7

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TABLE V-B-2  
 COMPOSITION OF GROSS DOMESTIC PRODUCT  
 (Percentage, 1968 Prices)

	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>
Agriculture	20.3%	19.5	18.8	18.1	17.5
(Commercial)	(11.1%)	(11.0)	(10.6)	(10.0)	(9.6)
(Subsistence)	( 9.2%)	( 8.5)	( 8.2)	( 8.1)	(7.9)
Mining	24.9%	24.0	23.6	23.9	24.3
Manufacturing	5.1%	5.6	5.6	5.8	6.0
Energy	1.0%	1.0	1.0	1.1	1.3
Commerce	11.7%	12.7	13.0	12.9	12.7
Transport and Telecommunications	5.2%	5.1	5.3	5.4	5.5
Government Services	9.0%	8.5	8.1	8.2	8.1
Other Services	9.8%	10.1	10.0	10.2	10.2
Construction	3.7%	4.8	5.2	5.3	5.3
(Commercial)	( 2.6%)	( 3.4)	( 3.7)	( 3.8)	(3.8)
(Subsistence)	( 1.1%)	( 1.4)	( 1.5)	( 1.5)	(1.5)

V. C. Balance-of-Payments Considerations:

As indicated in Table V-C-1, the current account of the Zairois balance of payments has been in a deficit position since 1971, occasioning substantial external capital inflows and/or declines in the Zairois foreign exchange reserve position. Inasmuch as real gross domestic investment (excluding changes in stocks) has averaged almost 29% of real GDP between 1969 and 1973, the current account deficits and foreign financial inflows which have been experienced should not be regarded as excessive. Indeed, it is perhaps remarkable that greater external financial inflows were not required to maintain such a high rate of capital formation. That such has not been the case can be attributed mainly to a strong export sector and most particularly to copper exports, which account for more than half of the Zairois exports of goods and services, which in turn account for about 40% of gross domestic product. Such heavy dependence on copper exports, of course, has its drawbacks; IBRD estimates of the sensitivity of the Zairois current account deficit to a decline in copper prices suggest an elasticity of about - 1.6%. While final estimates of the 1974 balance of payments are not available at this time, it is known that copper prices in late 1974 were substantially below the levels of 1973 and early 1974, so one may reasonably anticipate a weakening of the balance of payments in the near term, with a commitment requirement for an increased foreign financial inflow if GOZ investment targets are to be approximated.

TABLE V-C-1  
BALANCE OF PAYMENTS  
(Millions of Zaires)

	<u>Goods and Services</u>				<u>Net Transfers</u>	<u>Balance On Current Account</u>
	<u>Exports</u>		<u>Imports</u>			
	<u>Merchandise</u>	<u>Services</u>	<u>Merchandise</u>	<u>Services</u>		
1969	395.3	22.6	268.7	99.0	-46.4	3.8
1970	342.4	31.3	313.9	82.1	-44.0	-66.3
1971	343.5	35.3	320.6	94.9	-38.7	-75.4
1972						
1973						
	<u>Net Private Capital Inflow</u>	<u>Net Public Capital Inflow</u>	<u>Other</u>	<u>Increase In Monetary Reserves</u>		
1969	-9.6	-4.5	6.6	-3.7		
1970	6.0	24.0	9.2	-27.1		
1971	28.7	29.5	14.8	-2.4		
1972						
1973						

V. D. External Debt Service:

Although as noted above, the balance of payments and the GOZ investment program have entailed significant foreign financial inflows, the 1972 external debt service ratio, taken as the ratio of external debt service to export earnings, was relatively low, at 6.2%, and rose to only 6.8% in 1973. The GOZ, however, projects a debt service ratio of 11.0% for 1974; projections beyond 1974 clearly depend to a substantial degree on copper prices, as indicated above in our discussion of the balance of payments. The GOZ, the IBRD, and the EXIM Bank have made such projections and for the medium term, projected debt service ratios range from a low of 11.3% (IBRD) to a high of 23.0% (EXIM) for 1975, a low of 10.2% (GOZ) to a high of 24.4% (EXIM) for 1978, and a low of 9.0% (GOZ) to a high of 20.0% (EXIM) for 1980. All three projections are based on different assumptions about the price of copper. Given that the projections vary so widely, it is probably more important to focus on the fact that the structure of the external debt has a relatively short maturity structure, which poses special difficulties for external debt management.

The external debt service position would clearly be improved and stabilized by lengthening the maturity structure of the external debt.

V. E. Future Prospects

In the short and medium run, the Zairois economy faces a period of difficult readjustment to a lower level of export earnings brought about by the decline in the price of copper. The government budget had adapted to the higher price of copper and was in deficit before the decline in copper price, so that especially good management of the government budget and judicious use of foreign exchange will be required over the next few years. Inasmuch as a significant amount of short-term external supplier credits have been taken on recently, it will be especially important to achieve a restructuring of the external debt to lengthen its average maturity.

In the long run, prospects for the Zairois economy are more favorable, in that the country is rich in natural resources and has taken a variety of steps to develop those resources. Oil exploration has been successful in the Central Basin, and the offshore fields at Moanda should be productive by mid-1975; investment in hydroelectric power and the associated transmission network is proceeding, with completion scheduled for the near future; the hydro-power complex will supply energy for the expansion of copper mining at Shaba; several new factories are also well on the way to being on-stream; a flour mill capable of supplying all of the nation's wheat-flour needs, a new furniture factory, a General Motors assembly plant, a new steel mill, and a new cement factory are examples of this initiative.

Agricultural imports, however, will continue to rise in the near term and unless modifications in government price policies and improved transportation for access to the Kivu region are undertaken, the agricultural sector will remain a weak spot in the economy and a continual drain on foreign exchange earnings.

In spite of certain weaknesses, however, the economy of Zaire appears to be in better condition to absorb and repay long<sup>1</sup>-term external debt than most developing countries. Oil price increases have not devastated the economy's international monetary reserves and although worldwide inflation is and will continue to impinge on the economy and a certain amount of austerity in the government budget is clearly in order, there is presently no reason to anticipate that the economy cannot weather these difficulties and continue with its development program.

NOTE ON THE DERIVATION OF THE INCOME ESTIMATES

1. The basic sources for the income estimates in all three cities were family budget surveys. Supplementary income data, chiefly on wage rates, were used as checks and for extrapolation. The Kinshasa study was the first of these surveys, and was directed by Joseph Houyoux, financed by USAID and received French technical assistance. The sample frame was based in turn on a Socio-Demographic Survey of Kinshasa carried out in 1967 by the Institut National de Statistique; there has been no census in Zaire. The 1967 survey was a systematic 10 percent random drawing of all parcelles; for the 1969 sample, it was updated by field checks of the city extensions that occurred between 1967 and late 1968. The 1969 sample frame is therefore considered to be reasonably accurate for all Kinshasa.

2. The income unit for the Kinshasa survey was the standard family defined as a common consumption unit. This was adjusted slightly to include the frequently present lodgers, chiefly students who eat with their landlords (who share "la meme casserole"). Other lodgers or tenants in the parcelle, however, were not included, though their rental payments are reflected in the total income of the landlord family.

3. A major virtue of the 1969 survey is that it measures expenditures rather than incomes. Replies to direct income questions are almost always less accurate than to questions on expenditures. Also, expenditure surveys usually involve a more systematic item-by-item reconstruction of standards of living; their principal weakness is that they miss part of savings. Savings in the form of house construction and also some financial savings, were included in the Houyoux surveys, but total positive savings thus reported are probably underreported. On the other hand, borrowing, or negative savings, is missed. It is not clear whether total incomes are thereby under- or over-estimated, but the net error is not likely to be large.

Another aspect of the expenditure vs. income survey is that the former is more likely to pick up occasional and secondary sources of income earned by both family heads and dependents. In Kinshasa, as much as 57% of all family heads were found to have secondary income sources, of which the most common were occasional casual labor (11%), bribes and illegal activities in general (9%), and part-time retailing (7%). Incomes earned in such activities are usually underreported, but they are reflected in the consumption levels, estimated by the Houyoux expenditure surveys.

4. Though the overall income estimates seemed to be satisfactory for the purposes of this report, the estimate for one critical component - housing expenditure appeared to be too low. The reported expenditure on land and construction by the target group, averaging only Z 0.2 in 1969, could not be reconciled with (i) minimum quality housing cost estimates for that year (Z 250 - Z 400), and (ii) the estimated rate of city population growth and, thus, the implied increase in homes. These expenditures were therefore adjusted assuming (i) a cost of Z 250, and (ii) 9% annual growth in the stock of homes: since Kinshasa was estimated to be growing at 11.8%, the 9% figure allows for rising density within existing homes. The revised estimate of housing expenditure was Z 1.9, or Z 3.7 at October 1974 prices. A probable cause of the underestimation was the one-year lapse in time between the moment of sample selection and that of interview: many homes initiated during that lapse of time were probably accounting for a major part of the construction expenditures in 1969, and they were necessarily excluded from the survey.

Furthermore, the outlying districts where most construction was likely to be occurring were the last to be interviewed, so that the period between registration and interviews was from one to two years in their case. Other possible causes of underreporting are, firstly, that construction material purchases would often not be visible in the home in which the interview took place, and, secondly, that such purchases are often sporadic; e.g., after the annual June 30 wage bonus, and were therefore more liable to be forgotten or not mentioned during interviews.

5. The Lubumbashi and Kisangani surveys were similar to the Kinshasa study with regard to sample frame design and interviewing procedure. There was some feeling amongst persons consulted that the former surveys had perhaps been carried out less carefully than that for Kinshasa, but this feeling was not based on any specific procedural critique, and I was unable to form an independent judgment since their author, Mr. Houyoux was abroad, and the full survey reports were not made available to me by either the INS or by SICAI (the consulting firm responsible for the Kisangani study). In any case, my own judgment, based on conversations with an assistant to Houyoux, was that the overall quality of the two provincial surveys was acceptable for the purposes of this Mission.

6. The extrapolation of the incomes reported by the surveys to present levels required (i) information on wage and price trends, and (ii) an assumption regarding trends in non-wage incomes.

7. The price series used was the retail store price index for IRES, (Institut de Recherches Economiques et Sociales) of the National University of Zaire. Price series are also published by the INS, but the choice of the IRES series was governed, first, by evidence of the acceptable procedure used by the University - though the methodology has weaknesses and chiefly an out-of-date set of weights, that will reportedly be corrected within a few weeks - and, second, because there were widespread doubts concerning the objectivity of the official price series. A separate INS series - the only one available - was, however, used for Lubumbashi. For Kisangani, there was no separate price series so the Kinshasa index was applied.

8. Data on trends in wages and salaries were available, between 1969 and 1973, for both private sector and government employees (Table below). The principal question, therefore, concerned wage developments during 1974. The views of some government officials, and of economists at the research department of UNTZA (Union Nationale des Travailleurs du Zaire) coincided in seeing a relative stagnation in both negotiated and legal wage levels during 1974.

Wage and Price Indices

(1969 = 100)

<u>Real Wages</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>Sept.</u> <u>1973</u>	<u>Oct.</u> <u>1974</u>
<u>Private Sector</u>						
Unskilled	122	126	121	106	104	
Skilled	122	126	120	106	104	
All urban	114					
<u>Government</u>						
Banque Zaire series	97	100	94	83	81	
National accounts series	105	106	90	94		
<u>Prices</u>						
Kinshasa	106	118	134	137	143	195
Lubumbashi	101	110	120	144	-	206

- Sources: 1. Banque du Zaire, Rapport Annuel 1972 - 1973 pp.91; 323  
 2. IRES, Université Nationale du Zaire, Index des Prix de Detail dans les Magasins de Kinshasa, Oct. 1974  
 3. The Lubumbashi index is reported by the Bank up to 1973 only. The change between 1973 to Oct. 1974 was assumed to equal that in Kinshasa.

9. My assumption concerning the trend in non-wage incomes, which amount to about 45% of target group income, was that they followed the pattern of wage incomes, and therefore remained unchanged in real terms over the period. Most of this income is derived as a spillover of modern sector spending. Given the slowdown of modern sector income growth, and a probably unabated rate of migration, it seems likely that non-wage real incomes have remained, at best, constant between the survey periods and the present. It is worth noting also that the Houyoux report was particularly inadequate in its discussion of the level of non-wage incomes, and of the corresponding extent of non-modern sector occupations. For this report, these incomes had to be estimated indirectly, as a residual between total income and wage incomes. The Houyoux and the Socio-Demographic Surveys, unfortunately, both neglect "marginal" occupations (i.e., small-scale or traditional, or low productivity occupations), treating them as "secondary" occupations, and thereby overestimating the rate of open unemployment and severely underreporting the proportion of economically active population.

10. The forecast of future income trends was based on the following projections: (i) agricultural production will at best recover slowly from the effects of nationalization, and from an earnings squeeze caused by price controls and cost inflation. (ii) mineral prices, particularly copper, will at best stay at current levels. (iii) a squeeze on both fiscal and balance of payments capacity resulting from the above, as well as from increased debt service, and higher import costs, and also from high public investment commitments, will force the government to continue its current policy of real wage restraint.