Aspects of the informal economic sector of Juba southern Sudan

Susan Jenkins

ABSTRACT

This thesis is a first step towards the description and investigation of informal sector activity in Juba, capital of the Southern Region of Sudan. The major theoretical themes to be found in the literature on the informal sector are discussed with particular reference to their applicability in the Juba situation. As the Southern Sudan is a relatively unresearched area, an overview of the Region is given, and various socio-economic features of the town described, to provide adequate background material to complement a field study of one market in Juba - Konyo-Konyo - a major centre of the town's informal sector activities. Investigation at the small scale level of the market resulted in the collection of data unobtainable from larger scale research, such as the census, and enables a detailed picture of such activity to be drawn. It is concluded that in the light of present research, Juba's informal sector is an indispensable part of life in the town and its surrounding rural areas. In the current difficult economic situation, which is unlikely to change given present constraints for a considerable time to come, the informal sector is seen as a phenomenon which will continue to absorb larger numbers of workers (20-25% of the town's labour force), and serve the majority of the town's population.

ASPECTS OF THE INFORMAL ECONOMIC SECTOR OF JUBA SOUTHERN SUDAN

A thesis submitted for the degree of M.A. of the University of Durham

by

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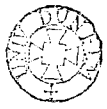

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PREFACE

This study is the product of two years of part-time fieldwork at the University of Juba, Southern Sudan. Work commenced in August 1978. The University had opened its doors less than a year earlier, in September 1977, as a new kind of African University. With a motto of relevance and excellence, the philosophy of this national institution was directly oriented to the development of a Region emerging from a long period of neglect and civil strife. It is with this philosophy in mind that this work has been undertaken and it is hoped that the material collected here will be a contribution to the work of the University in guiding the development of the Southern Region.

A first step towards describing and investigating informal sector activity in Juba, the capital of the Region, has been made in this work. The informal sector has been described in many ways but essentially it is that sector of the urban economy which is differentiated from the mechanised, capital-intensive modern sector as we know it in Europe, and consists largely of family enterprises with limited capital, poor working conditions and labour intensive techniques. The informal sector is an ever-growing phenomenon of cities of the Third World, as the modern sector fails to absorb a rapidly expanding labour force.

The material contained in this study is to a large extent original, due to a lack of data of all kinds on the Southern Region and particularly on Juba. Two major sources have proved particularly useful in providing information : work of the Population and Manpower Unit of the University of Juba, and personal field research.

The Population and Manpower Unit (PMU) is a United Nations (International Labour Organization) assisted project (SUD/74/028). During

the study period (1978-80) the PMU team in Juba consisted of a project manager, two volunteer (UNV, and IUC Study and Serve) assistants (of whom the writer was one). A team of secondary school leaver enumerators were trained in survey methods and data processing and undertook most of the survey enumeration.

The aims of the Unit are threefold and comprise (a) the undertaking of research on relevant aspects of the population and manpower in the Southern Sudan, (b) the development and guidance of the University as a producer of skilled manpower relevant to the development programmes of the Region and country and (c) the development and administration of population and manpower related courses within the academic programme of the University.

Throughout 1979 the PMU was involved in carrying out a Juba Town Survey with the aim of providing an overall picture of socio-economic conditions in the town. Much of the material collected has been written up in other PMU publications and chapters 2 and 6 are based largely on the results of that survey.

As the scope of the PMU Survey was rather broad and carried questions for a range of development agencies and projects, information on informal sector activities could not be collected in detail and a more thorough examination was carried out through personal field research. The nature of the informal sector is so complex, and the numbers involved so large (over 20% of Juba's work force), that it was necessary to restrict the scope of field investigation and look at particular aspects of this activity. As Chapter 3 illustrates, the problem of defining the informal sector is a major one, and after consideration of the major theoretical concepts to be found in the literature, and in relation to the Juba situation, it was decided to use an ILO typology of informal sector activities

in the approach to fieldwork. This model consists of four categories of overlapping activities ranging from well established enterprises with permanent premises to the pavement hawker.

Most of the major trading of the town centre falls within the first category of the ILO typology i.e. the well established enterprises with a permanent and conspicuous place of operation and where capital requirements are relatively high and experience is needed to manage the business. In addition there are the markets and streets of Juba Town with informal enterprises which could be classed in the remaining categories of the typology. These include the traders with wood and tin kiosks, those with moveable stalls and booths, and petty hawkers and vendors. It was felt that the town centre establishments, comprising the bulk of large scale trading activity in Juba, and where other facilities (transport, construction and services) are available, warrant in themselves a separate study. In this work, emphasis has been on the investigation of market activity. Due to a range of research constraints it was not feasible to cover the whole town in the field research. However, the chosen field area, Konyo-Konyo market, is representative of many informal activities to be found all over the town.

The choice of Konyo-Konyo market as the sample area for research has necessarily imposed limitations on the scope of this study. Concentration on a market implies concentration on the study of trading, petty trading, manufacturing (beer brewing, blacksmithing, tailoring), and a few services (radio repairing). This has therefore excluded other informal sector activities which would fall in the relevant categories of the ILO typology. Examples of these might include vehicle and bicycle repair, prostitution, transport (taxis) and some construction activities. Konyo-Konyo market is certainly representative of some of the major forms of

activity of Juba but does not include them all. The enterprises mentioned as not being covered by this study would also be relevant and interesting areas for further research. The situation is remedied to some extent in Chapter 5, where use is made of census data to gain an overall impression of the informal sector in Juba, but in-depth research in all areas of economic activity was not feasible given restraints of time, resources and manpower available.

Further limitations of the work were those imposed by the methods used in research. The main aim of this study has been to begin the description and investigation of the informal sector in Juba, but much investigation still needs to be done. An approach mentioned in Chapter 3 as outside the scope of the present study is particularly appealing : MacEwen Scott (1976) suggests that the informal sector should be regarded as more than an economic phenomenon and that we need to recognise that the relations of production go much wider and have implications in the social sphere also. Although an attempt has been made here to link the economic conditions of the informal sector with the social background of the town, it would be extremely interesting to take this process one step further and investigate the households of informal sector workers in depth. A socio-anthropological point of view may well provide valuable insight into the unravelling of more of the linkages which exist between informal sector activity and other areas of the social and economic setup of the town. A justification of the method of approach used in this present work is that an overall picture is vital before in-depth studies can be made.

These limitations are outlined not in any way as an excuse for any inadequacy in the material included in this thesis, but as an inspiration for further work along the same lines.

Combining the two data sources outlined above it has been possible:

(a) to describe the nature and characteristics of some of the main activities of the informal sector for the town in general, with specific emphasis on Konyo-Konyo market.

(b) to describe the socio-economic background to the town which has resulted in the activity outlined above.

The work on Juba has been put in its regional and national context wherever appropriate by reference to other writers on the Sudan.

A major constraint felt throughout the study period in both PMU and personal fieldwork has been that of time. The ideal way to obtain data is to undertake a thorough and comprehensive full time survey and obtain the information as rapidly as data processing techniques and checking allow. Under the prevailing working conditions in Juba this was impossible and many tasks were protracted with inadequate opportunity for the thorough follow-up which was always desired. Research for this study commenced under the agreement that work should be for two years on a part time basis and undertaken alongside voluntary commitments at the University of Juba. The demands on staff at the University at the beginning of the research period were often heavy, given the inevitable needs of an institution which had been operating for less than one year and under all the constraints which the Southern Region embodies. The small number of staff meant a heavy commitment to institution building on the part of everyone. Arriving to find disorganisation and few staff in the Geography department, the need was to take on the responsibility of devising a syllabus (which now covers four years of students), lecturing, holding seminars and practicals, organising field trips and deciding on future requirements, with a minimum of equipment and books available, as well as becoming involved in a range of

peripheral university activities. Whilst intellectually challenging and excellent experience, these extra-curricular duties were time-consuming and left little energy for research and writing, particularly during the first year.

A constant and serious problem was the lack of secretarial and general office backup facilities, e.g. most of the typing of questionnaires, coding sheets and written drafts was undertaken by the writer. Transport and fuel shortages are chronic in Juba, and here the support of the IUC and UN proved invaluable in providing sufficient transport to enable the research to proceed. All enumerator assistance for the PMU survey was from secondary school leavers who had to be trained, but financial constraints necessitated that only a small group, six on average, of part time workers could be employed. Individual research was even more restricted in this respect, with a sample survey undertaken with the help of one enumerator. To obtain the bulk of the informal sector survey data necessitated waiting a number of months for the relevant point in a 'Social Survey Techniques' course to use students on a fieldwork exercise.

Data collection and processing relied on very simple techniques which are necessarily more time consuming than sophisticated methods but it is very satisfying to have been able to collect enough data for this study without the use of any "imported" technology to the field area and it is hoped that this may be an encouragement to other researchers faced with similar problems.

Much has therefore been achieved during the research period and this would not have been possible without the aid and enthusiasm of many people. I should like to thank all those in Juba who have helped with the work and encouraged with the writing up, particularly Dr. Frank Rhodes and Dr. Ushari who read and commented on the initial drafts. Special thanks are due to

Robert Lubajo, my first student enumerator, for his work on the Konyo-Konyo survey and to second year students of the Social Survey Techniques course who helped in the task of collecting further field data. I am also grateful to Meine van Noorjwick for helping with the photography. Thanks are expressed to those who have supported me through the study period : the Inter-University Council for Higher Education Overseas, under their Study and Serve scheme; the United Nations with their UN Volunteer arrangement; and the administration of the University of Juba who provided not only housing and financial support but an opportunity for me to take on responsibilities in terms of lecturing and other university activities which I probably would not have been able to experience elsewhere. The continued support of Professor Abu Zayd, the Vice-Chancellor, and his wife Karen Koning, during my two years in Sudan, and the kindness of staff, students and the Sudanese people in general are all deeply appreciated. Finally, thanks are due to those who have supported me from the Durham end during my time overseas and during the final write-up period in Durham in early 1981 : to Professor W.B. Fisher for his supervision and encouragement; to Professor Robin Mills for his help in supervision and support whilst in Juba and for instigating this programme of research; to members of the Photographic, Printing and Cartography Units of the University of Durham Geography Department for their advice and production of this volume; and to Mrs.Margaret Bell for her typing.

The link between Durham and Juba Universities instigated by the IUC and organised largely by Robin Mills, has proved fruitful to both institutions. During my stay in Sudan, a number of Sudanese students came to study at Durham, hence a two-way flow of information began which can only be beneficial to both sides. Being at the beginning of the link in Juba has been a memorable experience and it gives me pleasure to submit this work as the first piece of research to emerge under the link scheme.

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Durham
February 1981.

PART ONE

BACKGROUND TO THE STUDY

CHAPTER 1

THE SOUTHERN REGION IN ITS NATIONAL CONTEXT

1.1 Introduction

The Sudan, the largest country in Africa, with an area of 2.5 million square kilometres and bordering eight other states, is a land of great diversity combining within its boundaries much of the physical, social and economic variation which can be seen throughout Africa as a whole (see Fig. 1.1 overleaf). Physically, ranging from the Nile Valley to 6,000 metre mountain ranges, climatically from scorched desert to tropical rain forest, and ethnically from Arab to negroid racial groups, Sudan by its diversity and size holds great potential for the future. As a crossroads between the Middle Eastern and African worlds it could be ideally placed. Economically its resources are many and are now beginning to be tapped (it is talked of as a future major agricultural supplier to the Middle East for example). But this is only slowly occurring after numerous restrictions and setbacks through the course of its history due to occupation first by Egypt and later by Britain, and civil war between North and South which began shortly before the gaining of independence in 1956 and continued for some seventeen years.

These seventeen years of internal strife have seriously hindered development, and it was not until the signing of the Addis Ababa Agreement in 1972 that peace returned to the Sudan. In many places, particularly the Southern Region[1], existing infrastructure (the legacy of British rule) was destroyed and the country is only now emerging

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1 Predominantly that area south of 10^{o} North, which now has its own identity and Regional Government.


THE SUDAN: PROVINCES AND PRINCIPAL TOWNS
A. R. EGYPT
A. R. LIBYA
RED SEA
RED SEA
NORTHERN
Dongola
Port Sudan
NILE
CHAD
Ed Damer
KHARTOUM
Khartoum
Kassala
KASSALA
NORTHERN DARFUR
NORTHERN KORDOFAN
GEZIRA
Wad Medani
El Fasher
Ed Dueim
El Obeid
WHITE NILE
Blue Nile
BLUE NILE
Lake Tana
Nyala
SOUTHERN DARFUR
SOUTHERN KORDOFAN
Ed Damazine
Kadugli
UPPER NILE
Malakal
ETHIOPIA
BAHR EL GHAZAL
Bahr El Jebel
JONGLEI
Wau
LAKES
CENTRAL AFRICA
Rumbek
Bor
WESTERN EQUATORIA
EASTERN EQUATORIA
Yambio
Juba
ZAIRE
KENYA
UGANDA
L Albert
SJJ
Principal Towns
Khartoum
Province Boundary
International Boundary
Rivers
miles 0 200
km 0 400

FIG 1.1

from this former period of chaos, as aid increases and development accelerates. Changes are occurring at a rate faster than at any time in the past : industrialisation, the growth of urban centres, increasing rural-urban migration, changing patterns of employment, the development of infrastructure and the evolution of political and administrative structures are all facets of this process, as are the inherent problems of nation building.

This chapter summarises the main features of the Sudan at this time and some of the major events which have affected the country's evolution are outlined. Emphasis is on the Southern Region which, with six provinces and an area of 650,000 square kilometres, occupies one quarter of the country.

1.2 Physical Features

The best general introductions to the Sudan remain those written by Barbour (1961), Tothill (1948) and Fisher (1971). Lying between latitudes 3^{o}N and 23^{o}N and extending over 18^{o} of longitude, the country stretches from the Ugandan border as far north as the Red Sea coast. Sudan has been described as an immense basin sloping gently to the north with highland on three sides : the Red Sea Hills and Ethiopian Highlands to the east, the Jebel Marra to the west, and in the south the Imatong Mountains marking the edge of the East African plateau. The dominant physical feature is the Nile system which runs through the country for four thousand kilometres. The White Nile, originating in Lake Victoria, flowing through rocky gorges and then the vast swamps of the Sudd, eventually reaches Khartoum where it is joined by the Blue Nile flowing from the Ethiopian Highlands. The Sudan lies at the meeting point of two different structural zones, the south and east being part of the ancient rock platform of East Africa, and the north an area overlain by sedimentary rocks as the result of numerous marine incursions in the past. Most of the Sudan is a vast plain interrupted by rolling hill country. Two major groups of surface processes may be identified (Fisher, 1971, p.531) : in the northern areas arid sub-aerial erosion

predominates, producing a landscape of sand dunes, sand and gravel plains and stony surfaces, whereas in contrast, over much of the south, deposition is dominant as water-borne sediments accumulate.

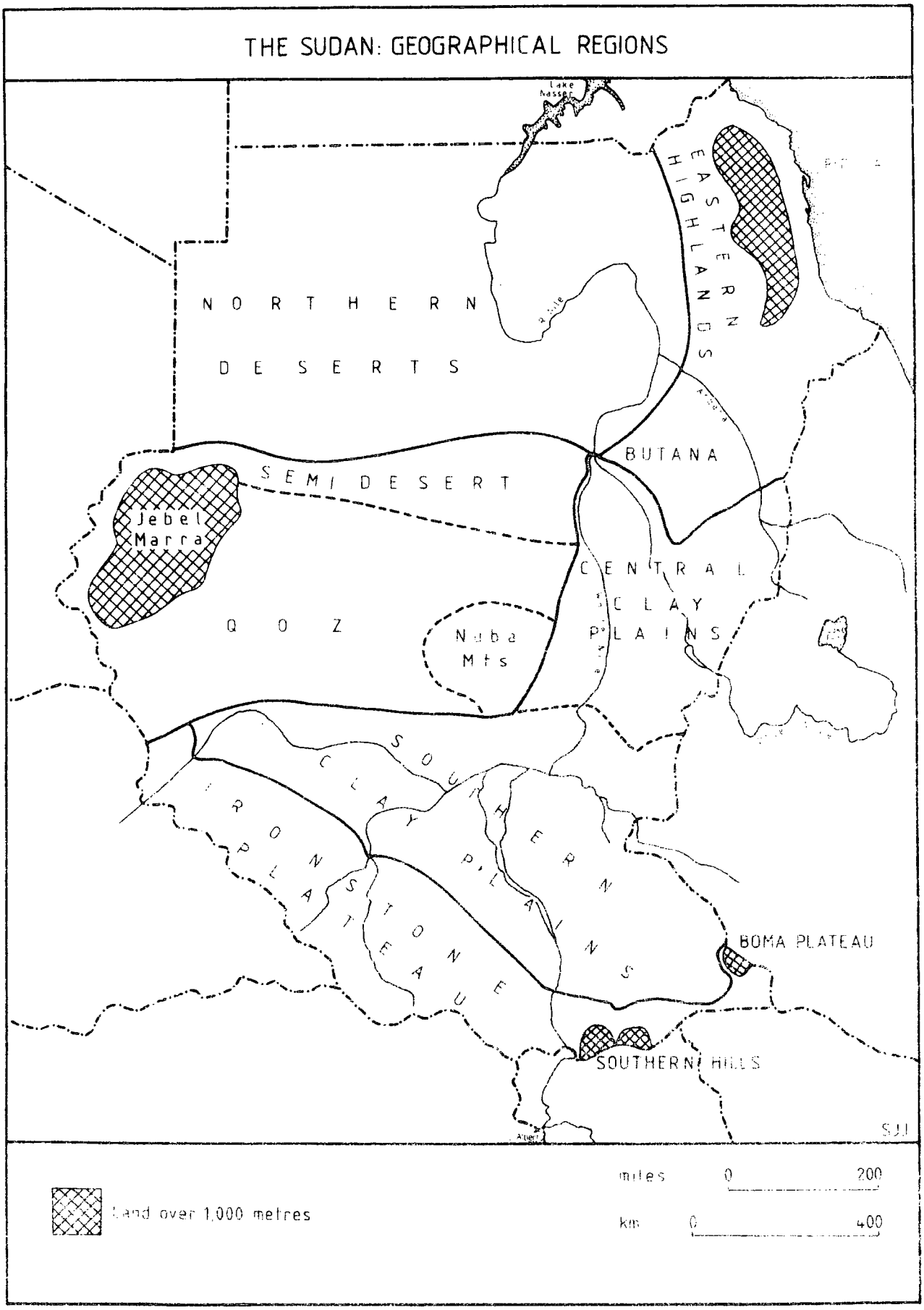
On the basis of the above characteristics, several regional units may be identified and are illustrated in Fig. 1.2. The north consists of desert, a part of the Sahara, whilst to the north east are the Red Sea Hills reaching to over 2000 metres. The hill masses decline considerably west of the River Atbara to a low plateau which is the interfluve between the Atbara and Blue Nile and is termed the Butana. The central clay plains form a low lying area of deposition upon which the major concentration of population is to be found. To the west is an area of semi-desert, lowland basins, uplands and inselbergs, including the most prominent upland feature of the area, Jebel Marra, and to the centre of this zone is found the Qoz, an area of sand dunes and silt basins.

The Southern Region consists of three main physical areas : in the north and north east of the Southern Region are the alluvial plains of the Upper Nile, occupying approximately half of the Region; to the south and south west is the ironstone plateau, 500-700 metres in altitude and forming the Nile-Congo watershed; the Imatong Mountains of the far south forming the third region.

1.3 Climate and Vegetation

Tothill states that "the dominant feature of the climate of the Sudan is the movement north and south with the declination of the sun of the boundary between the northerlies and the southerlies which lie along the equatorial low pressure belt." (Tothill, 1948, p.67). Sudan's climate is entirely tropical. Almost landlocked and largely unrelieved by altitude, every part of the country is hot and most places experience temperatures exceeding 35^{o}C for several months of the year. Except in the Sudd region there are no large inland water surfaces to produce even local climatic effects.

In both summer and winter the northerlies play an important role. The


THE SUDAN: GEOGRAPHICAL REGIONS
Lake Nasser
NORTHERN DESERTS
EASTERN HIGHLANDS
BUTANA
SEMI DESERT
Jebel Marra
QOZ
Nuba Mts
CENTRAL CLAY PLAINS
SOUTHERN CLAY PLAINS
IRONSTONE PLATEAUX
BOMA PLATEAU
SOUTHERN HILLS
Land over 1,000 metres
miles 0 200
km 0 400

Saharan High pressure zone dominates the air circulation, during winter producing cool dry continental air from the north African source region and resulting in uniform cloudless weather occasionally modified by masses of warmer air in eastern Sudan which are the result of intensification of the Arabian High. Both of these are periodically cut off by the passage of depressions west to east along the Mediterranean, and replaced by cold dry continental air from Eurasia. In summer the Saharan High produces hot dry weather whilst during spring and autumn the strengthening of the Arabian High brings predominantly warm dry weather. The southerlies are much more uniform - originating in the southern hemisphere tropical high pressure source over the Indian and Atlantic Oceans, they bring rain to the Sudan.

The amount of rainfall, its reliability, and the duration of the rainy season all increase southwards so that conditions in the Sudan vary from the hot deserts of the north, through a belt of summer rainfall which is variable both in duration and intensity, to an almost equatorial climate in the far south. As the rainfall increases, vegetation changes from desert, through scrub, tree savannah and woodland, to tropical rain forest. It is the availability of water more than the availability of land in this vast, sparsely populated country which is of prime importance, and both this and the physical nature of the landscape influence the pattern of human settlement and activity. The country may be divided into three general zones. North of the latitude of Khartoum there is desert and semi-desert, with a maximum of 200 mm rainfall near Khartoum. Agriculture is only possible close to the Nile where irrigation is practised. The Central Zone covers approximately half the country, has a rainfall range of 200 - 800 mm and includes the most important rain-fed agricultural areas with mechanised farming and animal production. Thirdly, the Southern Zone is an area where rainfall may be as much as 1500 mm, and is suitable for the cultivation of many types of tropical crops. The southern ironstone plateau is wetter than the plains, with a longer rainy season. Here agriculture comprises primarily

shifting cultivation and subsistence cropping (El Hassan, 1976, p.3).

In central and southern Sudan the seasons are delimited by the movement of the Inter-Tropical Convergence Zone (a broad and diffuse zone forming the boundary between the two trade wind streams), this boundary reaching its northern limit in mid-summer and southern limit in mid-winter. The rainy season is therefore shortest in the north and longest in the south. The Southern Region experiences a dry season between January and March. Average temperatures in Juba, the regional capital, at this time are 30°C compared with 24°C in August which is usually the wettest month of the rainy season.

1.4 Population Characteristics

Culturally, the Sudan is a great mixture of peoples, but the major tribal groupings may be listed as follows:-

TABLE 1.1 Major Tribal Groups of the Sudan

Arab	39%
Southern Peoples	30%
Western Peoples	13%
Nuba	6%
Beja	6%
Nubiyan	3%
Foreign and others	3%

SOURCE : First Sudan Census, 1956, Khartoum.

The South alone has over 50 languages, and Wai (1973, p.9) estimates 572 tribes and subgroups.

Sudan's population, according to the 1973 census, was 14,872,000.[1] (An updated estimate for 1979 is over 18 million).[2] Due to delays in processing, plus suspected underestimates, several revised estimates and projections have been made of population characteristics, using the 1973 data as base material. The 1973 census gives the population of the Southern Region as 2.8 million. If allowance is made for returning refugees (80% of the 220,000 refugees in Zaire, Uganda, Ethiopia and the Central African Republic at the time of the Addis Ababa Agreement (1972) were still abroad at the time of the census), plus those who emerged from hiding in the bush (estimates vary from 500,000 to 800,000) a figure of 3.5 to 4.0 million seems reasonable for the Southern Region. This is approximately 25% of the total population of Sudan. To give an idea of the changing nature of the population some comparisons can be made with the 1956 census data, as in Table 1.2 overleaf.

As can be seen, overall the highest rates of population growth have been in the urban centres. The very low annual growth in the Southern Region is a direct result of the civil war, with negative rates evident in two of the three Southern Provinces.

The seventeen year civil war has had a considerable effect on population characteristics in the Southern Region. Census data show a distinct deficiency of young adults, particularly male, due to the hostilities and to refugees fleeing to neighbouring countries, though it is expected that returning refugees have now evened this out to some extent. Forty four per cent of the population of the Region are less than 15 years old, 53% are in the 15-64 age group and less than 2% are 65 or over (Mills, 1977, p.13).

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1 Department of Statistics, Population Census Office, Estimates of the Population and Socio-Economic Characteristics of the Sudan during 1973-85, 1976, Khartoum, Appendix 1, Table 2.

2 U.S. Department of Commerce, Bureau of the Census, World Population Statistics in Brief : 1979, September 1980.

TABLE 1.2 Sudan Population 1955/56 and 1973

	1955/56	1973[1]	Annual Growth (%)
Total Population	10,262,536	14,758,346	2.7
of which:- URBAN	737,133	2,478,730	7.4
RURAL	9,525,403	12,270,616	1.5
All north	7,479,400	11,733,432	2.7
south	2,783,156	3,024,914	0.5
Southern Provinces[2]			
Equatoria	903,503	791,738	-0.7
Bahr el Ghazal	991,022	1,396,913	2.0
Upper Nile	888,611	836,263	-0.4

SOURCES : First and Second Sudan Census 1956 and 1973.

Migratory trends have been recently reversed. In contrast to the 1950's when there was a net outward migration, since 1972, there has been an influx to the Southern Region - particularly into Equatoria and Upper Nile Provinces. There has also been a reverse flow of refugees from Ethiopia, Zaire and Uganda, though as yet no one is sure of their number with any accuracy. From Table 1.2 it can be seen that population growth in the South has been well below the national average but this is expected to be changing rapidly, particularly as development accelerates.

A very important feature of the Sudan, and especially of the South, is its lack of urbanisation. The population density of the whole country is, at six persons per square kilometre, well below the African average of nine

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1 These figures are quoted from El Hassan 1976, p.4, and vary slightly from other 1973 data in that El Hassan's own corrections for the suspected underestimation of the census have been incorporated.

2 The Southern Region was divided into three provinces until 1976 when a further division of each created an additional three, making the overall list for the Southern Region as follows: Eastern Equatoria, Western Equatoria, Bahr el Ghazal, Lakes, Jonglei and Upper Nile.

persons per square kilometre (El Hassan, 1976, p.5). In the Southern Region there are less than five persons per square kilometre, with the highest concentrations to be found along the junction of the clay plains and the ironstone plateau, parallel to the Nile, and along the frontier zones with Zaire and Uganda.

The definition of "urban" obviously varies from country to country, but basing the definition on numbers rather than functions, a population of 20,000 is often seen as the minimum to be designated as urban settlement.[1] At the time of the 1956 census, less than 5% of the population of Sudan was to be found in such centres and more than half of these were concentrated in the "Three Towns" of Khartoum, Khartoum North and Omdurman, with the Southern Region having an even lower percentage as its urban population. Despite quite rapid urbanisation between 1956 and 1973,[2] only 5% of the Southern Region's population was designated as urban by the time of the second census and this population was confined to the (then) three province capitals : Juba 57,000 (Equatoria Province); Wau 53,000 (Bahr el Ghazal) and Malakal 37,000 (Upper Nile). Due to the generally small size of settlements in the Region, the census office classified an additional group of 13 settlements as "semi-urban", having populations ranging from just over 4,000 up to 18,000. If these are included with the three major centres, a figure of 292,000, or 10% of the population of the Southern Region are in urban and semi-urban settlements, with Equatoria having the largest concentration (19% of the population), followed by Bahr el Ghazal (9%) and Upper Nile (5%). This is illustrated in Table 1.3.

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1 For example ILO employs this figure widely.

2 There was a 10% increase of population in urban centres in the South between the two censuses which was the highest rate of urban growth in the country, the average overall being 7.4% (El Hassan, 1976, p.28).

TABLE 1.3 Urban and Semi-Urban Populations in the Southern Region

Town	Population	% of total Provincial or Regional population
BAHR EL GHAZAL		
Wau	53,402	
Rumbek	18,101	
Aweil	17,835	
Yirol	13,329	
Raga	8,874	
Tonj	8,470	
	120,011	9.0%
EQUATORIA		
Juba	56,723	
Anzara	17,230	
Torit	14,745	
Yei	11,696	
Maridi	9,618	
Tumbura	8,719	
Yambio	7,024	
Kapoeta	5,325	
Source Yubu	4,222	
	135,302	18.7%
UPPER NILE		
Malakal	37,147	4.8%
SOUTHERN REGION	292,460	10.4%

SOURCE: Mills, 1977, Table 2.1, p.12

Looking at the three major towns in more detail, there are excesses of males in the 15-35 year category who have moved to the economically more favourable areas of the Region. Urbanisation is extremely rapid, Juba for example had a population of 57,000 in 1973, which by 1980 had increased to around 100,000, an average increase of 8.3% per annum.[1] Urbanisation all over the Sudan largely consists of migration into the existing centres, particularly into the Three Towns. Population pressures already exist on the irrigated cultivation areas of the North and the developing Southern towns, with their lack of basic infrastructure and services are, as in the North, becoming strained beyond their limited capacities.

The population is characterised by high mobility. Apart from the 11% of the population who are categorised as nomads (chiefly in central Sudan) there are large numbers of people who migrate seasonally in response to the demands of various kinds of agriculture, and seasonal rural-urban migration is also common.

1.5 History and Politics

The North/South conflict of the last two decades was one of many power struggles between various factions of this culturally diverse country. Diversity, although potentially of value in a nation, has always led to problems. The valley of the Nile has long been a route for invasion from the North, as well as a means of communication. Even in the distant past, perennial migrations of people from the north forced the migration of the original Sudanese to the south and west, hence a variety of tribal societies and small dynasties grew up, based on agriculture, the caravan trade and slavery. The trading caravans

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1 University of Juba Population and Manpower Unit estimate, 1980. See Appendix 1.

which crossed the north however seldom penetrated the far south. There was little to induce the Arabs to settle in an area with such unpleasant conditions: disease, high humidity, isolation and hostile native tribes.

It was toward the end of Turko-Egyptian rule (1821-1880) that the first Europeans began to appear in the Sudan, adventurers who took control on behalf of the Khedive of Egypt of large areas of this huge country. Economic restrictions imposed by Britain and France on Egypt, plus the growing strength of nationalism and the rise of the Mahdia, brought an end to Turko-Egyptian control but because of its peasant nature and its lack of clear programme, the Mahdist movement failed to destroy the semi-feudalism which existed in the country. Despite the strong resistance of the Southerners to Northern intrusion in many ways, certain cultural and linguistic influences from the North did penetrate, e.g. many aspects of Mahdism were absorbed by the Dinka, the largest single ethnic group in the South, who use a language second only to Arabic in the numbers who speak it.

The British, overcoming the Mahdists in 1898, consolidated control over the country with the Anglo-Egyptian Condominium beginning in 1899. The colonisers began to develop infrastructures in the years before the First World War and initiated the development of a Sudanese educated elite by the establishment of institutes such as Gordon Memorial College in Khartoum. During the 1920's Sudan's first political parties began to develop from the two major muslim tariqas - the Khatmia and the Mahdists.

Increasing friction and threat of further uprising caused the British to decide in 1924 on a policy of isolation for the Southern Provinces. This "Southern Policy" resulted in the discontinuance of British expansion in the North, and the transfer of most of the money

in the colonial budget for education to the South. The policy compounded natural, historical and ethnic barriers dividing the country. Christian missionaries became a dominant influence and education was at mission schools. Islam was actively discouraged, and numerous measures taken to make contact between North and South difficult, e.g. the Closed Districts Order discouraged Northerners from visiting the Region, and the Permits Trade Order made commercial activity by Northerners in the Region more difficult.

Even with the reversal of the Southern Policy after World War Two, the effect of it had been to produce great retardation. Political progress however quickened and the Southerners began to develop a political consciousness, but found themselves excluded from all negotiations with the British administration until the 1947 Juba Conference. By then, resentment and fear, and a feeling that the Region was not being allowed to express an identity, had grown in the South.

The Anglo-Egyptian Agreement of 1953 put an end to the Condominium and paved the way for self rule, with Independence achieved on 1st January 1956. The Southerner's fears had proved positive in many ways. A major point of friction was over "sudanisation" of jobs. When the sudanisation of 800 jobs previously held by the colonial government was announced, the Southerners found that they had been given only four of these posts. Increasing tension between North and South cumulated in a revolt by some Southern soldiers against Northern officers on 18th August 1955. Many of the soldiers then fled to the bush to become the nucleus of the Anyanya - a Southern resistance force.

On the national level, government was an erratic chain of civilian and military rule between 1956 and 1964. The military junta of Abboud was particularly unpopular because of its repressive nature, and it ended in the October 1964 Revolution. A coalition government took over, dominated by progressive elements of the National Front of Associations, including the Sudan Communist Party (SCP). Throughout the 1960's declining economic conditions and the increasing intensity of war in the South further aggravated the worsening condition of the Sudan. On 25 May, 1969, a coup was staged, led by Jaafar Mohamed Nimeiri, who formed the National Revolutionary Council and announced that the Sudan would be "democratic, socialist and non-aligned". President Nimeiri from the start was committed to helping the Southern Region. By January 1970 "southernising" of administrative posts and the recruitment of Southern police and soldiers was well underway. The delay in granting regional autonomy to the South can be partly blamed on the Sudan Communist Party, who attempted to stage a coup in 1971 because they objected to Nimeiri's political stand. (They are still the main, though illegal, resistance to Nimeiri today). The 1970 nationalisation of Sudanese industry had not been successful; and Nimeiri turned back towards the western capitalist economy for support. After the 1971 coup, an anti-communist campaign began, and a definite rightward shift in government ideas has since prevailed. It was at this time that the Sudan Socialist Union (SSU), Sudan's only political party today, was established.

War in the South had continued throughout the 1960's and it was not until 1971 that Joseph Lagu (head of the Anyanya) succeeded in uniting all factions of resistance into the Southern Sudan Liberation Front (SSLF). By uniting the Southerners he created a powerful group

with a strong bargaining position, and paved the way to negotiations for peace. It was on 27 February 1972 that the Addis Ababa Agreement was finally signed, after the initiation of peace talks by the World Council of Churches and peace between North and South was decreed.

The legacy of the war years is daunting, and few resources have been available for rebuilding and development. A major burden for the Southern Region was the problem of resettling returning refugees (over 200,000 of them), and those persons emerging from the bush, often after years in hiding (500,000 to 800,000 are estimated). Aid was instigated by the United Nations High Commission for Refugees (UNHCR), and a Relief and Resettlement programme established, which injected funds of LS 8.3 million from July 1972 to October 1973. Mills, describing the situation in 1973, i.e. post civil war, states, "despite having at least one fifth of the national population, the Southern Region has less than 10% of the medical facilities and similar public services. The number of children at school, in relative terms, is less than half the national average. An administrative framework has been established but up to half the posts remain unfilled due to the lack of adequately qualified personnel. The road network was largely destroyed and transport and fuel shortages continue to hinder progress" (Mills, 1977, p. 6).

Immediately following the relief programme was a period of rehabilitation and rebuilding throughout the Region. Between 1972 and 1974 an urgent programme was put into operation to improve transport and communications, which have always been extremely difficult in the South. Schools were built to ease the strained education system - 90% of the population of the Region had never attended school at the time of the census yet by 1977 there were 800 primary schools, compared with

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1. The rate of exchange for authorised dealers and Government Units as of December 1980 was LS1 = US $ 2 approximately.

sixty three in 1972. Bridges were built, and hospitals improved. Today the Southern Region is in the first phase of real development after attempting to put right the damage of the civil war for almost a decade. Inputs from numerous, and multiplying, international aid agencies are contributing to the consolidation and gradual improvement of infrastructure and many pilot projects have been set up to contribute to economic development, both in agriculture and industry, as well as to the improvement of the standard of living and education within the Region.

Despite the progress of the years since the Peace Agreement, the possibility of continued unity between North and South is often debated. Many differences remain to be resolved. Aggrey Jaden (one time head of the Southern Government in exile) has said that "there are in fact two Sudans and the most important thing is that there can never be a basis of unity between the two. There is nothing in common between the various sections of the community; no body of shared beliefs, no identity of interests, no local signs of unity and above all, the Sudan has failed to compose a single community. The northern Sudanese claim for unity is based on a historical accident and imposed political domination over the Southern Sudan . . ." (Deng, 1973, p. 41).

On the other hand, Deng comments, "emphases and counter-emphases on the various aspects of the south-north problem have varied a great deal, but perhaps the most obvious and the most controversial has been the aspect of racio-cultural identification: the north is considered Arab and Muslim, and the south, negroid and pagan . . . people are now agreed that the identification of the south and north along racial lines is hardly justified for not only is the

northerner a mixture of Arab and African 'negroid' elements, but the southerner too is not a 'pure' negro . . . but the anomaly is not only racial, culturally too, only Islam and Arabic tie the north together and even these have been much influenced by the pre-existing tribal cultures of the north . . . these racio-cultural complexities show how flexible as well as conservative the process of identification has been in the Sudan" (Deng, 1973, p. 1).

As a final note on the political situation, it is worth mentioning that not only has the South suffered from internal civil war; the Region also bears the strain of refugees from war in neighbouring countries, in particular Zaire and Uganda. UNHCR estimates 2,000 Zaireans in the Region and possibly as many as 36,000 Ugandan refugees, although numbers are extremely difficult to estimate (Jamieson, 1979, p. 1). The large number of Ugandans is a result of the troubles which began in April 1979 when Kampala fell after a six-month bush war against Tanzanian troops over the question of borders. During the research period therefore, important political events occurred and had their impact on the Region.

1.6 Economic Aspects

It has been said that the Sudan provides a 'textbook' example of a developing country (El Hassan, 1976, p. 5). Almost 80% of the population are engaged in agriculture and this provides 95% of exports, directly or indirectly, and 50% of the government revenue. Sudan is one of the 25 most underdeveloped countries in the world, and the South is by far the poorest part of the Sudan. From United Nations data an indication of Sudan's economic condition in relation to other African countries can be obtained.

TABLE 1.4

GDP of Selected African Countries

Country	GDP in 1960 US$ million	GDP in 1970 US$ million	% Change 1960-70	GDP per capita 1961 US$	GDP per Cap 1971	% Change
Nigeria	5184.6	7438.8	43.4	112	141	25.9
Egypt	4367.1	7295.3	67.0	171	220	28.7
Morocco	2249.8	3351.8	48.9	182	232	27.5
Ghana	1915.1	2519.6	31.5	283	286	1.1
Ethiopia	1096.6	1836.0	67.4	59	69	16.9
Kenya	763.5	1617.8	111.1	88	149	69.3
Uganda	598.5	1304.2	111.1	79	121	53.2
Tanzania	670.0	1281.0	91.0	61	98	60.7
Gambia	30.4	46.1	51.6	96	131	36.5
Sudan	1376.4	1831.1	33.0	120	122	0.02

(1970 market prices)

SOURCES : United Nations Economic Commission for Africa, Statistical & Information Bulletin for Africa, No.4., Addis Ababa, September 1973, p.77, and Economic Indicators, April 1973, p.6.

The political troubles since independence have greatly affected the economy, but since the abortive 1971 coup, social and political organisations seem to have stabilised. ILO comments that the economy over the last decade has been more resiliant than is generally believed, but that certain imbalances are apparent, i.e. the predominance of agricultural-based activity (ILO, 1976, p. xix).

Manufacturing occupies only a 10% share of GDP (1970) (National Planning Commission, 1975, p. 59). There is a very low level of investment (it has never exceeded 16% of GDP) and savings are also very low (less than 4%). Levels of spending in the public sector are generally high due to the larger scale of activity in this sector. Ali Ahmed Suliman notes "perhaps one of the most striking features of the Sudanese economy is the dominant role played by the public sector in all important economic activities. The government owns the majority of modern capital establishments in the economy. In the current six-year plan (1977/78 - 1982/83) the share of the government in the total proposed investment of LS 2,676 million is 59% while the share of the private sector is 41%" (Suliman, 1979, p. 952). The government, as well as being the main investor in public utilities, is also the main promoter of many industries - sugar, cotton ginning, food processing, tanning and printing. The role of the private sector however is increasing slowly, and is being aided by the denationalisation of certain industries and by tax incentives to private businesses.

Sudan's more recent economic development has tended to take place in the region around the confluence of the Blue and White Niles and Gezira's irrigation and cultivation schemes have become very important. (Sylvester (1976, p. 98) comments that Sudan could produce "the food power of the future". Forty per cent of the unused cultivable land of the Arab world lies within the country.

Focusing on the South, numerous problems are immediately apparent. Economically the Region is far behind the North for a variety of reasons. The productive structure is extremely weak, primarily of a subsistence nature, and to a large extent not monetised. This is a reflection of the physical environment and social conditions which produce fragmented and isolated human settlement and activity throughout the South. The nature of a subsistence economy makes analysis difficult since subsistence activities often escape normal research methods, and yet it is this which constitutes the major part of production in the Region. There is a chronic lack of private investment and an almost complete dependence on the central government for public investment. The Six Year Plan of Economic and Social Development for the Region (the first formal plan for the South incorporating development programmes, policies and projects to be implemented by the Regional Government 1977-1983) indicates that over the plan period an anticipated sum of almost £S 290 million will be spent. The breakdown of sources of this finance is given as:

1. Regional resources	£S 231,310,000
2. Central Government contribution	35,872,154
3. External assistance	21,085,720
	288,267,874

However, of the projected Regional resources, only £S 51 million are expected to come as excesses from the recurrent budget of the Southern Region, the remaining £S 180 million being a central government subvention to the Regional Government. Overall, therefore, of the total amount proposed for development over the six years, slightly less than 18% of this can be generated by the Region itself (Regional Ministry of Finance, 1977).

Per capita income is very low, consequently the revenue from taxation is very low, although the budget report for 1977/78 (Gual, 1978, p.16) outlines methods of increasing this taxation by imposing taxes on those who can afford to pay rather than on the common man, for example by increasing development tax on coffee and tea; by introducing new taxes on the export of salt, soap, utensils, edible oils, onions and ready-made clothes; and by introducing border fees for trucks carrying merchandise. Collecting revenues too is a difficult problem given constraints of many kinds, and considerable effort has been put into solving the problem. An indication of the size of the task is shown by the fact that in May 1977 only 55% of expected Regional revenues for the financial year 1976/77 had actually been collected, which was in itself an improvement on the 29% collected the year before.

In addition, the Region is largely dependent on the exterior for all goods of a modern type, and even some essential foods - 15% of food demands have to be met by imports and food shortages are all too common. There is a complete lack of marketing structure for agricultural produce, since with the predominance of subsistence activity, each producer usually only wishes to sell occasionally and in small quantities. Trading by local petty traders and some barter trade has been prevalent all over the Region for a considerable period. The main system, however, is for the traders of the main towns to work a network of bush shops distributed throughout the rural areas. This has been a rather passive component of the economic activities of the Region because of the small volume of merchandise involved, infrastructural difficulties and the virtual monopoly position held by the traders.

The poor transport and communication system tends to cause a worsening state of immobility in the economy as it gets left further and further behind. Goods are brought to the Region by several means. River transport on the Nile is continuous over a section between Kosti and Juba with the steamers taking at least twelve days to travel the 1435 kilometres. The only rail

link in the Region is between Wau and Babanusa (448 km). Both rail and river operations have been in deficit in recent years (Mefit, 1978, p.81). Many goods are transported from neighbouring countries by road, although movement is seriously retarded and may even come to a halt during the wet season, since no road, apart from a few kilometres within Juba, is surfaced. Lorries provide the principal method of transportation both of goods and people within the Region and a handful of companies use large trailer units for overland contact with neighbouring countries. In April 1972 there were virtually no vehicles in Juba. A 1977 estimate is well over 1,000 (Ministry of Information and Culture, 1977). Communications have recently been improved with the installation of a radio and television link between Khartoum and the Southern Region.

Mefit data show that 75% of industrial production by value in the South is generated by subsistence activities (chiefly food and beverage production), 20% by the traditional sector, and only 5% by the modern sector, and gives a figure of £S 153 million as the value of total economic production over the whole Region 1975/76 - an indication of the extremely low level of industrial productivity in the South (Mefit, 1978, p.71). The six year plan shows that of planned expenditure in the period, only 1.5% will be allocated to commerce, industry and supply, and this largely for feasibility studies and for an industrial survey. It indicates that "the contribution of industry and mining to the Regional income in the Southern Region is proportionately far below the national estimates, and generally this sector is at an embryonic stage of development....with regard to modern industry it was only towards the end of the colonial era that the first factories were set up in the South. In 1952 a spinning and weaving mill was established at Nzara in Western Equatoria. An oil processing mill started in Yirol and a number of sawmills were established. The outbreak of the civil disturbances affected the working of these individual establishments."

"Since 1972, a few private industries have commenced operation in the

Southern Region. Among these are bakeries, ready-made clothes manufacturing, tobacco production, boat building, soft drinks, mineral water and ice production, and a number of small scale production unit like tailoring, carpentry, blacksmithing, motor and bicycle repairs, miscellaneous mechanical and electrical repair units etc. Most of these activities are concentrated in the major towns" (Regional Ministry of Finance, 1977, p.133). Most activities also, because of their small scale, are unable to satisfy even the very low levels of present demand.

To boost the industrial sector, a number of projects have been approved since 1972, but little has been done towards implementing them. Of particular interest to this study is the realisation by the Regional Government that traditional crafts have begun to enter the economy as a commodity for cash trade. A development of the handicraft industry has been proposed, with the setting up of provincial handicraft centres with tools and materials being brought by the Government and given to cooperatives or groups of craftsmen. (A sum of £S 100,000 was allocated in the six year plan for this end). This has as yet not reached past the planning stage, with the notable exception of a few independent workshops, but set up by international rather than Government aid.

The distribution of the employed of the South by occupational sector is illustrated in Table 1.5 and compared to that of the Sudan as a whole. The predominance of agriculture and other subsistence activity is easily seen, as is the small size of all other economic activities.

The effective labour force for the Region in 1973 was, at 700,000, approximately 25% of the total population. With the addition of unemployed persons and those looking for work for the first time, the economically active population (as defined by the 1973 census) was increased to approximately 30% of the Region's population.[1] Problems of definition arise,

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1 For a list of census definitions see Appendix 3.

TABLE 1.5 Percentages of the active population in the various sectors of the economy

Sector	Southern Region	Sudan
Agriculture, hunting, forestry, fishing	73.4	66.0
Mining and quarrying	-	0.1
Manufacturing	0.9	3.4
Electricity, gas, water	0.2	0.9
Construction	1.1	1.8
Wholesale & retail trade, restaurants etc.	1.8	4.8
Transport	0.6	3.4
Finance, insurance & real estate	-	0.1
Community, social & personal services	9.9	11.1
Activities not adequately defined	12.2	6.3
	100.0	100.0

(Due to rounding the percentages do not add up exactly)

SOURCE : 1973 Census Data

and this figure includes a very low female rate of economic activity, although females play an important, yet largely unrecorded, part in the economy. Recent work on revised census data has produced a male crude activity rate of 54%. Of the economically active group, 60% are self-employed. This is largely because of the nature of the subsistence economy, but this figure also includes those people involved in small scale enterprise.[1] The tertiary sector largely

1 This figure provides a starting point for an investigation of informal sector activity from 1973 census data, and the topic is discussed fully in Chapter 5.

consists of public employment and is made up of approximately 48,000 people (1976) although the full strength should be 60,000. There is a severe shortage of qualified staff, so creating a paradox of a large number of unemployed in a situation in which there are many unfilled posts.

Education is vital to remove this bottleneck which will seriously hamper any plan of development in the future. In the modern sector of the economy 60% of paid employment is in the tertiary sector, and 60% of the participants have never been to school. Fig. 1.3 indicates the nature of the education problem. In the academic year 1978/79, for example, enrolment at primary level was only 129,000 students for the whole Region (census figures show that even in 1973 there were approximately one million persons of school age i.e. 6 - 18 years in the Southern Region). Junior Secondary intake was only 19,500 and Senior Secondary 5,500, making a total population receiving schooling of 154,000. Of these, males dominated, filling over 70% of school places.[1] The educational bottleneck is clearly demonstrated, limited facilities resulting in only a small percentage of students following the system through from start to finish. The result of this on the employment situation is discussed more thoroughly in Chapters 5 and 6, but it is obvious that a very large pool of uneducated or inadequately educated persons is being created, and no solution to this problem seems imminent.

The ILO, writing about the labour situation in the Sudan as a whole comments: "urban labour markets in the Sudan are dominated by the hiring practices of the public sector; employment in modern private industry and commerce is still very small, being no more than a few percentage points of the total labour force, in fact, outside the public sector, there are many more employed and self-employed people in the informal than in the formal sector in urban areas." (ILO, 1976, p.xxiii) This is nowhere more true than in the Southern Region, where industrial activity is at an extremely low

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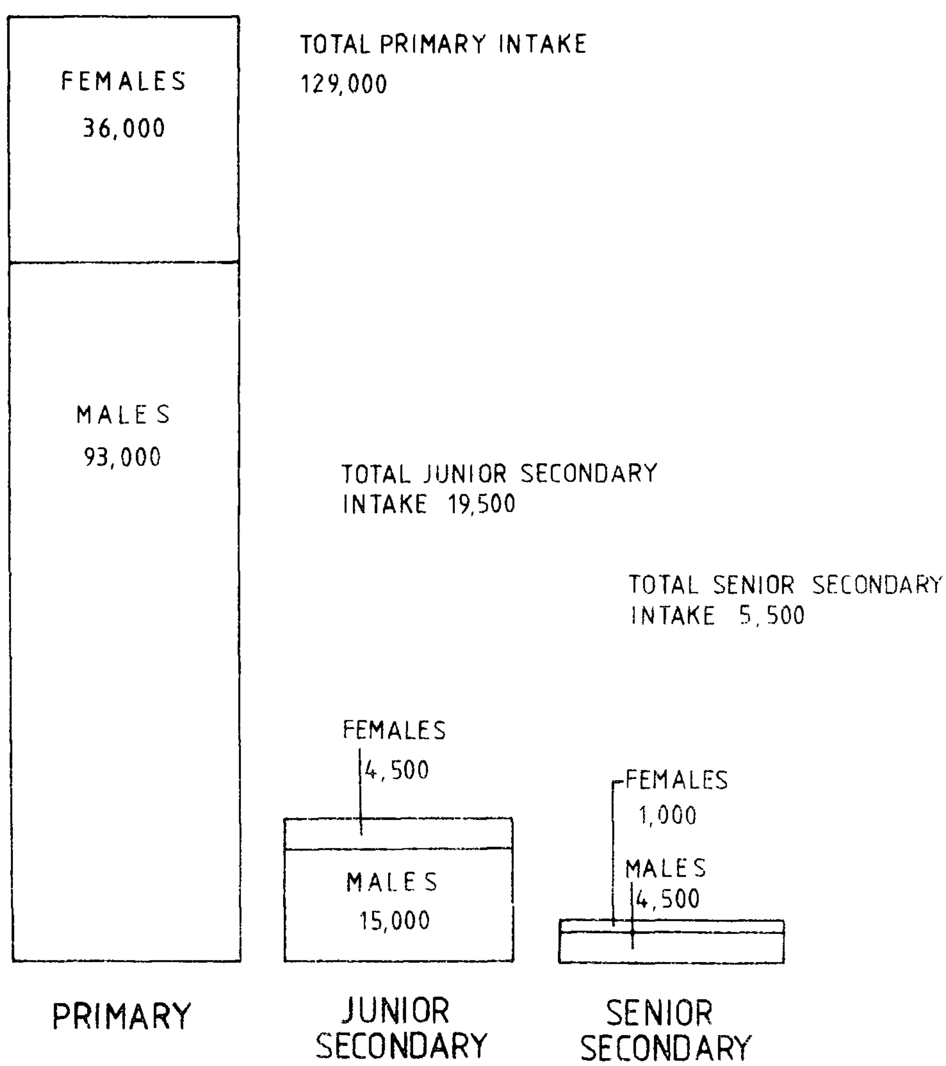
1 The Sudanese education system is divided into three stages : Primary school for the first six years; Junior Secondary School for three years; and Senior Secondary School also for three years.

ACADEMIC ENROLMENT 1978/9



Figures rounded to nearest 500

SJJ

From: Regional Ministry of Education and Guidance, Southern Sudan, *Education Statistics 1978/9 Part 1*, pp.41-49.

level and has been severely disrupted by the civil war.

The three main towns of Juba, Wau and Malakal, although small, play a very important role in the economy of the Region. Although incorporating only 5% of the population of the South, they include more than 25% of the people in paid employment. Urban unemployment is lower than in rural areas, but overall rates of unemployment are very high for a rural subsistence economy (15% of the labour force). Another problem is large scale underemployment - a common feature in such an economy. The problem of definition of "employed" and "unemployed" has been raised by many writers in relation to developing economies where a large part of activity is in subsistence agriculture. The ILO for example states that "the watertight distinctions between employment and unemployment and between economic and non-economic activity, which are relatively easy to draw in rich, developing countries, are hazy boundaries in a country like the Sudan. Many of the openly unemployed work several hours in the day or several days in the week, and it is easier to make unemployment look larger or smaller by shifting the cut-off point in definitions; unemployment shades into underemployment. It is poverty we ought to be measuring rather than work or no work." (ILO, 1976, p.xxx).

The employment picture in the Southern Region is fully discussed in Chapter 5 and problems elucidated. It is sufficient here to summarise that employment in the Region is predominantly in subsistence activities, with a high level of un- and underemployment.

1.7 Summary

This chapter has shown the wide variation in characteristics within the Sudan, and how different the Southern Region is from the rest of the country. An isolated area with fragmented societies due to social and physical conditions, the South suffers from a lack of communications and transport facilities. Predominantly agricultural, subsistence

farming is the way of life for most of the South's inhabitants. The standard of living is generally very low, with few facilities or amenities, and food shortages are all too common. The urban population is very small and the development of towns a relatively new phenomenon. However, high growth rates for the three urban centres of the Region indicate that urbanisation is becoming increasingly important, and rural-urban movement is being stimulated on a large scale. Hence, the South, after its recovery from the 17 years of bloodshed, can be said to be in a period of development and transition with a high rate of change and growth in many areas.

It is on the development of the Region's capital, Juba, as the primary urban centre of the South, that interest is focused in this thesis, and in particular on the changing nature of employment as modern developments and activities begin to compete with the traditional subsistence way of life. Almost no archival material or other data on the Southern Region or the topic of research exist. Over the eighteen months of fieldwork a large part of the research had rightly to be directed towards the collection of information to enable an overall impression of the town to be given. It is this which is described in the following chapter.

CHAPTER 2

JUBA

2.1 Sources of Information

Data on Juba are sparse, both with regard to its historical development and present day socio-economic conditions. Two branches of fieldwork carried out by the Population and Manpower Unit of the University of Juba (PMU) have proved particularly fruitful in providing material for this chapter.

Historical development has been largely pieced together from interviews with some of Juba's oldest inhabitants. A series of guided discussions were held with five Juba inhabitants who had been resident since the time of its designation as Province headquarters in 1929, and the interviews tape-recorded. After each interview the tapes were translated from Arabic by members of the Unit and the texts typed and circulated to enable the plan of the next interview session to be drawn up (PMU, 1980). By this method it is believed that the Population and Manpower Unit now has the most complete record of town development that Juba possesses. In a situation such as Juba, aural history is a particularly valuable, though as yet a sadly under-used resource.

In conjunction with this, members of the PMU have drawn up a series of maps beginning with sketchmaps from verbal descriptions for the 1930's, 1940's and 1950's and augmented by information from existing aerial photographs in the production of maps for the 1960's and 1970's. The first aerial photograph commissioned by the government was in 1962, and the second in 1977 in an ambitious project carried out by Mefit Planning Engineers (1978), in conjunction with their work on development planning for the Southern Region. A further map for 1980 has also been produced

incorporating field observation by the PMU to include information on urban sprawl at the town boundaries which is proceeding very rapidly at present.

The second area of study has been involved with present day socio-economic conditions in the town, in the form of a Juba Town Survey. The first step of this was necessarily an estimation of the population of the town, since very little work had previously been done, and what was available was of questionable accuracy. This was carried out by the writer in conjunction with other PMU members in early 1979 and the methodology is given in Appendix 1 of this work. Once a population estimate had been produced as a base (84,000 was the 1979 figure produced for the town), the planning of a full scale socio-economic survey of the town's population could begin. After drafting and testing of questionnaires, the sample survey was carried out between March and June 1979, and covered approximately 2% of the estimated population (1706 individuals in 158 compounds were enumerated). The full details of methodology and design of the survey are to be found in Appendix 2. The survey fell into two parts: Part 1 having questions related to each compound[1] selected, and Part 2 relating to individual data on each member of the compound above the age of twelve years and including education, employment and mobility, i.e. the major fields of interest to members of the Population and Manpower Unit.[2] It is from this survey that the information on present day conditions in the town presented in this chapter is drawn.

2.2 Historical Development

The establishment of Juba as province headquarters

Juba, the largest urban settlement of the South, is the capital of the Region. In the last hundred years there have been several shifts of the

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1 The definition of "compound" along with other definitions is to be found in Appendix 3.

2 A summary of the questionnaire contents for Part 1 and Part 2 of the Juba Town Survey are in Appendix 4.

site of the administrative headquarters of this part of the Sudan for political and military reasons, as well as those connected with physical conditions. The towns of Mongalla, Lado, Gondokoro, Rejaf and Dufile have all been important in the past. Immediately before the foundation of Juba in 1929 Mongalla was the province headquarters and Rejaf the district headquarters. These had all grown initially as military stations along the Nile during the time of Turko-Egyptian rule, fundamentally for acquiring slaves and riches from the Region, but had become embodied in the administrative organisation of the British who, in the early years of the twentieth century, divided the South into administrative units under direct rule[1].

Mongalla Province had its capital at Mongalla (40 km north east of Juba on the east bank of the Nile), which although it had begun as a focal point for European and Arab contacts and trade with the province, had a swampy site and became increasingly unsuitable as development occurred.

This led to the establishment of Juba as the new province capital, initially as an administrative centre but later also developing into the largest market centre of the Region. Situated on a spur of rocky ground running down to the Nile on the west bank, the site was well suited for town development. Prior to 1929, main roads had converged on Rejaf (10 km upstream from Juba on the east bank - the district headquarters), but with the site of Juba chosen in 1929 as the new administrative centre, roads were realigned to converge on Juba from Zaire (then Congo), Uganda (via Nimule), and Ethiopia (via Torit). The steamer station was also resited at Juba (it had also been at Rejaf), which had a more suitable physical layout for a harbour and calmer conditions than on the up-stream stretch between Juba and Rejaf.

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1 In 1929, the time of Juba's foundation, there were only two provinces, Fashoda and Mongalla. Prior to this, under Turkish rule, Bahr el Ghazal had formed a third province and had been amalgamated with what are now the Equatoria Provinces to form Mongalla Province. Fashoda was roughly equivalent to Upper Nile Province today. In 1945 Mongalla Province was divided into Bahr el Ghazal and Equatoria, and Fashoda renamed Upper Nile Province. Further division occurred in 1976.

The new site was largely above flooding levels of the Nile and the presence of rocky ground also provided ample building materials unavailable elsewhere on the Nile alluvium. A wooden bridge was built across the Nile, but this was washed away by flood water in the 1930's and replaced by a ferry boat system until the construction of the present bridge in 1974/5. An additional attraction in the siting of Juba was that the province's only school was located there. The Nugent school, established by Christian missionaries, was originally located at Mongalla, but ran into difficulties as the largely Moslem community there refused to send their children to a Christian establishment. In 1919/20 the school was transferred to the site of Juba where it trained the sons of local chiefs and soldiers.

Early development

In 1927 the site of Juba was surveyed and people brought from various districts of the province to construct the town. This was done on a quota system with forced labour demanded from the chiefs on a monthly basis. The local people in the Juba area at the beginning of the town's development were the Bari who were settled in several villages in the vicinity. All of these villages, with one exception, have survived to the present day and bear the same names.[1] In addition there were various wandering groups moving about in the area. Traditionally the Bari tribe was a pastoral community but owing to the infestation of their land by tse-tse fly, they lost their livestock and currently practise subsistence agriculture, although they are becoming increasingly dependent on the town for essential commodities, being unable to produce enough food to sustain them through the year.

The first stones laid in the development of Juba were in the building of the steamer office, district headquarters, province headquarters and customs; and in 1930 the transfer from Mongalla was put into operation.

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1 Luri, Nyaying, Bilinyang, Kasava, Tokiman, Lologo, Nyajuwar and Longamere can all be located today. Juba Nabari, on the banks of the Nile, was washed away by a flood in the early 1960's.

Skilled workers and traders were encouraged to move, and their numbers became augmented because many of the unskilled and uneducated who had been working with them moved too, using the Nile steamer to transfer upstream to Juba.

The first area of native housing was situated at Burusoki (the site of what is now Juba airport) and new offices, schools, and official housing (entirely for British and Northern Sudanese) erected on May Street, the main street. This is illustrated in Fig. 2.1. The building of the airport in 1934 resulted in the transfer of the native lodging area to Burokorongo (now known as Malakia Khabir). This was laid out in eight blocks of 70 tukls (traditional mud and grass dwellings) and therefore comprised 560 units, which soon resulted in serious housing shortages as the population increased. This led to the extension of native housing in the late 1930's and 1940's, firstly to Kosti area, followed by Malakal, Nimr Talata and Hilla Jallaba.[1] All of these housing areas are predominant parts of the Juba groundplan today, and through the 1950's and 1960's were added to by the construction of a cinema, a football stadium, schools, churches etc.

The growth of markets

The main market centre, begun in the 1920's, was at the site of what is now the football stadium. Built of local mud and thatch, it was devastated in the mid-1930's by severe flooding. This had been a market dealing in household commodities such as oil and soap, dry goods and clothing. There was no regular market for fruit and vegetables which were sold on a door-to-door basis by Bari villagers. Another market was established to replace this first one in Juba Town by the town council, where shops were built by the government and rented to traders. This continues to form the Juba Town shopping and business centre at the present

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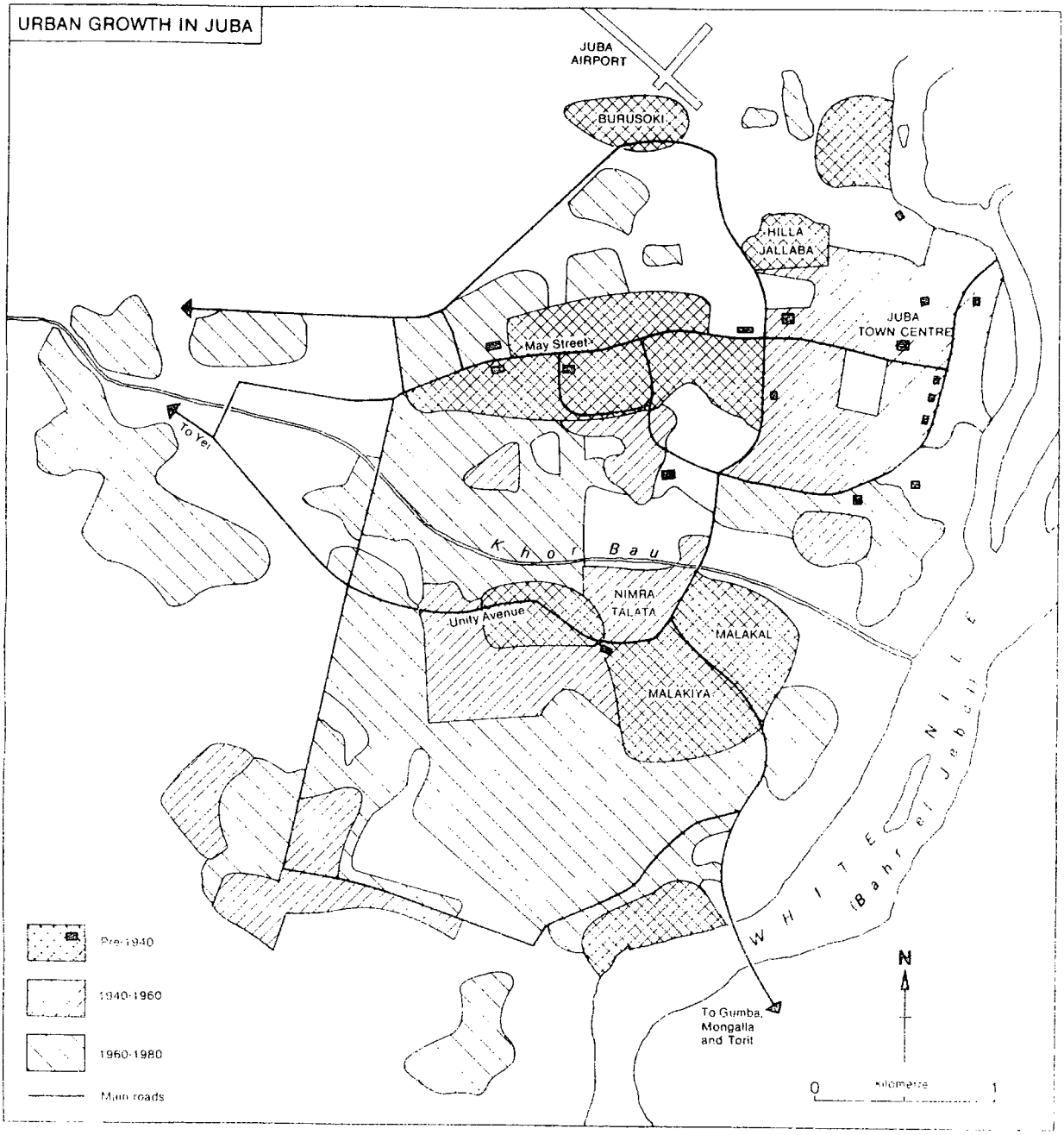
1 Hilla Jallaba was until 1945, as other native lodging areas, filled with dwellings of mud and grass. This area was however taken over in the late 1940's by the Arab traders coming in increasing numbers to the Region after the reversal of the British "Southern Policy".


URBAN GROWTH IN JUBA
JUBA AIRPORT
BURUSOKI
HILLA JALLABA
JUBA TOWN CENTRE
May Street
To Yei
Khor Bau
NIMRA TALATA
Unity Avenue
MALAKAL
MALAKIYA
WHITE NILE (Bahr el Jebel)
To Gumba, Mongalla and Torit
N
0
kilometre
1
Pre-1940
1940-1960
1960-1980
Main roads

day. Even now facilities are minimal, with sporadic electricity, and water from standpipes. Most shops are rented by Northern traders as wholesale and retail outlets for a wide variety of commodities ranging from green coffee to motor spares, groceries to imported clothing; or as shops performing various services, such as photo studios and repair shops for bicycles.

In this, the main centre of "organised" commercial activity in the town, each shop is a lock up, walk in, single room, with a staff of one or two and perhaps an assistant/teaboy/messenger. Most shops are organised by members of a family or close friends. By many standards the majority of these undertakings would certainly be classed as informal sector activities in other parts of the world, when contrasted with large scale, mechanised or more highly organised modern sector activities where infrastructure and facilities are more developed. (For example see the definitions of Sethuraman in the following chapter). In Juba, therefore, we could describe, if using international definitions, the majority of persons involved in commercial activity and services in the town centre as being part of the informal sector. It is worth noting that some of these traders, despite their premises, have very large turnovers. For example, one deals with most of the coffee coming from the Zaire border area via Juba to Khartoum - a very profitable business. There are a few large scale undertakings - government banks, other government agencies such as the Post Office and Duty Free Shop, and a Kenyan based transport company. There is also the Haggar cigarette factory, employing about one hundred persons in the production of cigarettes for the Southern Region and this is the only "large scale" industrial activity in Juba Town. Hence, large, organised activities in the town can be seen to be very much in the minority.

Juba Town was the first market centre to be developed. The population of the native quarters increased during the 1930's and 1940's, and transport to the town centre remained a major problem as there was no public transport system in Juba until 1952, when the first bus service began to operate between Juba Town and Malakia. Even today public transport is almost non-existent, the situation being aggravated by the severe fuel shortage, and movement around the sprawling town is becoming increasingly difficult. In response to this, a second market centre was set up at Malakia, initially with plots rented out by the council, where traders could build their own shops, but later with the same lock up type of shops as in the town centre. Here the Northern Sudanese traders have today specialised predominantly in fabrics and clothing, although there are also a few teashops and restaurants. Again the same problem of definition arises and many would consider this to be informal sector activity. By Juba standards, this is the best there is in the way of facilities, as the myriad of other pavement and tin-hut enterprises to be found indicate, for around the main market centres a whole range of other activities has evolved.

As indicated earlier the original Juba shopping centre had no fresh food market. Besides the two main shopping centres existing today these markets have now evolved, firstly in Juba Town and secondly at Malakia. Because the bulk of Juba's population were, and still are, resident in the Malakia area rather than towards Juba[1], the Malakia open market has become by far the most important with the Juba market declining to very limited activity. As Malakia open market increased in size it also evolved from a fruit and vegetable market where produce was laid on the ground for sale. A covered butchery was provided for the use of the Dinka beef sellers, and a similar covered stall was erected for the

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1 Administratively Juba is divided into two units by Khor Bau, the stream indicated on the map. The northern part is called Juba and the southern part Malakia.

selling of fish brought in by local fishermen. Traders began to build tin huts (or kiosks) on plots at the east end of the market and rented from the council. Each kiosk occupies only a few square metres and is constructed of corrugated tin sheets. There are no facilities, except electricity, which has been brought to the market within the last few years. Each kiosk is operated by one or two traders, often in shifts, to sell groceries and other household commodities, shoes, clothes, tea and cooked food. In addition, many other people now find the market a profitable place to work: oil, bags, bottles, cigarettes, sweets and a variety of other small items can be brought from small moveable kiosks scattered around the market place, and tailors fill the verandahs of all the big shops adjacent to the open market. It is on the activities of the "open" market, ranging from the trader who has built his own tin kiosk to the small boy selling cigarettes that interest is focussed in this study.

It was felt that given the wide diversity of informal sector activity in the town, ranging from the shops of the town centre to the pavement hawkers, some selection was necessary to narrow the scope of this study. The aspect chosen is therefore the activity of the open market. With adequate facilities and funding, further work could be done to cover other informal sector activity and this would form an interesting contrast and complementary piece of work to this exercise.

Malakia open market developed rapidly and survived even through the civil war, though activities were seriously reduced at that time since many of Juba's inhabitants left to find refuge in the bush or in neighbouring Uganda. Post 1972, with a rapid increase of population brought about by returnees at the end of hostilities, a very marked increase in trading/ services occurred in the market - an indication of returnees' attempts to create jobs for themselves in the absence of government support. As previously mentioned, industrial activity in Juba is on a very small scale and hence

not a potential absorber of much labour, and the only alternative to self-employment is often in government service, at the lowest levels, unless the candidate has a high level of education. The result of increasing activity was that Malakia became overcrowded, and market workers spilled over to an empty area on the opposite side of the road. A particularly interesting development was the growth of a group of blacksmiths and metal workers who added to the noise and confusion of the already overcrowded market with their enterprises.

As a result of the overspill, re-allocation by the town council occurred, firstly with the removal of the blacksmiths and metal workers to Konyo-Konyo - an area approximately half a kilometre east of Malakia and which had been a town rubbish dump until 1972. From this small beginning Konyo-Konyo has rapidly emerged as Juba's biggest and most diverse open market today. The blacksmiths were moved to a separate plot to one side of the main area and kiosks were built by traders around a central open space where fruit and vegetables could be sold. Moveable kiosks selling a wide variety of goods were also introduced and tailors working on the verandahs of the traders' kiosks moved in. Juba's beer brewing and drinking area developed at the south edge of the market from one establishment which had operated all through the 1960's into an area containing more than one hundred mud huts and bamboo shelters. In Konyo-Konyo today more than 1,500 people come to work each day, and it provides goods and services for a large percentage of Juba's population. The development of this market has occurred over only seven years, and it is on this market area that interest has been focussed in this work. It embodies a broad range of informal sector activities and attracts a wide variety of people: large numbers of migrant young men from the rural areas, Ugandan refugees, Bari villagers, Northern traders, Dinka middlemen and Zairean charcoal sellers all work side by side in providing a diversity of goods and services.

In many instances the workers of the market are fulfilling needs of the local population which could not be fulfilled in any other way. For example, imported household items are prohibitively expensive and the market offers alternatives such as "home-made" oil lamps produced from scrap tin, rubber tyre shoes, scrap wood tables, cheap clothing. Charcoal stoves can only be found in the informal sector and offer a satisfactory and appropriate cooking method for the town dwellers who do not have electricity or who cannot afford expensive imported cooking stoves using kerosene. Konyo-Konyo market continues to expand and many changes were noted even during the relatively short period of study.

Throughout the town, too, a rapid development of pavement activities, petty trading and repair services, has occurred. It is interesting to note that throughout the development of trade in the town, Southerners have been in the minority, and much enterprise has been in the hands of Northern traders, and in the past Greeks too. The only exception to this was during the time of the Southern Policy when Northern traders were discouraged, but Southern trading did not develop very much during this time due to lack of funds and expertise. The emergence of petty trading has seen the emergence of the Southern trader,who has in the past, and also today, been handicapped by lack of capital and the overall low standard of education in the Region. Monthly minimum wages for a labourer are only LS15 (L 8 sterling equivalent) today and the cost of living is extremely high. In the past it was little better, with a labourer's monthly wage in the order of LS 6 in the 1940's. Trade today is still dominated by Northerners, with remittances to families at home in the North taking capital out of the Region; and it is predominantly within the informal sector that the Southern entrepreneur is beinning to emerge. This is discussed more fully in Chapter 7.

Despite the increase in trading activity in Juba, particularly

since 1972, the shortage of commodities of all kinds has been a constant problem. This is in part due to the rapid growth of Juba's population, which is discussed in the following section. In the period 1930 to the coming of independence, food shortages were unknown in the town and living was easier. As well as being self sufficient in food, the South had excess goods for export: dura, sesame seed, lubia (beans), chili, honey, beeswax, gum, groundnuts and dried fish being the most important commodities. Food supplies were carefully controlled by the administration who bought up commodities in bulk, resold to traders for distribution in the Region, and when there was excess, provided for its transport to the North.

Today, as a result of population policies outlined below, Juba often experiences shortages of almost all everyday commodities, is becoming increasingly crowded and has services which, designed during the British administration, are taxed beyond their capabilities. A description of the socio-economic situation in Juba today, to contrast with its historical development is given in succeeding pages.

2.3 Population Growth

Population expansion in Juba was carefully controlled by the British administration from its beginning in 1929 until the coming of independence. Those who were unemployed were not allowed to stay in the town and incoming people were allowed to stay only for a limited period, being rounded up each April (at the beginning of the rains) and dispatched to their home areas. Hence, until the 1950's Juba was not overcrowded with in-migrants and the infrastructure and services of the town were adequate to support the population. Table 2.1 illustrates the growth of population in Juba, from an estimated 1,000 in 1930 to around 100,000 fifty years later. If these results are presented graphically, as in Fig. 2.2., the history of Juba

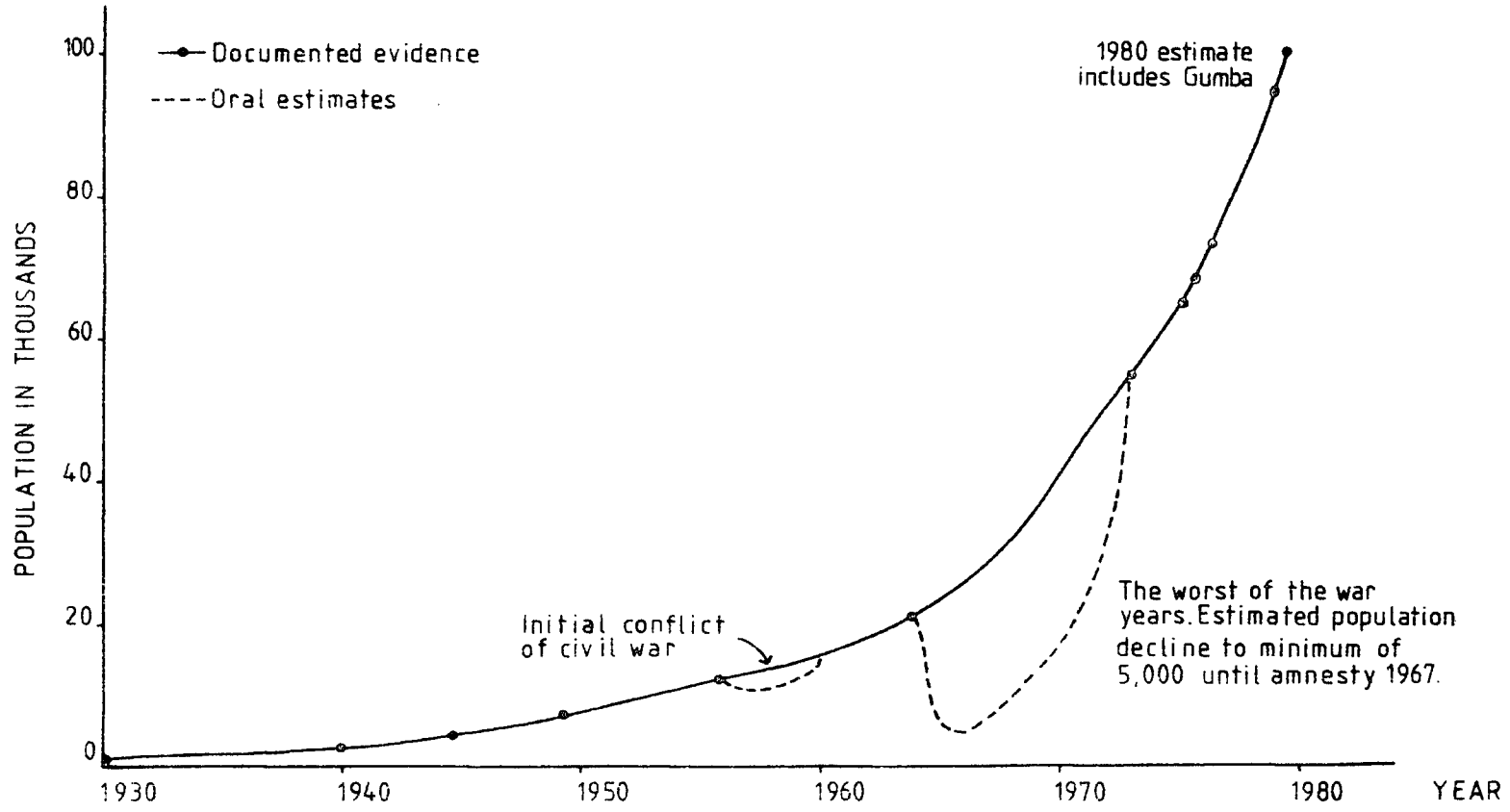
TABLE 2.1 Juba Population Estimates 1930 -80

Year	Estimated Population	Source
1930	1,000	Oral sources
1940	1,625	Letter of Governor of Equatoria to the Governor General Khartoum 1949, File EP/51-1-B, Regional Archives, Province HQ, Juba
1945	4,135	"
1949	8,265	"
1956	10,600	Sudan Census 1956
1964	19,500	Housing Survey, 1964, Regional Ministry of Housing & Public Utilities, Juba.
1973	56,723	Sudan Census 1973
1975	65,937	Household Survey of Equatoria Province, Dept. of Statistics, Regional Ministry of Housing & Public Utilities, Juba
1976	72,128	Report on Population Sample Survey of Juba, Wau & Malakal, Regional Ministry of Housing and Public Utilities, Juba
1977	81,171	Population & Manpower Unit, University of Juba, using Mefit aerial photographs
1979	84,000	" with correction for officially recorded urban expansion
1980	96,000	" with estimation of urban infilling and spreading at town boundary (unofficial housing)
1980	100,000	" including Gumba settlement on E.bank of Nile

is reflected in its population characteristics through time. In the period 1930 to 1956, average population increase was in the order of 9.4% per annum. For the period 1956 to 1973 an overall population growth rate of 10.4% per annum is produced from the data in Table 2.1. From Fig. 2.2 this can be seen as a misleading estimate as fluctuations during the war years, where scanty and unreliable data only exist, are entirely masked. In the initial war period 1956 to 1957, it is assumed (and confirmed by eye witness accounts) that a population decrease occurred in the town with people fleeing to neighbouring countries and going into hiding in the bush. The period 1959 to 1964 appears to have been more stable with a spate of construction throughout the town and population increase. In July 1966, Juba was severely burned during fighting and approximately 75% of the population fled, leaving an estimated 5,000. By 1967 an amnesty for Southern fighters was in operation, and this was reinforced after Nimeiri's 1969 coup when he restated the amnesty and later engineered the Addis Ababa Agreement of 1972. The population began to return during this period, though the figures quoted by the 1973 census are regarded as underestimates, since many people were still in hiding at the time of enumeration.

Since the end of the war there has been heavy in-migration and the beginnings of unauthorised tukl construction, both within the urban area and on the boundaries. Within the last two to three years the spread of this informal housing has reached to the east bank of the Nile in a new housing settlement called Gumba, consisting almost entirely of refugees (predominantly from Uganda) and rural migrants. For the period 1973 to 1980, annual growth has exceeded 8%. Excluding the Gumba settlement, increase is still 7.6% p.a. over the same period. This is illustrated in Table 2.2. This increase in the population without a similar increase in basic facilities demonstrates the strain being put

JUBA POPULATION GROWTH 1930-80



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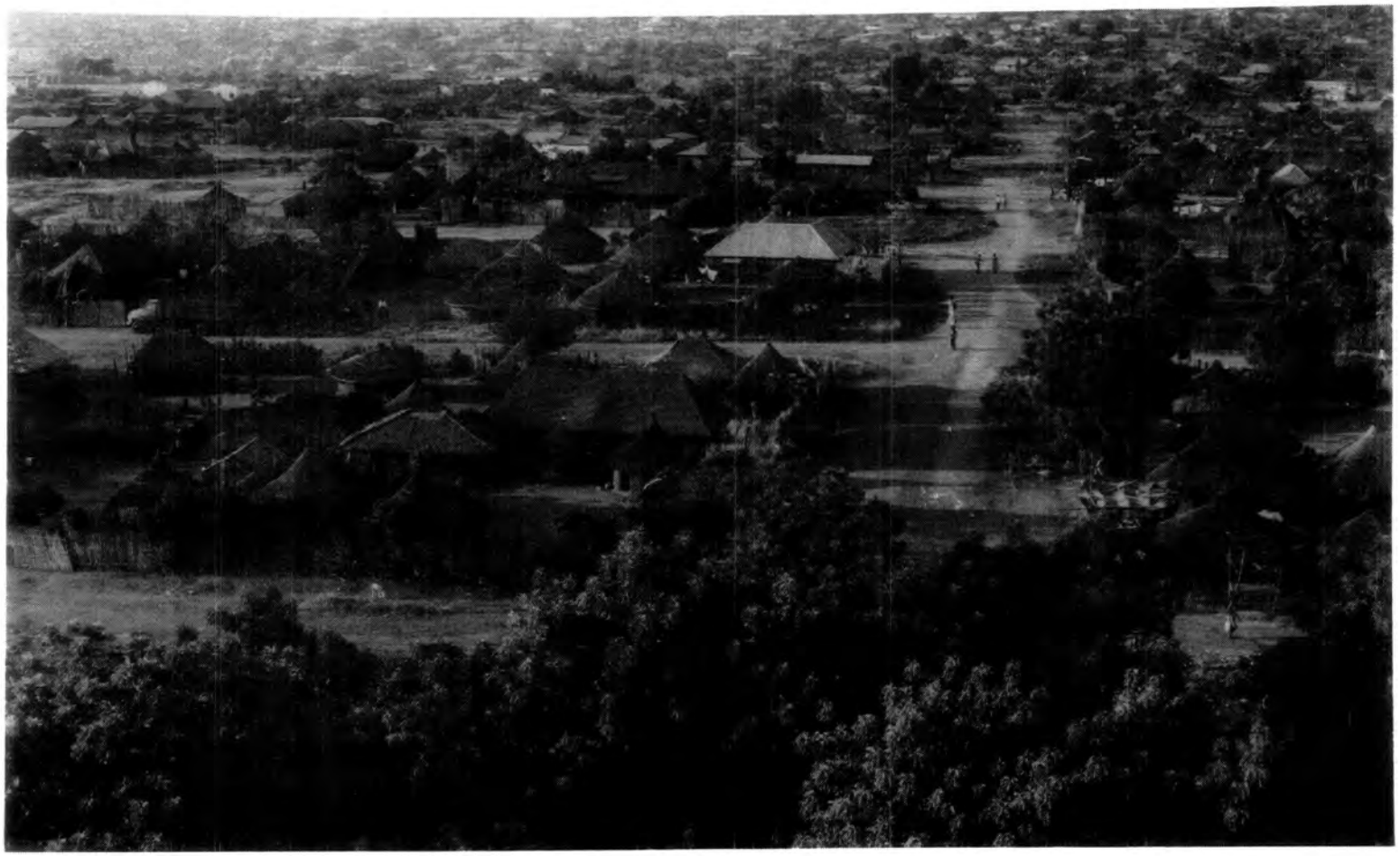

A typical view of a Juba Town residential area showing traditional building styles. Taken from the top of Kator Cathedral, looking North.

TABLE 2.2 Juba Population Increase 1930-1980

Period	Estimated Percentage Increase per annum [1]
1930 - 56	9.4
1957 - 73	10.4
1973 - 80 [2]	7.6
1973 - 80 [3]	8.3

[1] Cumulative calculation. See Appendix 5

[2] Population estimate for Juba Town with allowance made for urban infilling and expansion at boundaries

[3] Population estimate including Gumba settlement on east bank of Nile

on Juba Town today. The major problems in this respect are outlined below.

2.4 Socio-Economic Characteristics of Present Day Juba

A suitable description of Juba today, as the result of its historical development, is an overgrown African village for the most part consisting of tukls (more than 20,000 of them), with a small Northern Sudanese dominated trading sector, several local markets, a collection of compounds for the various expatriate aid agencies who have moved in since the end of the hostilities, the newly established university and several groups of buildings associated with the Regional Government administration. In addition there are schools, churches and mosques constructed in the main since 1950. The lack of infrastructure is a severe handicap - even piped

water and electricity are luxuries rather than everyday conveniences. Many quarters are crowded and planning is lax or non-existent.

Living conditions in the town

From Part 1 of the Juba Town Survey (compound data), an overall picture of living conditions in the town was obtained.

Housing in Juba is divided by the Department of Town Planning and Lands into four classes according to the level of services and standard of building existing. Class I, II and III areas include permanent constructions of concrete, with facilities ranging from electricity and on-tap water in class I areas to standpipe and possible electricity in class III areas. Overall less than 13% of Juba's dwellings fall in these three categories. Class IV areas have tukls with no electricity while water is obtained from standpipes or the river, often at a considerable distance (a kilometre or more), or is delivered to the door by human haulage. Approximately 50% of Juba's dwellings are found in this category. In addition, there is an increasing, illegal group of squatter settlements, uncontrolled by the Government, and gradually filling open areas within Juba, extending the town boundaries such as in the Munuki area, and even spilling across the river to the east bank at Gumba.[1] These form an estimated 28% of Juba's dwellings. A miscellaneous group including schools and the military area occupy the remaining 9% of residential units in the town. Over 75% of the population are therefore living at class IV level or below in extremely difficult conditions. On average each compound has three or four living rooms (i.e. rooms for sitting and sleeping as opposed to cooking, bathing etc.) with approximately

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1 All housing areas are illustrated by a map of sample compounds given in Appendix 2.

eleven persons in each compound, an occupancy level of between three and four persons per room. Bearing in mind the very small size of dwelling units constructed from local materials, Juba's population is generally extremely overcrowded. Only 14% of all compounds surveyed had access to the town electricity supply, and this was by no means regular or dependable, and 17% had piped water within their compounds. All other compounds had to rely on both alternative fuel sources and alternative methods of obtaining water.

Eighty five per cent of all compounds used charcoal for some cooking, whilst 63% also used kerosene, when available (it is often only available through the black market and is very expensive). Forty six per cent used some wood, whilst gas was used by only 2.5% of compounds, and candles (again a commodity in short supply) by 7.5%. Forty four per cent of compounds obtained their water from public standpipe, 15% used the river, 15% had water hand carried and sold at the door, whilst a small percentage (approximately 4% each) had water brought by lorry or donkey. Due to the underlying bedrock being extremely hard, very few wells exist in Juba and less than 2% of compounds employed this method of obtaining water.

Turning to sanitary provision, less than one-third of compounds employed some kind of a toilet (mostly bucket or pit latrines), whilst the activities of those in other compounds increased the ever present health hazard in Juba, where residential areas are criss-crossed by wet season streams and open drainage channels providing breeding grounds for many diseases, and the ideal environment for mosquitoes. Malaria is endemic, and cholera and bubonic plague resulted in Juba being isolated from the rest of the Sudan for several months during the study period.

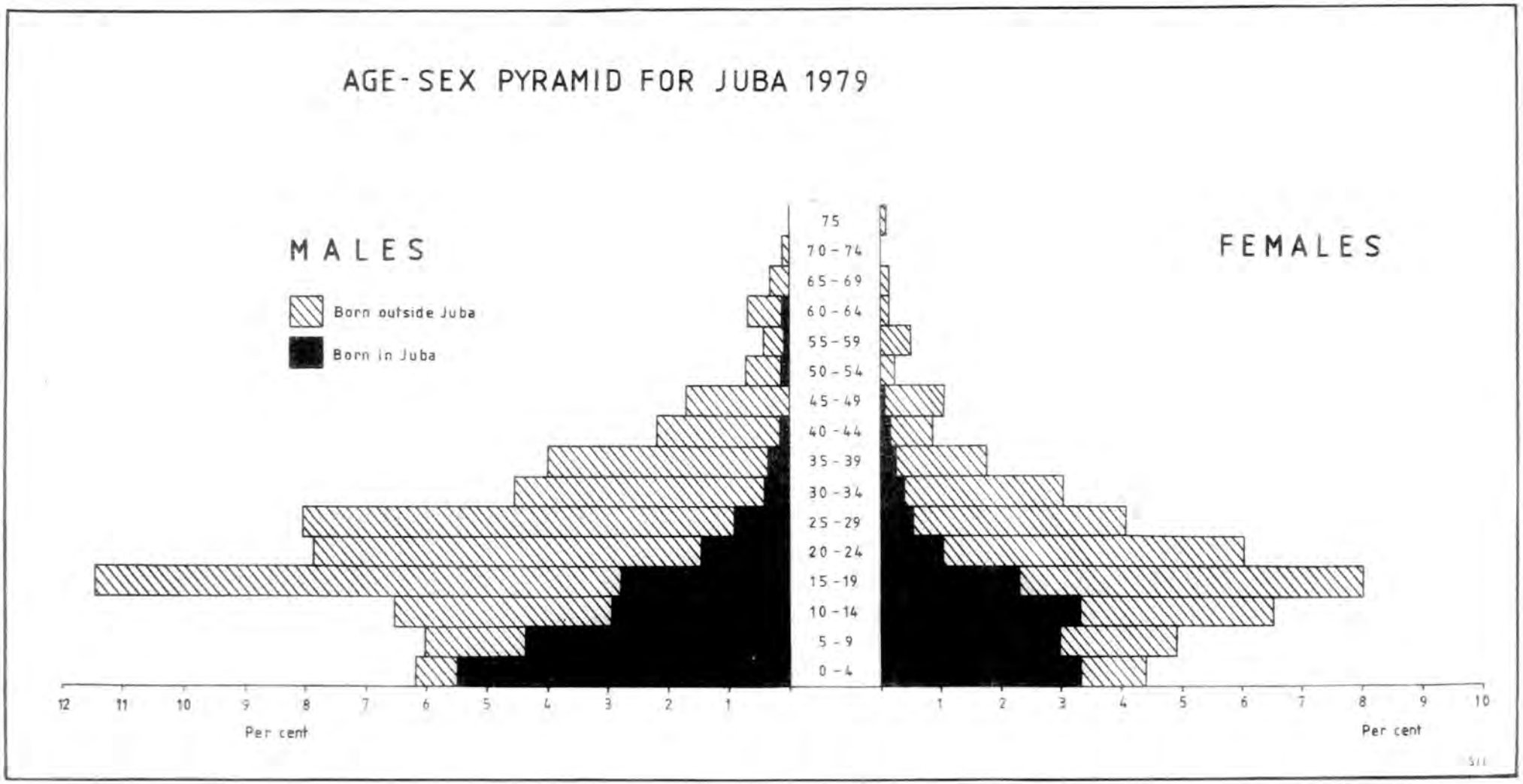
An interesting comparison of this data can be made with a small survey undertaken in early 1978 of just over 100 compounds in Juba by the Population and Manpower Unit before the writer's arrival. The

results are included in Appendix 6 and indicate that between the time of that survey and the 1979 round, living conditions in the town had actually declined. Overcrowding had increased, with density per compound increasing from 7.9 persons to 10.8. "Infilling" had occurred across the town with tukls being added to existing compounds (due to the difficulty of obtaining new plots which are laid out extremely slowly by the Government), so living quarters per compound had increased from 2.3 to 3.6. The proportion of compounds with electricity had declined between the two samples, from 22.2% to 13.9%; similarly those compounds with piped water had decreased from 24.1% to 17.1%. These conditions are a reflection of the increase of squatter residences and urban infilling in the poorer areas of the town. Without a thorough revision of planning policies and attention turned towards provision of basic infrastructure, the situation seems unlikely to improve in the near future.

Population characteristics

Turning to Part 2 of the Juba Town Survey, 1,706 persons were enumerated: 1,004 males and 702 females, giving a sex ratio of 143 (i.e. 143 males to every 100 females), illustrating the attraction of the Region's largest urban centre to the male. An age/sex pyramid (Fig.2.3) serves to illustrate the main population characteristics of residents in Juba, both those who were born in the town, and those who had migrated from other areas. Of the people born in Juba (only 33% of the total population), males predominate, with an overall sex ratio of 125, and 68.5% of the population being less than 15 years old. In the working age group (defined by the census as 15 to 64 years of age) were 31.5% of the population, and nobody of greater age was recorded.

For those residents not born in Juba (67% of Juba's population),


AGE-SEX PYRAMID FOR JUBA 1979
MALES
FEMALES
Born outside Juba
Born in Juba
75
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
12 11 10 9 8 7 6 5 4 3 2 1
1 2 3 4 5 6 7 8 9 10
Per cent
Per cent

the picture is somewhat different. The sex ratio of 153 illustrates that migration is more predominantly undertaken by males, particularly those in the young working age group. Only 17.2% of the migrants were below 15 years of age, with 83.2% in the working age group and 0.6% above 64 years of age. Within the working age group, the largest number of migrants (21.1%) were to be found in the 15 to 19 group, with a further 16.5% between 20 and 24 years, and 15.9% between 25 and 29 years. The youngest of the working age group however may not all have been in Juba working, or seeking employment, but obtaining an education since Juba has the largest concentration of schools of the Region.[1]

The population born in Juba is dominated by children, whilst the migrant population consists largely of people at the younger end of the working age group, with more than one and a half times as many males as females. A comparison of population characteristics for 'Juba born' and 'Juba migrant' populations, with those of the Southern Region as a whole is given below.

TABLE 2.3 Comparison of Juba Population Characteristics with those of the Southern Region as a whole

Age	Total Juba Population	Population born in Juba	Juba inhabitants born elsewhere	Population of the Region as a whole
0-14	33.8	68.5	17.2	45.0
15-64	65.7	31.5	83.2	53.0
64+	0.5	-	0.6	2.0
	100.0	100.0	100.0	100.0

It must be remembered that the Regional data, from the 1973 census,

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1 Lee Kirkham, Ministry of Education, Juba, 1979. Unpublished data indicates almost 16,000 people in school in Juba i.e. 18.5% of the 1979 population. The breakdown by standard and sex is:

	M	F	TOTAL
PRIMARY (6 years)	5669	4128	9797
INTERMEDIATE (3 years)	2976	1586	4562
SENIOR (3 years)	699	668	1367
	9344	6382	15726

are six years older than those for Juba. The civil war produced population anomalies which, according to the Juba data,are already being removed. The working age group, from whom the labour force is composed had, according to the census, some characteristics peculiar to the Southern Sudan. Overall the sex ratio of 103 showed males to be in the majority, but the sex distribution showed anomalies since in the 15-34 age group, both men and women, (but particularly men) were in fewer numbers than they should have been and an estimate of a deficiency of 150,000 to 200,000 males in this group was made (see Fig. 2.4).

Mills (1977, p.16) states, "... in Equatoria the lack of men is so great that the province as a whole shows an excess of women and the male deficit is seen in all age groups between 15 and 35 where there is an overall average of only 80 men per 100 women". However, looking in more detail we find excesses of working age males in the economically more attractive parts of the Region i.e. the towns, and deficits in the rural areas. This is clearly illustrated in Table 2.4. In all three provincial capitals of the South males dominated in the population whilst over the rest of each province working age males were in a minority. Hence, even when there was a shortage of 15 - 34 year old males over the Region, Juba had a concentration in this age group, and the sex ratio for Juba from the time of the census can be calculated from Table 2.4 as 119.

From the preceding Juba Town results it would seem that this anomaly is on the way to being removed. Nothing short of a new Sudan census can produce data for both the overall rural and urban areas of the Region, but from the very high percentage of children, even at the time of the census it can be deduced that the lack of young working age persons is now being made up, seven years after the census. With a very high percentage of children now in Juba town (34% less than 15 years old), no such deficiency of working age population should occur in the future.

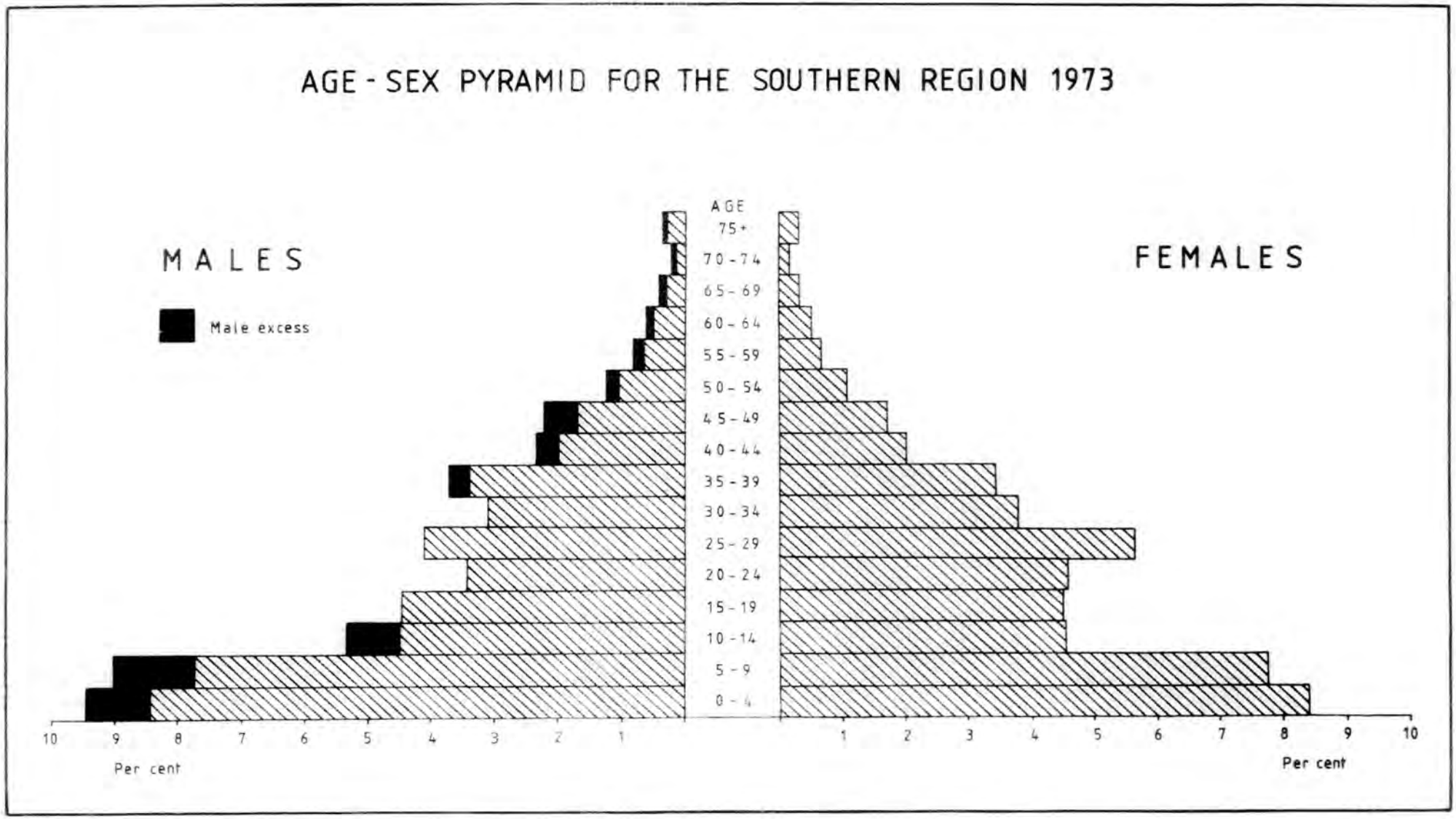
AGE - SEX PYRAMID FOR THE SOUTHERN REGION 1973
MALES
FEMALES
Male excess
AGE
75+
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
10 9 8 7 6 5 4 3 2 1
1 2 3 4 5 6 7 8 9 10
Per cent
Per cent

TABLE 2.4 Excess of Males & Females by District and Age Group in the Region

District	All Ages		15-34 Age Group	
	Male Excess	Female Excess	Male Excess	Female Excess
EQUATORIA				
Juba District	-	3439	-	5076
Juba Town	4991	-	2608	-
Rest of Equatoria combined	-	18557	-	29191
BAHR EL GHAZAL				
Wau	6299	-	82	-
Rest of Bahr El Ghazal combined	19397	-	-	37649
UPPER NILE				
Malakal Town	6176	-	5375	-
Rest of Upper Nile combined	36468	-	-	24873

Source: Mills, 1977, p.18, Table 3.3

Almost two-third of Juba's population were recorded as unmarried, a reflection of the young age of the population but also of social constraints since marriage normally entails the payment of a large bride price which must be earned over several years of working, or borrowed from friends and relatives. Of the migrant population 50% were of single status. This figure is lower than that for Juba overall since in the Juba born population is such a high proportion of young children.

Juba's population consists of a great mixture of tribes, often with

certain tribes specialising in certain activities. The largest group are the local Bari (14.6%), closely followed by the Dinka (11.0%), Moru (9.6%), Pojulu (7.4%), Kakwa (6.7%) and Kuku (5.5%).[1] More than 35 tribes were recorded, with origins all over the country. Overall 93.3% of the population were of Sudanese origin, 5.6% from Uganda, and the remaining 1.0% from other countries. A more detailed breakdown of origin is also included in Chapter 7 when the nature of the informal sector workforce is discussed.

For those persons not born in Juba, numerous reasons were given for their first coming to the capital: the largest group (20.6%) were looking for employment, whilst 12.7% came to continue their education. A further 20.5% came with their families, whilst 13.8% joined their families after some time.

Economic characteristics

The census definition of employment covers only those persons of 15 years and above, whilst in Juba many younger persons are found to be employed. Hence Population and Manpower Unit data on employment include the population of 12 years and above to attempt a more realistic description for Juba. Economic characteristics of Juba Town are described in detail in Chapter 6 but an overall indication of conditions can be obtained by looking at the 1979 figures estimated by the PMU. Of the 84,000 people living in Juba, almost 28,500 were recorded as being economically active. Of these, 21,000 were actually employed, and over 7,000 unemployed (i.e. approximately one quarter of the economically active age group were unemployed). If we compare these figures with those obtained in the 1973 census, as in Table 2.5, we find that the employment situation is actually worsening in relative terms with an increase of unemployed persons greater

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1 See Fig. 7.4 which illustrates the locations of the major tribes in the Southern Region.

than the increase in population over the same period.

In summary, it might be expected that Juba, with its poor standard of living and with high unemployment, would be an ideal situation for the development and growth of an informal sector. This would provide a solution perhaps to the problems of a modern sector which cannot expand at the same rate as the available labour force, and for a society where there is no governmental or official support for those with overburdened facilities and services. This theme will be considered in the remaining chapters of this work.

TABLE 2.5 Labour Force characteristics of Juba 1973 & 1979

	1973	1979	% increase
Total Employed	15,467	21,100	+5.3% p.a.
Population of Juba	56,723	84,000	+6.8% p.a.
Unemployed	4,146	7,200	+9.7% p.a.

Sources: 1973 Sudan Census
1979 PMU Juba Town Survey

PART TWO

THE INFORMAL SECTOR

CHAPTER 3

THE INFORMAL SECTOR CONCEPT

"An informal sector unit is like a giraffe;
it's hard to describe, but you know one
when you see one". 1

3.1 General Considerations

Sudan represents a nation at the lower end of the development spectrum even in African terms where for the continent as a whole less than 13% of the population live in urban areas. Like the rest of Africa, however, its rate of urbanisation is very rapid, due to population increase and rural-urban migration. As described in Chapter 1, at the time of the 1956 census, less than 5% of the population of Sudan were to be found in urban centres, with the Southern Region only attaining this 5% urban population by the time of the second census in 1973. Over the country as a whole between the two censuses the urban population was increasing at approximately 7.5% per annum, with the South leading with an average annual increase of 10%. Characteristic of this urban growth has been the concentration in a few major centres, often where transport, location or markets have created a situation particularly favourable for development. Associated with this rapid change are numerous problems of urban growth: the sprawl of shanty towns and squatter settlements, the increase of overcrowding, the lack of social services and other facilities, and the growth of both unemployment and underemployment. As previously described, the Sudan, and in particular the Southern Region, are no exceptions.

On a world scale, the growth rate of employment opportunities, i.e.

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1 Hans Singer, in Joshi et al (1975, p.298)

the creation of jobs in the "modern"[1] sector of developing countries, is in the order of 2.5 to 3.0% per annum, whilst the urban labour force has been increasing at an estimated 4.0 to 7.0% per annum (ILO, 1974, p.69). Child, (1973 (a), p.7) commenting on this situation, points out that "if the modern sector, say, employs 20% of the labour force, it must, assuming fixed production coefficients, increase capital stock and output by 15% per annum to absorb a 3% annual increase to the labour force. If labour productivity is growing, the output growth and possibly the capital stock growth required for labour absorbtion by the modern sector are greater still." As modern sectors of developing countries typically employ less than 20% of the working population, labour force growth rates of 3% or more are commonplace, and since a modern sector growth rate as high as 15% is unusual, the result is increasing unemployment amongst those wishing to be employed in this sector. That is, the gap between the number of jobs available and the potential number of people to fill these jobs is increasing.

Comparable figures for the Sudan are hard to find, due to the inadequacy of statistical data and the considerable time taken in data processing, but some estimates can be made. ILO (1976, p.110) comments that "the formal sector, broadly defined to include organised agriculture, manufacturing, construction, commerce and services, covers 1.6 million workers, or 20 to 25% of the total labour force. If it is more narrowly defined as the modern sector in urban areas, it includes only 100,000 workers, or 15% of the labour force of urban areas". This falls far short of the 20% postulated by Child.

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1 Students of developing economies have for a long time realised that such economies cannot be regarded as an homogeneous whole and that discontinuities in the modes of production exist. These are demonstrated by the development in the economy of two sectors, variously called the "modern" and the "traditional", the "formal" and the "informal", the "organised" and the "disorganised". As will be demonstrated later in this chapter, agreement on the nature and dynamics of this dichotomy has yet to be reached and its definition in Juba terms will be investigated.

With an estimated increase in the GDP of 4% per annum (1961-71), and negligible economic growth overall, (Suliman, 1979, p.952) the growth of the Sudanese modern sector falls far short of the 15% per annum increase put forward by Child as necessary to absorb an increasing labour force. Even an ILO estimate (1976, p.xix) of an average 6.0% increase in output and incomes over the next decade indicates the low level of growth in the economy.

Estimates of the size of the labour force again fluctuate widely due to the inadequacy of definition. From 1973 census figures ILO (1976,p.16) gives upper and lower estimates of the labour force ranging from 4.7 million to 7.3 million (31-50% of the population). In an estimate of labour force growth rates to 1985, 2.4% to 3.0% is given as an overall rate (ILO, 1976, p.315) whilst the urban growth rate (estimated from projections of urban population growth, birth rate, male-female ratios etc.) for the same period is given as between 6.4 and 7.1% per annum (ILO, 1976, p.317). Obviously these estimates give only a rough idea and past rates will have been lower, but they are sufficient to demonstrate that modern sector labour force growth rates are likely to exceed the 3.0% allowed by Child in his postulation.

Taking the average size of the labour force as 6 million in 1973 and an average labour force growth rate of 2.7%, over 150,000 jobs will need to be created annually to absorb this increase. ILO (1976, p.15) comments: "modern sector employment - both agricultural and non-agricultural - has been rising by up to 50,000 jobs annually which means that well over 100,000 entrants to the labour force have been finding employment in traditional activities characterised by low productivity and the underutilisation both in time and ability."

Turning to the Southern Region, the picture is even bleaker, with a negligible agricultural and industrial base, and 77% of the labour force involved in subsistence agriculture. According to the 1973 census the modern sector involves 198,000 people, i.e. 23% of the total economically active, but this figure is deceptive since it includes any person outside of subsistence agriculture and hence includes many who are not in the urban modern sector as

previously described by ILO and others. With the majority of modern sector activity being involved with the government bureaucracy, the size of the modern agricultural, industrial, trade and service groups is extremely small.

An extremely high rate of urban population growth (more than 8% per annum in the Regional capital), coupled with the failure to provide jobs in the modern sector indicates the nature of the problem. It is under these conditions that the growth of the informal sector has flourished.

As a consequence of the ever-widening gap between the number of modern sector jobs and size of potential work force, job seekers, rather than finding employment in the "organised" system of production find employment in more informal or disorganised activities e.g. scrap metal workers, petty traders, barbers, beer brewers, tailors, shoe menders etc.[1]

It is on these informal activities that interest by researchers in several fields, from development economics to geography, and economic anthropology to sociology has become focused in recent years. It is recognised that an increasing number of people are being absorbed in this area of employment and its role, functions and feasibility have consequently been the subject of numerous case studies during the late 1960's and 1970's e.g. Bienefeld (1975) in Tanzania, Child (1973 (b)) in Kenya, Dasgupta (1973) in Calcutta, and Hart in Ghana (1973).

3.2 What is the Informal Sector?

A Juba definition

Attempted definitions of the informal sector are numerous and various throughout the literature which has developed over the last two decades. In Juba terms, we are looking for a definition to cover a range of activities from the shop keeper of the town centre with limited facilities but often a very high turnover of capital, to the petty trader of the market and the

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1 The term "informal activity" implies traditional, small-scale industry/services/trade as opposed to large-scale, capital intensive, modern sector enterprise.

hawker of the streets. The ILO (1976, pp.375-388) have attempted a definition to cover such a wide area and to combat many of the limitations of other approaches. This approach is outlined below and a discussion of how it fits into the literature on the subject follows.

The definition proceeds from an assumption of the informal sector being "a heterogeneous, multi-dimensional or multi-layered phenomenon, with each layer possessing different attributes and therefore playing divergent economic roles" (ILO, 1976, p.375); and it builds in material derived from previous work in Kenya on the characteristics of the informal sector (ILO, 1972). Here, informal sector activity was described (ILO, 1972 p.6) as a way of doing things characterised by:

1. Ease of entry to the sector
2. A reliance on indigenous resources
3. Family ownership of enterprises
4. Small scale of operation
5. Labour intensive and adapted technology
6. Skills acquired outside the formal school system
7. Unregulated and competitive markets

This description is used as a basis for devising a typology of all economic activities outside the urban formal or modern high wage sector, and outside the rural traditional sector, as illustrated below. (However, it must be remembered that groups may overlap; it is impossible to distinguish completely distinct groups within the informal sector and this is therefore more a description of general trends).

Category I

An enterprise in this class is usually well established with a permanent and conspicuous place of operation. A licence is required and is not always easy to obtain. Capital requirements are relatively high and experience is needed to manage the business. Some imported implements are used. The business is usually prosperous and the owner's ambition is to remain in it and expand it if his means allow. (an example would be the shops of Juba Town centre described in the previous chapter).

Category II

Establishments in this category have a fixed and conspicuous place of work, but are not very well established (wood and tin booths). They are reasonably productive and profitable but could easily go out of business. They are usually licensed but not necessarily. Relatively small capital requirements are involved but they are still large enough to inhibit entrance. In general these establishments are struggling to improve their situation and dream of one day attaining category I status. (The tin kiosks in the open markets of Malakia and Konyo-Konyo fall in this category).

Category III

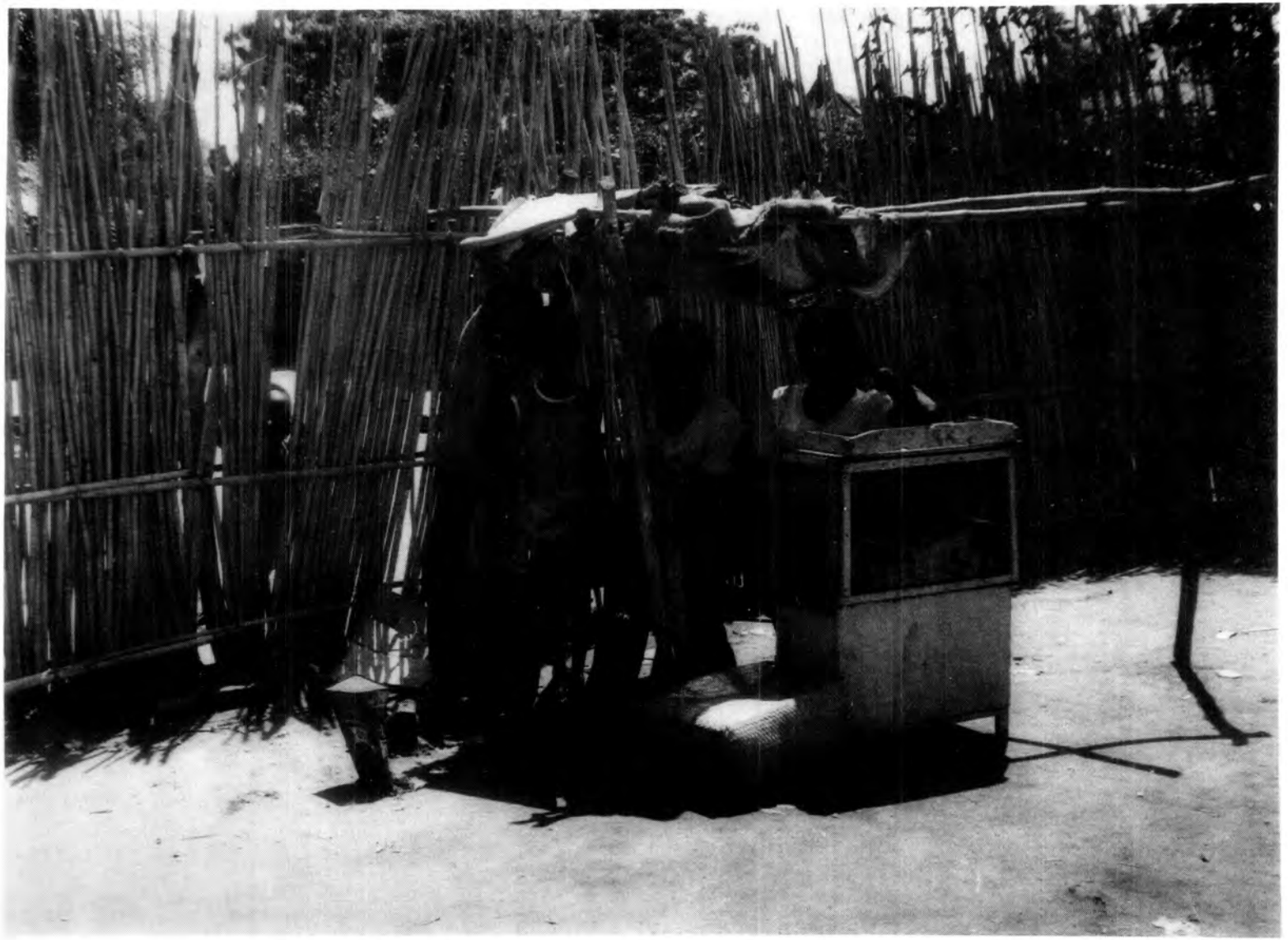
Establishments in this group are relatively young (one or two years). They have no permanent place of work, mostly involving tabali (a compromise between a booth and a stall - they may be small enough to carry round, or large enough to be almost a booth). These establishments are typically unlicenced. Although capital requirements are relatively small they nevertheless pose a problem for new entrants. Productivity and profits are rather low. Although individuals in this class would like to make a career of informal sector work, they do not always succeed. This results in a relatively more frequent job movement to and from the formal sector. (The stands selling items such as cigarettes in the markets and around Juba Town fall in this group).

Category IV

These are mainly the petty hawkers and vendors; shoeshine boys, carwash boys, and the multitude of other individuals undertaking all sorts of petty jobs characterised by long hours, low productivity and small income. Very little or no capital is required for entering into this category. The majority of people here are waiting to obtain jobs in the formal sector. A few may make it into the informal sector and graduate to category III status. (The market is full of such activities, with people peddling a few wares in the open square in the market centre).

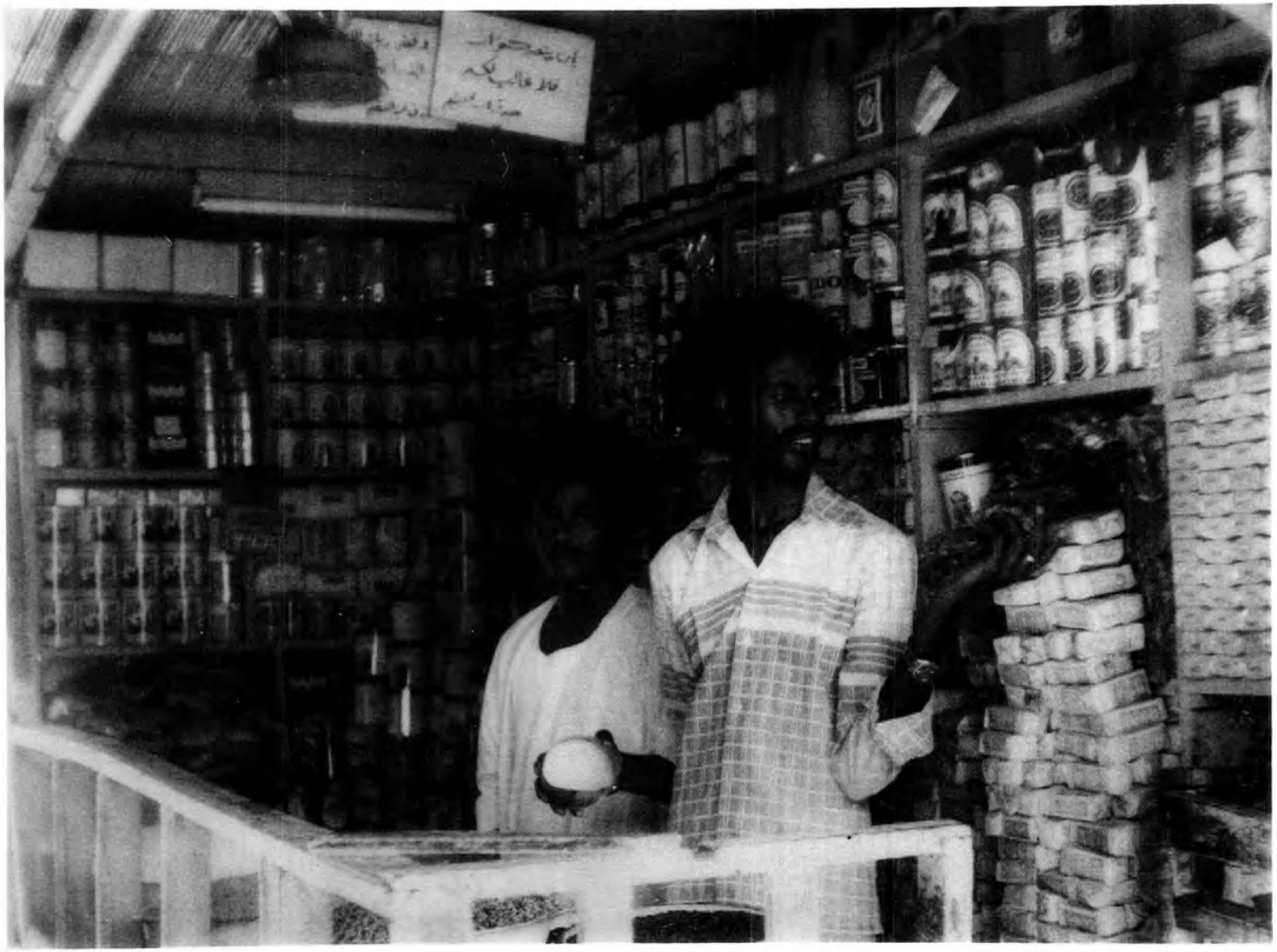
(ILO, 1972, p.376)

It was stated earlier that time and resources did not permit a study of the entire informal sector of Juba Town, but it can be seen that the representative study of activity in Konyo-Konyo market falls into categories II to IV of the ILO definition, whilst the informal occupations of the town centre are predominantly class I. Before accepting this definition, however, as a working basis for further field studies, it is necessary to justify why it should be better than other approaches and how these concepts fit within the study of informal sector enterprise in the literature as a whole.



Cigarette sellers in May Street, Juba

Traders' kiosks in Konyo-Konyo market, Juba.



Interior of a Northern Sudanese run kiosk in Konyo-Konyo market

3.3 Background to Informal Sector Theory

Economic dualism

The term informal sector was coined in a study on Ghana by K. Hart (1973), who investigated a north Ghanaian group (the Frafras) who had become migrants to the urban centres of southern Ghana. Hart described the economic activities of these people as part of the lower income labour force in Accra. In this study he produced a typology of urban income opportunities ranging from legitimate primary and secondary informal sector activities, such as farming and craftwork; through tertiary sector activities such as the renting out of housing, providing transport services, petty trading etc; to illegal informal sector activities such as smuggling, prostitution and protection rackets (illegal services), and transfer of income through gambling and theft.

This informal sector concept, following Hart's ideas, was picked up by the ILO (1972) in the report of the ILO/United Nations Development Programme (UNDP) employment mission to Kenya, and their confidence in its role in providing employment opportunities to a large part of the unemployed urban labour force in many developing countries demonstrated by the setting up of sample surveys in selected cities of the developing world, to build a body of information on the sector which is to be of use in decision and policy making.

In the above, and indeed in many other studies, certain assumptions have been made about economics, development and employment which characterise one school of thought in this field. All see the urban economy of developing countries as having a dualistic nature; for example McGee (1973, p.138) has said that most cities of the Third World can be seen to consist of two juxtaposed systems of production, one derived from capitalist forms of production, the other from the peasant system. Even before the term

informal sector was coined by Hart and taken up widely in the literature, descriptions of the urban economy of the LDCs followed along the same lines: the firm centred and the bazaar-type economy (Geertz 1963, Chap. 3); the protected and unprotected sectors (Mazumdar 1976) and the upper circuit and the lower circuit of the economy, (Santos, 1975); and Breman (1976, p.8) has commented that "the informal sector concept must be regarded as a new variant of the dualism theories which earlier gained popularity."

From these studies, numerous criteria have been put forward to attempt a definition of the informal sector, some of which are summarised in Table 3.1. In addition, the ILO has laid down criteria for identifying individual enterprises in the informal sector, resulting from their World Employment Programme (WEP) project in which studies have taken the format of a basic survey questionnaire, designed by Sethuraman (1975) which contains questions about several facets of informal sector activity. These are outlined in Table 3.2. The definition of an informal sector enterprise is also clearly laid down:-

"An enterprise...is broadly defined to include any economic unit engaged in the production of goods and services, whether it employs only one person (i.e. sole proprietorship) or more; whether or not it uses any fixed capital; whether or not it has a fixed location for conducting business; whether or not it manufactures a commodity...Note that the economic unit which produces goods and services, is what matters and not the individual associated with the enterprise. For example, a self-employed construction worker or plumber working alone is a one-man enterprise; but a construction worker or plumber employed for wages by an employer is an employee of the concerned construction enterprise."

Sethuraman then goes on to outline several criteria by which enterprises may be judged, i.e. an enterprise may be included in the informal sector if it satisfies one or more of the following criteria:

TABLE 3.1 Summary of some criteria for the definition of the informal sector

Criteria	Formal Sector	Informal Sector
Technology	Capital intensive and often imported	Labour intensive,adapted
Organisation	Bureaucratic	Family organised
Capital	Abundant	Scarce
Dependence on foreign countries	Great. Outward oriented activity	None
Resources	Often overseas	Indigenous
Skills	Formally acquired	Acquired on job
Wages	Regular, fixed	Often the idea of wages is not involved
Markets	Protected	Highly competitive
Ease of entry to the sector	Difficult. Capital, licences, etc. are needed	Easy
Price of commodities	Fixed	Negotiable
Relationship with clients	Impersonal	Personal
Policies	Often government aided: provision of infra-structure, protection	Very little contact with authorities - may be harrassment or evasion

SOURCES: Santos, 1975.
ILO, 1972

TABLE 3.2 ILO Questionnaire Format for a Survey of the Urban Informal Sector

I. Identification particulars

II. Information on the informal sector enterprise

(i) Physical background

(ii) Structural background

(iii) Legal constraints

(iv) History of the enterprise

(v) Operational characteristics

a. Capacity utilisation

b. Work force

c. Capital employed

d. Building structure

e. Purchase of goods

f. Purchase of services

g. Credit

h. Revenue

i. Taxes

j. Miscellaneous

k. Operational constraints

l. Incentives and attitudes toward possible policies

III. Information on the head of the enterprise

IV. Information on the household of the head of the enterprise

SOURCE : Sethuraman, 1975

1. Employs ten or less persons
2. Operates on an illegal basis, contrary to government regulations
3. Members of the household of the head of the enterprise work in it.

Several other criteria are also listed for various employment categories (manufacturing, construction, transport, trade and services).

This approach lays out a clear framework within which informal sector activity can be systematically investigated, since there is a structured questionnaire and a series of criteria with which a division between formal and informal sector activity can be made. Because of this, the model outlined above has been applied in several situations around the world by WEP of ILO, tailoring the survey to fit each individual situation.

The definitions are valuable in delineating enterprises which fall within the informal sector and, as mentioned previously, many of the points made in this earlier work have been taken up by the ILO in devising their typology outlined at the beginning of this chapter. The earlier approaches however suffer from a failure to realise the diversity of levels of activity within the informal sector and to concentrate on the idea of strict economic dualism, with no contact or potential contact between the informal and formal sectors. With the most recent ILO typology, a change in approach is apparent, since both diversity and the ability of persons within different "categories" of the informal sector to move "up" or "down" i.e. towards the formal sector or into unemployment, are recognised. Even the ILO typology however is still subject to the criticism of belonging to the "economic dualism" school of thought. This shortcoming has been noted and care taken in field work to avoid "a priori" judgements. However, even with its setbacks, the typology provides the most useful framework within which to work.

The surveys designed by Sethuraman are intended for blanket coverage of informal sector activity on a large scale. Such work involves a lot of manpower to collect the information and is not suitable for individual research in its present format with such a large questionnaire, although it could be fairly easily scaled down to a more manageable level. Several groups of questionnaires, particularly regarding finance and supplies, will not be best answered by putting them on a formal questionnaire since informal sector activity often borders on illegality and may have dealings with the black market. Less structured interviews may be of an advantage in such a situation, for example taking the "key-informant" approach of Richter (1978 (a) & (b)) who proposed that more valuable material can be collected by informal discussion with certain selected, knowledgeable individuals than can ever be collected by formal questionnaire. In practice, a contribution of both (of formal questionnaire and informal discussion) have been found to be the most valuable in the collection of data and the methods undertaken are further discussed in Chapter 4.

Returning to the idea of economic dualism: the validity of the dualistic approach should be questioned, and indeed, there has been much debate in the literature, since it seems that an economy with two juxtaposed systems of production is not an ideal way to describe the development of an economy in the Third World today. The adoption of a dualistic approach is the adoption of a rather narrow field of view, since employment is strictly dichotomised and no account is taken of the interactions or "articulation" between the two sectors and each is seen as standing alone and complete. Gerry (1974, p.5) comments "... it is putting the cart before the horse to classify the productive ensemble into two subsystems on the basis of a set of characteristics chosen 'a priori'," and Breman (1976) notes that "by interpreting the relationship of the informal sector to the

formal sector in a dualistic framework and by focussing on the mutually exclusive characteristics, we lose sight of the unity and totality of the productive system." However, the dualistic theorists may also argue that even though there are some linkages between the sectors (e.g. informal sector supplying cheap labour pools for the formal sector, or partly processing goods), the informal sector is different and should be viewed separately. For example, considering taxation, an accountant might argue that production in almost any economy is classifiable in terms of who pays taxes (i.e. contributes to the national wealth) and who does not. Therefore, if the informal sector is an important sector for employment and production, it is different in that its workers are not paying taxes.

The adoption of a dualistic approach seems to have entailed the adoption of several assumptions which have developed through the years e.g. the informal sector has become thought of as the major point of entry for fresh migrants from rural areas; as a sector where everybody earns low wages in comparison with the modern sector; as a sector of uneducated or very poorly educated workers; and as a sector involving predominantly young adult males.

Some attempts have been made to break away from these assumptions, notably by Mazumdar (1976) who discusses some of what he describes as misplaced beliefs, and illustrates with empirical evidence collected from a range of informal sector studies. This is a valuable contribution, empirical evidence being rather scarce in the informal sector debate. He argues that the informal sector is not necessarily the major point of entry for new migrants from the rural areas; that a large variation of earnings may be found within the informal sector; that many of the very old, the young and the female population also find work in this sector, and so on. The validity, or otherwise, of these arguments to the Juba situation is illustrated in Chapters 6 and 7 with the presentation of Juba field data.

An approach that goes one step further than the dualistic approach is that of Child (1973 (a), p.9). He notes that "development is seen as a process of expanding the modern (i.e. formal) sector, transfering labour from the traditional to the modern sector as rapidly as capital formation in the latter will permit" and describes " a neglected third sector which generates employment at lower capital cost than the modern sector and creates income per worker equal to or greater than that of the traditional sector" and which emerges in his investigations of small scale enterprises in neighbouring Kenya. This sector he describes as an "intermediate sector", halfway between the traditional and the modern, and he maintains that Kenya's economy is appropriately described by this three-sector model and stresses the importance of this middle sector in the overall economy. His analysis is interesting in that it puts informal sector activity into a broader perspective including all traditional activity, rather than confining it to the urban case. However, again his categorisation cannot do justice to the complexities of the real-life situation, since overlapping between the "traditional" and the "intermediate" sectors occurs in many occupations. In the Juba case his typology would fit rather well - the "modern sector" being dominated by public service, with the "intermediate" sector including the majority of informal sector enterprises to be found in the town, however, some activities such as pot-making and basket-weaving are important in the urban centre and these are definitely traditional, rural based activities, with Juba being the marketing centre only for such commodities. In fact, the decision as to whether to include these rural-based workers who are nevertheless contributing to the urban economy, is a difficult one. From field studies in the sample market, approximately 16% of workers fall in this category and provide goods for the town unavailable through other sources, and it was considered worthwhile to include them in the informal sector survey.

In summary of the broadly dualistic approaches described in this section, it can be said that they are the first concepts to have evolved in investigation of the informal sector. Methodology and definitions have been clearly defined, and to a large extent the writers are aware of their own shortcomings. If the basic deficiency of a lack of investigation of interaction between this sector and the rest of the economy is acknowledged and allowed for in future study, the survey methods are well developed and capable of providing much valuable data. Using the ILO typology outlined earlier with its internal stratification, and bearing in mind the need to investigate linkages outside the sector as well as within it, a satisfactory instrument for initial survey of informal sector activity can be devised.

However, it is worthwhile to summarise viewpoints from other schools of thought on the informal sector theme, which argue that there can be no dichotomy, no division and no categorisation of activity in the above manner. One branch or theory maintains that there is a continuum of production activities and a division of it into two parts can only be arbitrary. If there is a dichotomy at all it is because the so-called informal sector enterprises are still in the process of transition, and it is only a matter of time before the discontinuities disappear. Looking at the Juba situation, such an idea cannot be upheld, since with its extremely poor infrastructure, supply position and unbalanced economy it seems unlikely that conditions will significantly change even within the coming 20 or 30 years. This attitude stems directly from Rostow (1971) and his stages of growth model and is currently under attack, along with dualist theories, from numerous authors, notably Marxist-oriented writers, who have a different perception of development economics and the role of capitalism in influencing the various forms of production.

Marxist approach

In general, Marxist writers maintain that an economy cannot be categorised into two independent groups in the manner of the dualist approach and they stress the "articulation" or interaction between "dominant" and "sub-dominant" modes of production as represented by the co-existence of capitalist with non-capitalist forms to explain the heterogeneity of the forms of production, distribution and exchange in the Third World.[1] They criticise dualism as being an inadequate approach to handling the inter-relationships between smaller-scale less organised activity and larger-scale capitalist enterprise.

The neo-Marxist approach suggests a "modes of production" type of analysis that looks at the forces and social relations of production, the interconnections between co-existing modes and the processes by which surplus product is created and extracted rather than merely attempting to divide the economic structure into two distinct sectors.

Authorities with this ideology describe the whole world as part of, and affected by, the capitalist economy. (leaving aside the communist world which bears no relation to informal sector studies as yet). According to Marxist theory, when the capitalist mode enters into relations with pre-capitalist (i.e. traditional) modes, a transfer of value takes place from the pre-capitalist to the capitalist mode and the pre-capitalist mode is itself necessarily modified and evolves. Since very few parts of the developing world have escaped the touch of capitalism, most pre-capitalist activities have therefore in some way been affected. Gerry and le Brun (1975, p.32) comment, "the deteriorating conditions of life and the declining possibilities for the....petty producer of engaging in productive activity are inextricably linked to the domination of these subordinate forms of production by the capitalist mode of production. The continuation of such forms of production simultaneously favours the reproduction and

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1 For example see Long & Richardson, 1978.

expansion of the capitalist mode of production and presents it with severe problems."

Some argue that the evolution of these pre-capitalist modes will never produce the results it did in Europe and the USA during the industrial revolution, but that the activities will develop into "marginalised" modes of production, at the periphery of the world system, a position from which they cannot escape unless some revolutionary changes in attitudes to development occur. Lipton (1977) put forward several reasons for this and believes that poverty today in the Third World does not seem to be a temporary state as it was in the Western world. Firstly, in the LDC's today, the bargaining power of the labourer has been weakened because the size of the potential labour force is so large, and increasing rapidly with each generation; secondly, during the early economic activity and development of the West, much of the capital produced went back to "directly productive" businessmen who reinvested and helped to preserve the market, whilst today in LDC's a greater percentage goes to bureaucrats and traders with a more tenuous interest in mass consumption; and thirdly, the industrial sector of LDC's, whilst politically strong is commercially weak, with in general, less than 10% of the output and less than 5% of the workers, and its ability to stimulate the rest of the domestic economy is therefore low. Economic growth is stimulated by investment and reinvestment as mentioned above. When considering the Sudan, and particularly the Southern Region, it can be seen that levels of investment are low both in the public and private sector - a major handicap to economic progress. This was clearly demonstrated in Chapter 1 when studying the budgetary details for the Southern Region during the six year plan.

Bienefeld (1975, p.6) discussing the problem of defining the informal sector in terms of modes of production argues that to justify the term

informal sector one needs to show that it "represents a part of the economy which has its own dynamics of development, which responds differently to certain socio-economic changes and which generates different types of change than the other sectors from which it is distinguished." He further suggests that the informal sector may be regarded in terms of a discontinuity within the capitalist mode of production, in which different sectors of the capitalist economy relate to each other in an unequal manner, i.e. the informal sector is in fact taking advantage of the obsolescence of the capitalist mode in developing economies and is developing as an alternative within the capitalist mode.

It is important to note, and can be seen in the discussions above, that the concept of "marginalisation" or "peripheralism" does not describe a static situation, but mechanisms in the economy - the informal sector is not a phenomenon existing in one state through time, but something which is continually evolving.

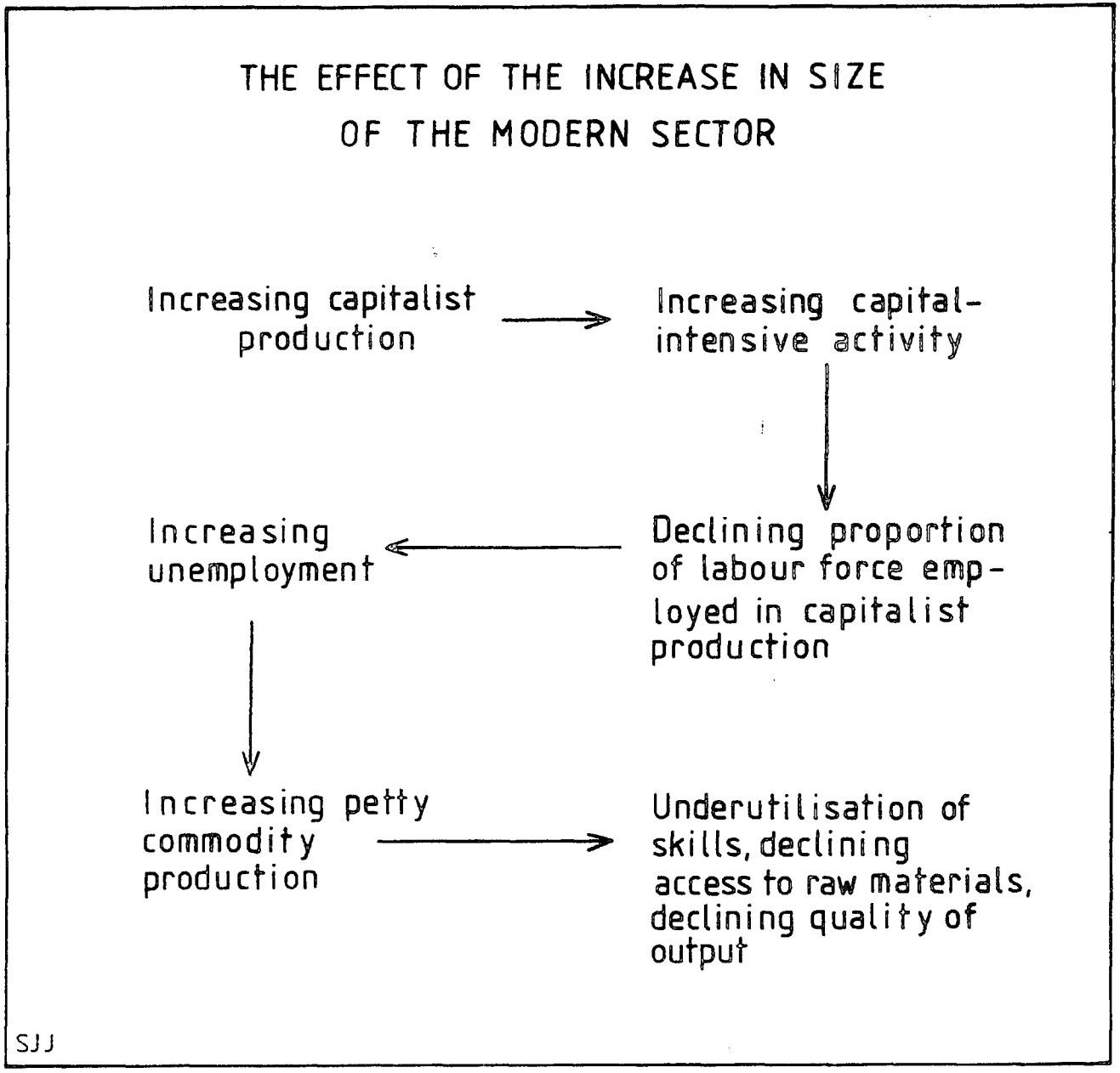
Looking at the informal sector as a mode of production within the capitalist system we can say that informal sector workers are crowded into a series of activities which have a major attribute in common: their ability to accumulate capital, to save, is limited by the activities of the modern sector, and also dependent on them. The modern sector is capable of taking over any sphere of production, or market, which may, prior to that time, have been developed totally through non-capital intensive activities. As this happens, informal sector activities are destroyed, and others may be generated which more closely link in with the newly created modern enterprises e.g. the case of traditional shoe makers in Dakar, (Gerry, 1977) who were family organised groups making leather footwear when they came into competition with Bata, a multi-national company with government protection. Bata obtained a monopoly in the purchase of fine leather and the traditional sector therefore no longer produce leather shoes but had to

convert to synthetics imported from the EEC, which resulted in declining standards and disruption of traditional systems. The traditional workers were unable to fight back due to the size of the multi-national company operation and its domination of the market.

One would imagine that eventually informal sector activity would die out as the modern mode took over, but contrary to this, in many places the informal sector is expanding as its traditional activities become replaced by alternative activities which can survive alongside modern production techniques and products. This returns us to the point made at the beginning of this chapter, that due to its capital intensive nature the modern sector cannot provide the number of jobs required, hence the continued necessity for an informal sector to absorb this excess labour force. This is illustrated in Fig. 3.1.

The Marxist approach is useful in considering the informal sector in its wider context, and involves the consideration of mechanisms operating in the overall economy and linkages between the various kinds of activities. As stated earlier it is essential that these factors should be considered in surveys of the informal sector. However, although the theory of the Marxist-oriented approach has been written about and discussed at length, the development of a practical research approach has not yet begun. They are sophisticated theories which may well be applied to highly researched societies but which are difficult to apply in the case of a society such as the Southern Sudan, where even the most basic socio-economic data are unavailable or difficult to obtain.

Once initial data have been gathered, their interpretation need not be completely restricted to the dualistic approach of the early writers and can also be reconsidered in the light of other theories. Hence, to recapitulate, the writer believes that the developed questionnaire techniques are useful if well designed and structured, provided their shortcomings


THE EFFECT OF THE INCREASE IN SIZE OF THE MODERN SECTOR
Increasing capitalist production
Increasing capital-intensive activity
Declining proportion of labour force employed in capitalist production
Increasing unemployment
Increasing petty commodity production
Underutilisation of skills, declining access to raw materials, declining quality of output
SJJ

are recognised and corrected for as far as possible. Wider theoretical issues can then be taken meaningfully into account when attempting to describe informal sector activity.

It should be noted that only two main schools of thought have been outlined here. We must also take into account the views of other writers who have diverged from these theories in various directions, for example, Scott (1976) with her social anthropological interpretation. Scott's work is directed at the personal level rather than at the aggregate labour force level and she maintains that this approach has certain advantages in attempting to unravel the complexities of the labour force situation in a developing country. It is an interesting new viewpoint and one which has promise for future fieldwork. She also suggests that the terms of reference for investigating the informal sector be changed. Rather than investigating it as an economic phenomenon, we should recognise that the relations of production go much wider than economics, and have implications in the social sphere as well. She suggests the household as a starting point for investigation of employment phenomena in the developing world. Whilst alternative viewpoints are interesting it is felt that their consideration is outside the scope of this study which is basically an attempt at a first description of activity in Juba Town and would be an extrapolation of theory before the necessary factual basis has been established. Their theoretical implications will therefore not be considered here.

3.4 Future Development of Informal Sector Activities : Optimistic and Pessimistic Views

Whatever viewpoint one holds about the informal sector concept, there is a further aspect which comes into consideration, and that is the future role of the informal sector in the developing world. Predictions will largely depend on how the informal sector is defined, and how the positive and negative characteristics of such activity are stressed.

Traditionally the informal sector has been viewed as stagnant and unproductive, a last resort for the urban unemployed and a source of job opportunities for the majority of rural migrants arriving in the cities. To encourage the growth of such activity has often in the past been seen as a waste of capital which could otherwise have been spent on attracting industrial investment rather than backstreet activity. Because of its marginality it has been assumed that informal sector activity could not provide a dynamic form of employment, and could never be an independent alternative to more organised forms since small operators depend on larger ones for some, or all of: knowhow, inputs (discards, byproducts, intermediate goods), skilled labour and markets.

A different point of view, and indeed one illustrated by activity in Juba, puts the informal sector in a definitely optimistic light: there is great merit in labour intensive, absorbtive industry, since unlike modern industry which needs large inputs of capital to create new jobs, informal sector activity can expand easily and cheaply to create more jobs for the unemployed, and in consequence the informal sector provides cheap/alternative goods for a large percentage of the less well-off population, therefore satisfying a need which could not be met in any other way. By Juba standards many workers can also make more money by informal sector activities than as employees at the lower end of the wage paying sector. Unfortunately, because the informal sector is also capable of supplying modern sector workers with cheap goods, thus keeping the cost of certain essential household commodities low, the employers in the formal sector tend to keep wages lower than might otherwise be the case. The use of local raw materials and wastes (paper, tin, rubber, wood, etc.) is a further advantage of such activities and provides a chance for entrepreneurship and innovation.

The small size and relative inefficiency of informal sector enterprises can be explained as "the consequence of the structure of an economy in which

a number of policy measures favour the formal sector" (Emmerij, 1974, p.202). If one takes a favourable view of the potential of this sector, there are numerous suggestions which can be made to improve conditions, many of which have been taken up by such organisations as World Bank and ILO, e.g. eliminating licencing rules which discriminate against informal sector workers and issuing licences to anyone able to pay the fees; increasing research to aid technology and managerial issues of such enterprises; offering urban "extension services" to informal sector operators; reforming interest rates and credit structures to enable the small scale worker to borrow money more easily; fostering attitudes which favour an increase in labour intensive techniques, and trying to improve productivity of such methods by improved education and training of participants, better housing and improved health standards. ILO and others have suggested that links between formal and informal sector activity be strengthened e.g. by subcontracting of work to the informal sector. A consideration of such recommendationsin terms of the Sudan paints a depressing picture, Sudan being an extreme case where at present all policy measures appear to favour the state sector and no consideration has been given to improvement of informal sector enterprises. It seems that the encouragement of informal sector activity, despite its potential, runs counter to the interests of established institutions and policy makers, and hence we have a paradox - to encourage development of informal activities will necessitate persuading the "elite" of LDC's to institute changes which may affect themselves adversely.

The ILO viewpoint of a multi-layered informal sector, with each layer possessing different attributes and therefore playing divergent economic roles is useful, since it is possible to distinguish by this categorisation between productive and profitable informal activities which are existing side by side with stagnant and unproductive pursuits - a distinction which

will aid the policy makers of the future.

Summarising the potential role of the informal sector, Child (1973 (a) p.18) remarks that this sector "offers a favourable return on scarce capital, generates productive jobs at low investment per job, utilises savings not otherwise available, develops new skills at low cost to society - a combination hard to beat."

ILO objectives in informal sector studies have directed the nature and extent of fieldwork and are outlined below (WEP, 1978, p.1). It is hoped that this study fulfils the first objective and points the way towards obtaining the data for the others. Further studies of informal sector activity in Juba and the Southern Region as a whole will be needed to complete the picture:

1. To cover a large number of informal sector enterprises and collect basic data on them
2. To learn about the constraints that inhibit growth in terms of output, employment, and labour productivity as well as to identify their relative importance with a view to discovering the priorities among various policy alternatives, separately from the long and short term time horizons
3. To examine the nature and extent of forward and backward linkages that exist at present and assess the scope for strengthening and increasing these linkages through appropriate policies.
4. To find out the nature and extent of possible participation by the informal sector enterprises themselves in implementing the policies with a view to discovering the most efficient means of policy implementation.

The methods of research devised in following these general ideas are described in the following chapter.

PART THREE

THE SURVEY AND INVESTIGATION OF THE INFORMAL SECTOR

CHAPTER 4

OBJECTIVES & METHODS OF APPROACH

4.1 Objectives

Chapters 1, 2 and 3 have concentrated on the more general aspects of this study. In this chapter these varied aspects are linked more closely together and the objectives of the study and methods of approach which were used are elaborated. A discussion of major difficulties faced is also included.

The primary objective of the fieldwork undertaken was to describe and investigate informal sector activity in Juba Town. A second objective was to discover as much as possible about the social and economic background of the town, to try and explain why the informal sector is as it is and how it operates. With these two objectives in mind, an attempt has also been made to fit the study in its context by gathering what limited data exists in this subject area for the Southern Region of the Sudan and by making comparisons with the situation in the North wherever relevant and wherever possible.

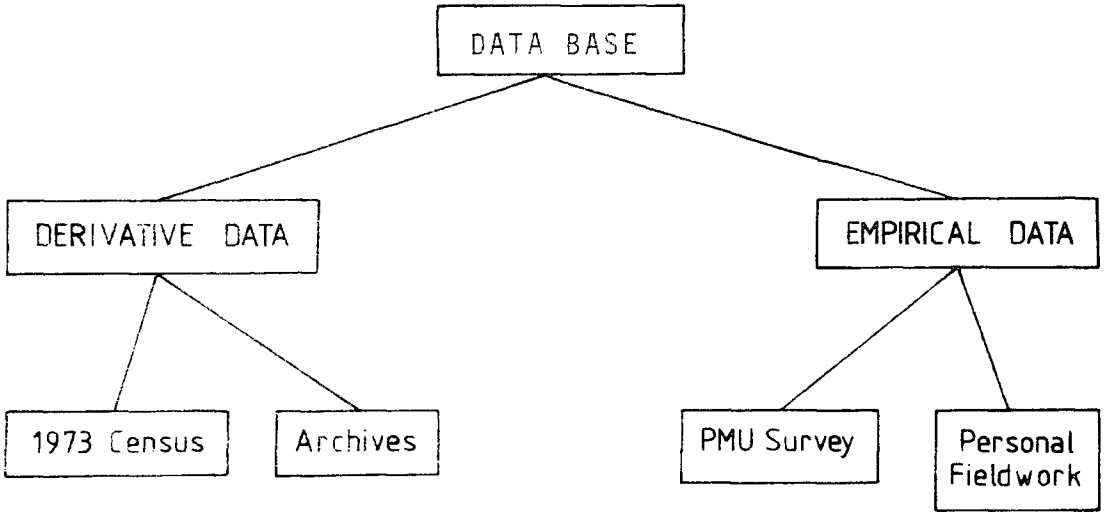
In Chapter 3, a definition of the informal sector as considered relevant to the Juba situation was described: that devised by the ILO and itemising several categories of informal sector workers. This was used as a working base during all the fieldwork.

4.2 Methods of Approach

Derivative methods

Both derivative and empirical methods of approach were made in this study of the informal sector so as to build up as comprehensive a picture as time and resources for this study would allow. A flow diagram (Fig. 4.1) indicates the methods of data gathering employed in this work. Personal

DATA GATHERING



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fieldwork and Population & Manpower Unit activities were necessarily limited to carefully selected samples within Juba over a limited time span. In order to fit the data collected by these methods into an overall framework, to illustrate how informal sector activities are related to the economic structure as a whole and to demonstrate how Juba's activities relate to those of the Region, data derived from the relatively few existing sources were also used. The collection of data from archival and other sources to complement fieldwork information proved in many ways to be difficult and frustrating. Seventeen years of civil war have resulted in the fact that archival material and other public records are scarce or non-existent and what is available is often uncatalogued and in poor condition.

The most valuable source of derivative data was the 1973 census (an earlier national census had been taken in 1955-56), from which an overall impression of economic activity in the Region and its provinces could be built. Owing to the difficulty of obtaining census materials direct (at the time of fieldwork), use was made of the work of Mills, who in 1976 had processed a sample of the original 1973 returns, due to the slowness with which information was being released by the Census Office. For the Southern Region, with the help of the Statistics Office and the Labour Department, a sample of more than 10,000 had been taken from all persons aged 15 years and above, outside of those engaged in subsistence agriculture. Details had been collected and scrutinised, and discrepancies in census codings and counting corrected in places; hence the resulting data are considered to be of reasonable reliability. From this sample, and official census tabulations, a paper (Mills, 1975) and an ILO publication (Mills, 1977) were prepared and both have been quoted in the following chapter.

The size of Mills's sample (approximately 5% of the effective labour force) allowed a more detailed examination than would have been possible from the larger scale tabulations of the census, and therefore his work

has been a valuable input to this study. The data derived from this source are presented in Chapter 5, where, using supplementary census figures, first estimates of the size and nature of the informal sector in the Region as a whole and in Juba Town are put forward.

Empirical methods : the PMU Survey

Due to a lack of data on all aspects of Juba, a large amount of empirical data had to be gathered. Data of a more general nature, relating to the social and economic conditions in the town were collected by the Population & Manpower Unit of the University of Juba. Much of this empirical data was incorporated into Chapter 2 and a full account of survey procedures appears as Appendix 2; the questionnaires themselves to be found in Appendix 4.

A few sections of the questionnaire were directly relevant to research on the informal sector, particularly the employment section of Part 2 of the survey. However, it should be noted that the PMU survey was intended as a composite general survey encompassing a broad range of questions (as data was required by several different interested bodies), hence it was not possible to build in all the questions which would have provided most information about informal sector activities as these would have been too time consuming and produced an unbalanced questionnaire. As a compromise, a series of general questions was devised to obtain an idea of the overall employment characteristics of the town. These are discussed in Chapter 6.

Although the data collected was of use, the problems associated with this method of data gathering were numerous. With the survey being based on a random sample of housing units scattered across the town and with both informal sector activity and workers concentrated in the main in a few areas of the town, fewer informal sector workers than expected

were interviewed in the PMU survey. Moreover, by interviewing people alone at home, rather than meeting them collectively at their work place, they were more unwilling to admit to their informal sector activities. This often arose from suspicion of the Government imposing taxes or because to some extent they were involved in "semi-legal" or illegal practices: for example, purchasing goods from the black market, neglecting to pay plot rents or acquiring working materials from questionable sources.

Many women failed to reveal their informal sector activity despite instructions to enumerators to explain fully to respondents the term "employment" as any activity for which a person received an income. Women in Juba, for instance, frequently brew beer and distil spirits in their homes illegally, since the production of alcohol requires a licence from the Town Council. Other activities often included unrecorded baking of bread and cakes to be sold in the market.

Another category of workers, those who came from nearby villages to sell their produce, were also excluded. One might question whether these form a part of the urban informal sector but in Juba terms it is hard to exclude them since a daily "wave" of between 3,500 and 4,000 persons converged on the town and then moved out again after a few hours, and this formed an important contribution to economic activity in the town.

One further group of potential respondents who did not get sufficient attention were the schoolchildren who earned money for their education by employment in the informal sector during their school vacations. The questionnaire unfortunately was not designed to record secondary occupations and was limited to major occupations only. Schoolboy workers were certainly important in informal sector activity in the town.

Despite these deficiencies, the PMU survey provided some useful information on general employment characteristics of the town, and this included occupational status, the rate of unemployment and major groups

of occupations. These in themselves were valuable contributions to the understanding of the informal sector in terms of the wider economic activity of Juba and its environs.

Empirical methods : personal field research

In addition to the overall picture provided by the survey, personal field research specifically on informal sector activity was carried out, largely between January 1979 and May 1980. After careful examination of the nature of informal activity in the town, it was decided to chose a field area for research which represented some of the major informal sector occupations of Juba. Konyo-Konyo market was selected, as it was the largest market in Juba, and was still growing. Well over 1,500 people came to work there each day and the working population increased by almost one quarter between March 1979 and March 1980. The market had in fact started very recently, in 1973, on what had been an open site used as a town rubbish dump. By 1976, Malakia market (less than one kilometre away) was becoming overcrowded and spreading across the road largely due to the development of blacksmithing. The Town Council then moved the blacksmiths to Konyo-Konyo, leaving Malakia as a market for groceries, fresh food and household items. From this small beginning, growth had been so rapid that by 1979 the market had extended across a main road and provided a wider range of activities than any other market in Juba.

The first step of the fieldwork investigation was the counting and mapping of people and their activities in the market. Counting was undertaken on two separate occasions, one near the beginning of fieldwork and one at the end, to monitor change in overall numbers and occupations.

Maps and data to illustrate this work are to be found in Chapter 7. In all, 26 different activity groups were identified and these ranged from blacksmiths to local medicine sellers, from beer brewers to Northern Sudanese traders.

It was decided that, given the time and resources available for field investigation, and given the nature of Konyo-Konyo market, a large questionnaire such as that devised by Sethuraman would be too complicated and unwieldly. For most of the initial work, use was made of a local enumerator (a first year student at the University of Juba) who translated questions into Bari and Juba Arabic as well as conversing in English. It was felt that simple survey methods gathering accurate data were to be preferred to attempting something outside the scope of the situation.

In order to ensure the optimum in survey design a sample of 57 interviews was taken between January and May 1979. It was felt that the data collection could be broadly divided into two parts:

(i) that to be derived from observation of surroundings and discussions with interested respondents,

(ii) that to be derived from a formal questionnaire approach.

The ideas of Richter (1978) with his key informant approach, as described in the previous chapter, were found to be of great value, and much incidental information, on manufacturing techniques for example, was also given by certain enthusiastic respondents.[1] However, care had to be taken to corroborate the statements of any one respondent by questioning others engaged in the same kind of activity. Information on the physical structure of the enterprise (buildings, services etc.) could be obtained by direct observation and informal discussion.

From these initial interviews, the main components to be included in a formal questionnaire were derived and the best logical sequence formulated. It was found that there were certain questions that the majority of respondents were willing to answer, and others about which only some

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1 Unfortunately, some of this material, whilst of great interest is outside the main objectives of this work. It is however hoped that this will be written up as a separate paper.

respondents were willing to volunteer information. For this reason, the questionnaire was designed in two parts, the first containing straightforward questions on age, sex, tribe, place of birth, place of residence, length of time in residence in Juba, literacy, languages spoken and educational level attained. The second half of the questionnaire contained more specific questions on employment aspects: how long the respondent had been doing the job, previous jobs, reasons for stopping previous jobs, father's occupation, whether the job was full time or part time, reasons for choosing a particular job, job satisfaction, occupational status (employer, employee, self-employed), rents paid in the market, estimate of income, working hours, and methods of running the enterprise. The questionnaire is to be found in Appendix 8. By leading the respondent from the simpler questions to more probing ones it was found that more information could be willingly obtained.

The 57 trial interviews were thus of prime importance in shaping the questionnaire. All information obtained in this pilot phase was recorded as case studies. Owing to the constraints of finance, only one enumerator was initially employed, but for the larger scale data gathering exercise (which covered a further 150 respondents) use was made of a class of 30 second year students under taking a course in Social Survey Techniques at the University of Juba. Their participation in the collection of data was in the form of a practical class on data gathering, and after lectures on interview aims and techniques and questionnaire design they spent one day working in Konyo-Konyo market in May 1980. In all, over the study period 207 interviews were carried out, covering 22 of the 26 categories of activity to be found in the market. (Those groups which were not questioned were in fact very small in comparison with the others). In every group at least a 10% sample of informal sector workers were interviewed (the full description of the coverage of the sample is to be found in Chapter 7).

Overall the sample consisted of 13.5% of the working population engaged in Konyo-Konyo as of May 1980.

All data compiled over the study period on individual respondents were divided into the activity groups initially outlined at the beginning of fieldwork. For each activity group a grid was designed to record each item of each individual's information. This meant that all information within each activity group was easily available and comparisons between groups could also be made. Tabulations were then drawn up from the grids by hand, and form the body of Chapter 7.

4.3 Difficulties of Research

Research under the conditions described in Juba (Chapter 2) is fraught with problems and it is worth discussing the major handicaps which had to be overcome (at least in part) and conditions which had to be accepted to obtain the material for this study. The main difficulties occurred in three areas: physical problems; cultural problems; and organisational and infrastructural problems. These are indicated below, not by way of excusing any deficits in this work, but to outline the factors which have caused the most hardship and whose overcoming has created most stimulus!

Physical problems

These are difficulties created by the environment and were a general impediment to research. Temperatures in Juba often exceed 110^{0}F each day for weeks during the dry season (November to April) and there are almost daily outbursts of torrential rain in the wet season (May to October) which turn Juba into a quagmire, and present major problems. Fieldwork in such a climate is physically exhausting, particularly travelling and interviewing for long hours in the heat; and writing is

a mental challenge in such an atmosphere. The general unhealthiness of Juba has been an added setback. During the research period there were several outbreaks of cholera (with the result that Juba was in total isolation from the rest of the world for several months), an outbreak of bubonic plague, whilst hepatitis and malaria were endemic. These basic environmental conditions, whilst not directly related to research, were a considerable and constant handicap to work of an academic nature.

A further physical problem, more directly related to research, is that of the geography of the town. As described in Chapter 2, Juba consists largely of a sprawl of 20,000 or more tukls with little infrastructure and minimal planning for the future. This hindered field research, particularly that based on the PMU Juba Town Survey, because individual sample compounds located theoretically on the 1977 map had to be located in reality by PMU members and enumerators on the ground. In the two years since map production, much urban "infilling" (i.e. construction of more tukls on plots already built upon) and illegal squatting had occurred to complicate the picture very considerably.

Cultural problems

Juba's population consists of a great mixture of tribes speaking a wide variety of languages and dialects and originating not only from Sudan but from surrounding countries, particularly Zaire, Uganda, Ethiopia and Kenya. Although the local Juba Arabic, an adaption of the colloquial Arabic of Northern Sudan, has become a kind of "lingua franca" for many town dwellers, and English is spoken by some[1], problems of communication arose. These arose particularly between enumerators and those respondents who were "commuters" to Juba from the surrounding rural areas, who came

1 Approximately 14% of the informal sector survey respondents could speak some English.

occasionally to trade, and who spoke only their tribal languages; and between enumerators and recent refugees from neighbouring countries.

Enumerators participating in the PMU survey and in the informal sector survey had to be conversant in a range of languages between them, the primary languages being Arabic (and Juba Arabic), Bari, Dinka and English, with other secondary languages also being used. Of course, the problem of mistranslation and misinterpretation of ideas from the English of the original questionnaire arose, hence the need to make questions as unambiguous and self explanatory as possible.

A barrier equally as large as language was that of suspicion. In all cases enumerators were briefed on how to explain their work and the aims of the project when challenged, and to stress that all information was confidential and that no names would be used. With the PMU survey this worked well, with only a few refusals. Informal sector investigations proved to be more difficult. As questions of wages and rents were involved, people assumed it was a government enquiry and that they would suffer for the information they gave. In many cases suspicion on the part of the informal sector respondent had a good basis since some were operating illegally without paying rent, or in the case of brewing without paying for a licence; others used materials (e.g. scrap metal) of suspicious origins and yet others obtained materials (sugar, dura, oil) illegally through black market sources. Many respondents felt that extra money would be taken from them in terms of rent and licences if they declared their true income, and with some workers there was a very strong feeling of resentment at the lack of action on the part of the Government. An illustration of this attitude was a particularly unpleasant incident with some of the blacksmiths in the market who were ex-Anyanya (Southern freedom fighters) and who deeply resented the fact that they had fought for so long to achieve "such a peace" with little prospect of job

improvement or government aid.

Contact with foreigners in some areas of the market (e.g. beer drinking booths) was minimal, and their appearance often froze the tongues of those who would otherwise have been happy to talk to Sudanese enumerators. Participation in fieldwork was attempted as far as possible but where this proved difficult or even impossible, enumerators were sent alone to ensure the gaining of the best possible results.

Organisational and infrastructural difficulties

The working agreement during the time spent in Juba included being attached to the Population & Manpower Unit of the University which, through the method of survey work over the two year research period would be able to supply much of the data required for this study. Due to the lack of basic working data on the town and the Region, as mentioned earlier in this chapter, the first need was to obtain a data base on which to build individual research (It must be stressed that in many other situations this data base would already have been available). This was covered by the PMU survey 1978-80 which, although providing useful background material, was time-consuming and in reality did not contribute sufficiently to the specific needs of research on the informal sector. It necessitated the design and execution of a totally independent investigation to collect additional and more detailed information on the informal sector. This proved a difficult task in the face of the other commitments already noted.

Data processing proved to be a further problem. With both the PMU survey and personal research each step was carefully checked. For the PMU survey Part I, 158 coding cards recorded the information, whilst for Part II there were 1706, and informal sector research covered a further 207 respondents in 22 groups. All data processing was undertaken manually from these cards. Although streamlined as much as possible,

e.g. counting, recording and checking data for small batches of cards at a time to help minimise large scale errors and long recounts, the process was obviously very long. Recommendations for the future are a punch card system, and, for some of the more complicated data correlations (at present impossible), computer time would be very useful, both resources being totally unavailable in Juba. However, despite the problems of data processing, it is worth noting that a considerable amount of data can be handled manually if circumstances dictate and it is satisfying to know that useful information can be produced without sophisticated techniques. This is particularly relevant in the Third World where resources and equipment are not always easy to obtain, and the lack of such back-up need not necessarily be a deterrent to survey and other research work.

Despite problems and setbacks, much has been achieved. In the following chapters the nature of the informal sector enterprises which have been studied and their relation to Juba and the Region overall are discussed.

CHAPTER 5

INFORMAL SECTOR ACTIVITY IN SOUTHERN SUDAN : AN OVERVIEW

Prior to a consideration of the informal sector in Juba Town, it is important to examine the picture for the Southern Region as a whole. This was undertaken for this chapter using existing data which, to a large extent, was restricted to information derived from the 1973 census.

5.1 The Informal Sector in its Regional Context : A First Estimate

The methods of deriving data from the 1973 census were described in Chapter 4. The main findings relevant to the employment situation in general, and informal sector activity in particular, are outlined below.

The population of the Southern Sudan from the 1973 census was originally given as 2.8 million. A 5% upgrading of this figure by the Statistics Office to over 2.9 million was later made to correct for underestimation[1] but Mills's work (1975, 1977) throughout refers to the 2.8 million originally quoted. However, when producing data on various sub-groups of the population where percentage figures for comparison are of more value than actual figures, the differences in the two population estimates for the Region lose some of their significance. The figures, however, should be used with caution if projections are to be made, since it would be extremely difficult to project future populations from them using natural increase. A consideration of refugees and returnees (the majority of whom were out of the country at the time of the census enumeration) would be necessary. However, as the majority of returnees and a large percentage of refugees also returned to work in subsistence agriculture, their effect on the economic situation has not been as large as might be imagined.

Of the total population in 1973, 53% (1,557,000) were in the working

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1. Other estimates were discussed in Chapter One.

age group, i.e. between 15 and 64 years of age, and of this working age group 57.5% (851,500) were recorded as economically active. This latter figure included, by definition of the census office, unemployed persons and those seeking work for the first time. Over 125,000 persons were listed as unemployed and a further 5,000 as looking for work for the first time, bringing the effective labour force total to just over 700,000 - about 25% of the population of the Region.

At 15% of the economically active (8% of the total working age group) unemployment in 1973 was very high, comparable with the chronic rates of large African cities. Table 5.1 shows a breakdown of all working age population by activity and this is also illustrated in Fig. 5.1. Female employment, according to the census figures, was far below that of male, and female unemployment virtually non-existent - an illustration of the inadequacy of census definition in relation to women's employment. On average over 83% of the women in the Region were recorded as not economically active. This figure obviously needs closer investigation when looking at the informal sector since women are expected, from fieldwork data, to play a larger part in the labour force than this figure would suggest.

The census definition of an unemployed person was "one who for most of the time during the twelve months before census day was not working but was seeking work for pay or profit". [1] This seems to be ambiguous since it does not cover the case of extremely widespread underemployment which is particularly prevalent in agricultural areas. Bearing this in mind, Table 5.2 illustrates the very general nature of the unemployment problem by age group: 74% of unemployed persons being less than 30 years old and [illegible] than 20. Equatoria had the highest unemployment rate in the 15-19 age group, an indication of the migration of young men to Juba seeking work

1 Department of Statistics, Population Census Technical Committee, Enumerators' Manual, 1973 Population Census, Government Printing Press, Khartoum, 1972.

TABLE 5-1: POPULATION AGED 15 YEARS AND ABOVE BY TYPE OF ACTIVITY 1973[1]

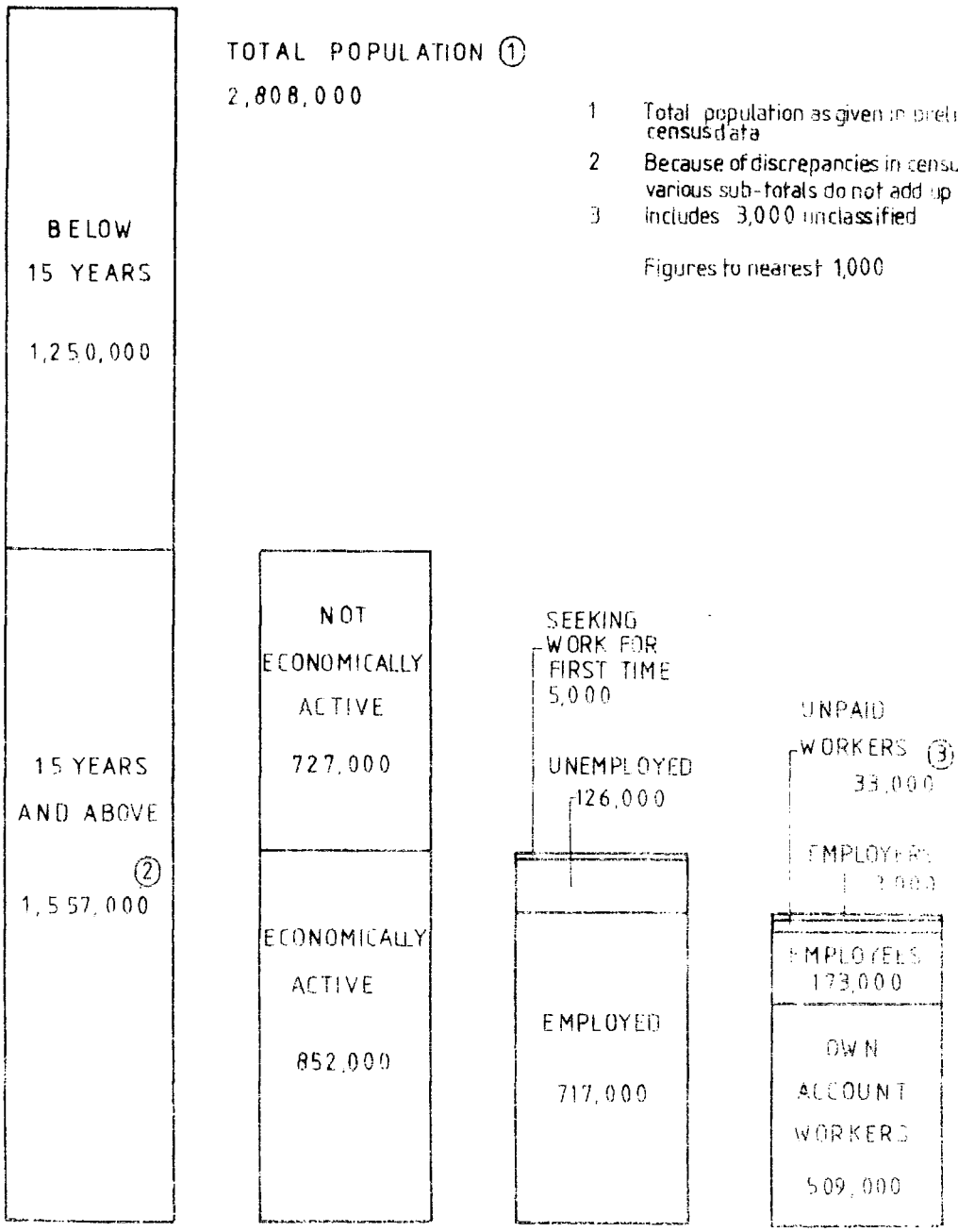
		BAHR EL GHAZAL			EQUATORIA			UPPER NILE			SOUTHERN REGION		
Population aged 15 years and above	MALES	349,998			198,472			221,391			769,851		
	FEMALES	359,222			227,560			221,864			808,639		
	TOTAL	709,210			426,032			443,255			1,578,490		
TYPE OF ACTIVITY		PERCENTAGE DISTRIBUTION BY SEX											
		M	F	T	M	F	T	M	F	T	M	F	T
Employed		74	23	48	78	9	47	77	12	45	76	16	45
Unemployed		20	1	10	9	0	4	15	0	8	16	0	8
Seeking work for first time		0	0	0	0	0	0	2	0	1	1	0	0
Not economically active		5	75	41	13	91	54	6	87	47	7	83	46
TOTAL		100	100	100	100	100	100	100	100	100	100	100	100

Percentage totals do not add up in some cases due to rounding and also to category of activity not being stated in some cases.

1. Derived from preliminary census data.

SOURCE: Mills, 1977, p.40.

POPULATION AND LABOUR FORCE



1 Total population as given in preliminary census data

2 Because of discrepancies in census data the various sub-totals do not add up exactly

3 Includes 3,000 unclassified

Figures to nearest 1,000

TABLE 5.2: UNEMPLOYED PERSONS AS A PERCENTAGE OF THE TOTAL ACTIVE POPULATION PER AGE GROUP

AGE GROUP	BAHR EL GHAZAL	EQUATORIA	UPPER NILE	SOUTHERN REGION
	%	%	%	%
15 - 19	35	43	32	36
20 - 24	24	18	23	23
25 - 29	18	8	15	15
30 - 34	12	8	11	15
35 - 39	10	4	9	8
40 - 44	9	3	11	8
45 - 49	9	4	7	7
50 - 54	12	4	10	9
55 and above	7	2	4	4
ALL AGES	18	10	15	15
Total unemployed	73,285	17,952	35,009	126,246
Total active population	420,999	194,409	236,083	851,491

"[illegible]" Mills, 1972, p.59.

Mills (1977) gives several reasons for high unemployment rates. An educational system where many are educated to at least primary level, after which education the student often regards himself as above manual work, but has not enough skills to work in many of the jobs available in the modern sector, is a major cause of unemployment. Considerable bottlenecks in the educational system occur, as was illustrated in Fig. 1.3 for academic enrolment in the Southern Sudan. Almost 130,000 students were taken in at the primary level in the academic year 1978/79, for example, whilst less than 20,000 places were available in junior secondary schools and only 5,500 in senior secondary schools for those wishing to continue their education to school certificate level. Hence, many students, whilst desiring to continue their education above primary level are handicapped by the lack of places available in the schools and are often forced to join the ranks of the unemployed.

Choice of technology is given as another reason for high unemployment, although with hardly any manufacturing or even primary industry in the South it is hard to cite this as a major cause of unemployment yet. There is certainly a danger in the future that governments will be influenced to choose the "wrong" kinds of technology i.e. capital rather than labour intensive, which will only serve to further compound the problem of a rapidly expanding labour force with nowhere to work.

Inadequate attention to agriculture seems to be one of the most plausible explanationsfor increasing unemployment, and finally sheer increase of population, producing more and more people for a potential labour force where job opportunities are not expanding to keep pace with such an increase.

The importance of examining the agricultural sector lies in the fact that the Southern Sudan shows a very different picture from many

developing countries where it is common to find much higher rates of unemployment in urban rather than rural areas. In the Southern Region however, rural unemployment (according to the 1973 figures) was higher (over 16%) than in the urban areas (less than 10% for the three centres with populations of over 20,000 people). Some of this high rural unemployment however may be explained as the result of returnees emerging at the time of the census with no job organised in the rural areas. Agriculture remains poorly developed and improvement is hampered by insufficient inputs (both of knowledge and materials), and infrastructure; hence the flow of young migrants into the towns from rural areas, many of whom are therefore potential workers for the informal sector, with its low levels of education and training.

The effect of population increase is difficult to discuss since a reliable figure for the Southern Region is hard to find. During the civil war, many people fled to neighbouring countries and an estimate of 0.34% annual growth rate of population for the Southern Provinces based on the 1973 census data reflects that situation. Work by the Department of Statistics (1976, p.7) after the census produced a revised estimate of 1.7% per annum, again fairly low by African standards where rates of 2.5% and over are commonly found. Low agricultural productivity however, as discussed above, stimulates rural-urban movement and hence urban growth rates, rather than overall population increase are probably more important in outlining the situation. For Juba, as discussed in Chapter 2, the growth rate 1973-80 was in the order of 8.0% per annum. This again points to the suggestion that workers of rural origin are potential material for the informal sector. In many developing economies rural-urban migrants would be absorbed into modern sector production at the lowest levels, but in Juba, where industrial production is virtually non-existent this

opportunity is lacking.

From the census, the breakdown of the economically active population in the Southern Region by economic sector is given below.

TABLE 5.3 Active Population by Economic Sector 1973
(% distribution)

	Total	Primary	Secondary	Tertiary	Undetermined
Bahr El Ghazal	100.0	79.6	1.0	5.7	13.6
Equatoria	100.0	66.5	4.5	20.5	8.5
Upper Nile	100.0	67.4	2.5	17.7	12.5
Southern Region	100.0	73.4	2.2	12.3	12.2

Source : Mills, 1975, p.7.

Probably the 12% "undetermined" for the Southern Region belonged in the majority to the agricultural sector, bringing the estimate of those engaged in primary activities to approximately 80%. An indication of the extremely low level of industrial production in the Region can be found by looking at the estimated size of the secondary sector. Even in Equatoria, containing the capital of the Region, only 4.5% of the economically active were to be found, and this figure was the highest for the three provinces. In fact, secondary sector figures largely represent those employed in construction work and rebuilding during the relief programme at the end of the civil war. The tertiary sector of Equatoria was again the highest of the provinces at 20.5% of the economically active, a reflection of an increasing body of civil servants, particularly in Juba since the gaining of regional autonomy. (The 1955/56 data for the size of Equatoria's secondary and tertiary sectors give 2.5% and 6.2% respectively).

Another relevant sphere is that of occupational status. Tables 5.4 and 5.5 show how the labour force can be broken down into several categories: employer, employee, own-account worker, unpaid family worker, unpaid worker for others, those seeking work for the first time, and the unemployed. As can be deduced from Table 5.5, of the economically active population 84% are men, and overall almost two thirds of the economically active group are own-account workers i.e. self employed, 20% are employees, 4% unpaid family workers and 0.4% employers. This information is also represented in Fig.5.1.

As the term "economically active" covers many involved in some kind of agriculture (with very small contributions to the monetary economy) it is useful to exclude these to obtain an idea of the structure of the so called "modern sector". Care must be taken with definition here as what Mills denotes as the modern sector includes all the economically active population outside subsistence agriculture. The same term used in much informal sector literature refers to that section of the economy involved in large scale, westernised, mechanised production and services having regular wages, well defined working hours and permanent premises with facilities such as electricity and water, in contrast to the informal sector as described in Chapter 3. Hence, in using Mills's interpretation of census data, it must be remembered that the informal sector of interest in this study will largely be inside the modern sector as he defines it.[1] Some informal sector workers, those of rural origin, will be within the subsistence agricultural sector.

According to the data extracted by Mills from the 1973 census, the modern sector involved 198,000 people, i.e. 23% of the total economically active, was almost entirely male (over 90%) and largely less than 40 years old (67% in the 20 - 40 age group). The

1 In fact, 84% of the respondents enumerated in fieldwork belong in this category.

TABLE 5.4: OCCUPATIONAL STATUS FOR PERSONS AGED 15 YEARS AND ABOVE IN THE SOUTHERN REGION 1973.

OCCUPATION STATUS	BAHR EL GHAZAL		EQUATORIA		UPPER NILE		SOUTHERN REGION	
	Number	%	Number	%	Number	%	Number	%
Employers	606	0	439	0	1,443	1	2,488	0
Own-account workers	293,779	70	101,425	52	113,546	48	508,750	60
Employees	28,924	7	73,271	38	70,642	30	172,837	20
Unpaid family workers	20,445	5	441	0	11,559	5	32,445	4
Unpaid workers,working for others	62	0	198	0	63	0	323	0
Unemployed	73,285	17	17,952	9	35,009	15	126,246	15
Seeking work for the first time	1,292	0	412	0	3,442	2	5,146	1
Occupation not stated	2,606	1	271	0	379	0	3,256	0
TOTAL ECONOMICALLY ACTIVE	420,999	100	194,409	100	236,083	100	851,491	100

Due to rounding some percentage totals do not add up exactly

0 = less than 0.5%

SOURCE. Mills, 1977, p.51.

TABLE 5.5: OCCUPATIONAL STATUS BY SEX FOR ECONOMICALLY ACTIVE PERSONS AGED 15 YEARS AND ABOVE IN THE SOUTHERN REGION 1973

OCCUPATIONAL STATUS	MALE		FEMALE		TOTAL	
	Number	%	Number	%	Number	%
Employers	2,129	0	359	0	2,488	0
Own-account workers	401,538	56	107,212	78	508,750	60
Employees	158,814	22	14,023	10	172,837	20
Unpaid family workers	22,537	3	9,908	9	32,445	4
Unpaid workers, working for others	304	0	19	0	323	0
Unemployed	122,933	17	3,313	2	126,246	15
Seeking work for the first time	4,868	1	278	0	5,146	1
Occupation not stated	1,550	0	1,706	1	3,256	0
Total economically active	714,673	100	136,818	100	851,491	100

Due to rounding percentage totals do not always add up exactly.

SOURCE: Mills, 1977, p.53.

proportion of the economically active to be found in the modern sector was highest (42%) as would be expected, in Equatoria.

Table 5.6 indicates that the relative sizes of the basic economic sectors were very different within the modern sector: primary 21%, secondary 17% and tertiary 62% as compared with 73%, 2%, and 12% respectively for the overall economy. Broken down into sub-groups it can be seen how agriculture and the civil service still occupied the bulk of the work force in the modern sector.

Table 5.7 gives an overall picture for occupational status in the modern sector: 1.3% employers, 87.4% employees and 11.4% own-account workers. Equatoria had fewer employers (0.6%) and more employees (89.3%) due to the predominance of government activities, and just over 10% engaged in self employment. The anomaly of 21% own account workers in remote Bahr el Ghazal is explained by the lack of organised large scale activity of any kind in that province.

It is from this census data that a first estimate of the size of the informal sector can be made. Although the informal sector contains employers, employees and own-account workers, almost all are expected to be in the last group. The ILO (1976, pp.375-388) in surveying the informal sector in Khartoum discovered that approximately 70% of the workers were self-employed and Mills (1977, p.85) suggests that in the predominantly rural economy of the Southern Region the percentage would probably be much higher, i.e. 90-95%.[1] Hence, to obtain an idea of the size of the informal sector, a first step was to look at the own-account workers, since few self-employed belong to the high wage sector (due to lack of sufficient capital), and the majority would likely be in informal sector activities.

Table 5.8 shows that there were almost 23,000 own-account workers

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1 This suggestion was borne out by fieldwork when less than 10% of the informal sector workers were classified as employers and employees

TABLE 5.6: ECONOMIC SUB-SECTORS OF THE MODERN SECTOR IN THE SOUTHERN REGION (PERCENTAGE DISTRIBUTION)

ECONOMIC SUB-SECTOR	BAHR EL GHAZAL	EQUATORIA	UPPER NILE	SOUTHERN REGION
Agriculture and hunting	11	18	23	17
Forestry and logging	3	5	2	3
Fishing	1	1	1	1
PRIMARY SECTOR TOTAL	15	24	26	21
Manufacturing of food, beverages and tobacco	7	1	2	3
Textiles,wearing apparel and leather industry	3	5	2	3
Manufacture of wood and wood products	1	0	0	1
Waterworks and supply	1	0	4	1
Construction	9	8	7	9
SECONDARY SECTOR TOTAL	20	14	15	17
Wholesale trade	1	1	0	0
Retail trade	13	7	8	9
Restaurants and hotels	1	4	1	2
Transport and storage	5	6	5	5
Communications	0	1	0	0
Public administration and defence	23	24	20	23
Sanitation	1	2	2	2
Social and related community services	13	12	13	12
Recreation and cultural activities	0	1	0	1
Personal and household services	8	6	8	7
TERTIARY SECTOR TOTAL	65	64	57	62
TOTAL ACTIVE POPULATION IN MODERN SECTOR	100	100	100	100

0 = Less than 0.5 per cent.
Percentages rounded to nearest whole number.

SOURCE: Mills, 1977, p.68.

TABLE 5.7: OCCUPATIONAL STATUS IN THE MODERN SECTOR OF THE SOUTHERN REGION 1973

OCCUPATIONAL STATUS	BAHR EL GHAZAL		EQUATORIA		UPPER NILE		SOUTHERN REGION	
	Number	%	Number	%	Number	%	Number	%
EMPLOYER	606	1.6	439	0.6	1,443	1.9	2,488	1.3
EMPLOYEE	28,924	77.2	73,271	89.3	70,642	90.3	172,837	87.4
OWN-ACCOUNT WORKER	7,962	21.2	8,341	10.2	6,132	7.8	22,435	11.4
TOTAL MODERN SECTOR	37,492	100.0	82,051	100.0	78,217	100.0	197,760	100.0

SOURCE: Mills, 1977, p.75.

TABLE 5.8: OCCUPATIONAL STATUS BY OCCUPATION GROUP AND SEX.

CODE	OCCUPATION GROUP	EMPLOYEES				OWN-ACCOUNT-WORKERS				EMPLOYEES				TOTAL			
		M *	F *	T *	%	M	F	T	%	M	F	T	%	M	F	T	%
1	Professional,Technical & related	27	-	27	1.1	70	-	70	0.3	11,913	1,906	13,819	8.0	12,010	1,906	13,916	7.0
2	Administrative & Professional	6	-	6	0.2	6	-	6	0.0	919	27	946	0.6	931	27	958	0.5
3	Clerical & related	-	-	-	-	6	-	6	0.0	9,592	360	9,952	5.8	9,598	360	9,958	5.0
4	Sales workers	1,329	-	1,329	53.4	9,337	292	9,629	42.9	3,064	141	3,205	1.9	13,730	433	14,163	7.2
5	Service workers	235	223	458	18.4	683	614	1,297	5.8	40,122	4,401	44,523	25.8	41,040	5,238	46,278	23.4
6	Agricultural,Animal Husbandry,Forestry Fishing & Hunting	171	27	198	8.0	2,094	172	2,266	10.1	32,250	4,788	37,038	21.4	34,515	4,987	39,502	20.0
7/8/9	Production,Transport & Labourers	361	109	470	18.9	7,686	1,475	9,161	40.8	54,740	2,290	57,030	33.0	62,787	3,874	66,661	33.7
	Unclassified	-	-	-	-	-	-	-	-	6,214	110	6,324	3.7	6,214	110	6,324	3.2
	TOTAL	2,129	359	2,488	100.0	19,882	2,553	22,435	100.0	158,814	14,023	172,837	100.0	180,825	16,395	197,760	100.0

* M: Males F: Females T: Total

SOURCE: Mills, 1977, p.76.

in the Region in 1973, and of these nearly 90% were male and 75% less than 40 years old. This group was specialised in certain activities as can be seen from the table. The sales work group and the category including production, transport and labourers occupied over 40% each, although for the modern sector as a whole the figures were 8% and 34% respectively. With further sub-division of the census sample results, a listing of the major occupations of the own-account workers may be obtained, as in Table 5.9. The largest proportion of males were involved in trade as working proprietors (37% of males), and tailors (15%). Amongst the women over 50% were engaged in brewing, and 23% in "other" service work, defined as being a residual group but almost all undertaking personal services not classified in the ISCO [1] code list. From this, a high percentage of prostitution amongst female own-account workers may be deduced. Over 70% of the self employed were therefore found to be in a few major occupations: retail trade, manufacturing of textiles and clothes, and manufacturing of food and beverages.

Using Appendix E [2] of Mills's work (1977) which gives a thorough breakdown of occupation by 3-digit ISCO code and occupational status, an estimate of informal sector activity can be made for the Region. By counting those own-account workers who from fieldwork and experience were observed to be occupied in predominantly informal sector activities a figure of just over 22,000 workers is obtained. Bearing in mind that this figure represents approximately 90% of the informal sector workforce (Mills, 1977, p.85), the remainder being made up of employers and employees, a figure of almost 25,000 workers can be estimated for the size of the informal sector in the Southern Region. This is 13% of the modern sector labour force (against it must be stressed that the term "modern sector"

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1 ILO., International Standard Classification of Occupations, Geneva, 1975.

2 See Appendix 9.

TABLE 5.9: THE MAJOR OCCUPATIONS OF OWN-ACCOUNT WORKERS IN THE MODERN SECTOR OF THE REGION

OCCUPATIONAL STATUS	MALES				FEMALES			
	CODE	OCCUPATION	NUMBER	%	CODE	OCCUPATION	NUMBER	%
OWN-ACCOUNT WORKERS	410	Working proprietors (trade)	7,367	37.1	778	Brewers	1,336	52.3
	791	Tailors	3,066	15.4	599	'Other' service workers[1]	589	23.1
	641	Fishermen	1,332	6.7	611	General farmers	157	6.1
	954	Carpenters	852	4.3	452	Street vendors	109	4.3
	452	Street vendors	842	4.2	410	Working proprietors (trade)	91	3.6
	773	Butchers	833	4.2	749	Charcoal burners	60	2.4
	749	Charcoal burners	761	3.8	791	Tailors/dressmakers	42	1.7
	985	Motor vehicle drivers	398	2.0	641	Fishing	15	0.6
	611	General farmers	338	1.7	570	Hairdressers	7	0.3
	451	Salesmen	256	1.3	510	Working proprietors (catering)	6	0.3
		Other occupations	3,837	19.2		Other occupations	141	5.5
		TOTAL	19,882	100.0		TOTAL	2,553	100.0

1. A residual group but almost all undertaking personal services not classified in the I.S.C.O. list.

SOURCE: Mills, 1977, p.78.

as used by Mills implies a broader coverage than that used by some informal sector writers and includes all workers employed in the economy outside of subsistence agriculture).

Estimating the size of the informal sector from census data has some limitations since rural-based workers who are classified as subsistence agriculturalists also contribute to the informal sector. Subsistence farmers and their families occasionally bring produce and manufactured goods to the population centres (clay pots, grass mats, fruit and vegetables) to earn money for basic commodities such as salt, cloth and cooking pots which they cannot obtain except by entering the money economy. It would be difficult to estimate the size of this group over the Region as a whole without more detailed base data. In the Konyo-Konyo fieldwork area about 16% of the informal sector workers fell in this category, but Juba markets, as in other major centres, would tend to encourage a larger group of these activities than the rural areas. The figure of 13% of the modern sector workforce estimated as informal sector workers (i.e. 3% of the entire economically active population) is therefore enlarged slightly by the addition of some workers in this rural-based category.

5.2 A Tentative Estimate of Juba's Informal Sector

A further first estimate, that of the size of Juba's informal sector is possible from data quoted by Mills (1975, Appendix A) for occupations of the economically active population in Juba Town. The occupations predominantly involving informal sector workers (knowledge again gained from field experience) were extracted and numbers of workers summed to produce an estimate of informal sector size as approximately 21% of the modern sector labour force. (In 1973 this involved 3,600 workers). The major occupations encountered are to be found in Table 5.10, whilst the

data base used for this calculation is included in Appendix 9(b). This is a minimum estimate since some workers in other categories and some from the "unclassified" category would also be in this sector and an estimate of 25% of the modern sector workforce is probably nearer the size of the informal sector. As the breakdown of data for Juba is not as detailed as that for the Region as a whole, a more accurate estimate cannot be made from this material. Also the estimation of the size of the informal sector in Juba suffers from the same limitation as the estimate for the Region : the rural-based workers who also contribute to informal activity are not all included. Again it is difficult to estimate the size of this group. Fieldwork in the sample market suggested that of all the informal sector workers to be found in the market, approximately 16% fell into the category of rural "commuters" from surrounding areas who came to town to sell their goods. Their effect on the size of the town's informal sector is expected to be less than this overall, since the markets of Juba form a collecting point for such activity. Hence, as with the Region's estimate, it can be said that the estimate of the size of the informal sector from the census is expected to be enlarged by the addition of some workers in this rural based category.

The larger relative size of the informal sector in Juba as compared to the rest of the Region is to be expected since Juba, as the capital, is the largest potential market for production and service activities. Again the largest single group was the 17.3% engaged in trade as working proprietors, closely followed by "other" service workers (14.7%), food and beverage processors (12.6%) and tailors and dressmakers (11.8%). Table 5.11 illustrates the breakdown of activity for Juba in comparison to the Region as a whole. As expected, the higher percentage of service workers in Juba (27.5% as compared with 5.6% over the Region) due to it being the Regional capital reduced the percentage involved in sales and

TABLE 5.10 An estimate of Informal Sector Activity in Juba from 1973 Census data

	No.	%
Sales Workers		
Managers (wholesale & retail trade)	19	0.5
Working proprietors "	620	17.3
Salesmen & shop assistants	279	7.8
Others	167	4.7
	1085	30.3
Service Workers		
Managers (catering & lodging)	56	1.6
Working proprietors "	37	1.0
Cooks, waiters & bar tenders	304	8.5
Launderers	43	1.2
Hairdressers, barbers	19	0.5
Other service workers	527	14.7
	986	27.5
Agriculture, Animal Husbandry, Forestry, Fishing & Hunting Workers		
Farmers	43	1.2
Fishermen, hunters & related	205	5.7
	248	6.9
Production & Related Workers		
Food & beverage processors	453	12.6
Tobacco Preparers, Tobacco produce makers	12	0.3
Tailors & Dressmakers	422	11.8
Shoemakers & Leatherworkers	12	0.3
Cabinet makers & related woodworkers	267	7.4
Blacksmiths & toolmakers	93	2.6
Potters	6	0.2
	1265	35.2
GRAND TOTAL	3584	100.0

SOURCE : Mills, 1975, Appendix A.

TABLE 5.11 Informal Sector Activity : Comparison between Juba and the Region 1973

	Juba	Region
Sales Workers	30.3	43.2
Service Workers	27.5	5.6
Agricultural workers, animal husbandry & forestry workers, fishermen & hunters	6.9	10.1
Production & related workers	35.2	41.1
	100.0	100.0

production slightly; and the percentage involved in agricultural activities was less than for the Region - 6.9% as compared to 10.1% overall.

In summary, from the 1973 census data, much can be indirectly deduced about the nature of the informal sector. Predominantly male, this sector occupied a young work force in the main in a few major occupations. Of the estimated 25,000 informal sector workers in the Region (13% of the modern sector workforce), almost 90% were male and 75% less than forty years old. Saleswork and production, transport and labouring categories occupied a large group of workers, the largest proportion of males being involved in trade as working proprietors (37% of males) and tailors (15.4%) whilst among the women over 50% were engaged in brewing of local beer. Juba was seen to have a larger percentage of workers engaged in informal sector activities, almost 25% of the modern sector labour force, with an additional small group of informal sector workers being rural based "commuters" from surrounding areas who came to Juba regularly to sell their produce and were therefore considered to be part of the urban economy. A detailed analysis of the Juba case is given in the following two chapters.

CHAPTER 6

THE INFORMAL SECTOR IN JUBA

As described in Chapter 4, the field research on informal sector activity in Juba falls broadly into two categories: the PMU survey, and personal research. From the PMU results some idea of the nature of informal sector activity and its relation to the employment situation in the town as a whole was derived. It must be stressed throughout however that this was a small first sample and results are only indications of general trends. The relevant PMU data are discussed below in the same format as the census material considered in Chapter 5 so that more specific comparisons can be made between Juba and the Region as a whole. The results of personal field research, the Konyo-Konyo market survey, with a larger sample of the informal sector population, are discussed in the next chapter. The general trends discovered in the PMU data are also explored in more detail in that chapter.

6.1 Employment characteristics of Juba

At the time of the PMU survey (1979) the population of Juba was estimated at 84,000. Of this population, the PMU sample consisted of 158 compounds containing 1706 people i.e. a 2% sample. Of the people enumerated 76% (1301) were aged twelve years and above and approximately 65% were in the working age group, as defined by the census office, of 15 to 64 years. The PMU survey distinguished between the population above and below 12 years of age as against 15 years in the 1973 census. The reason for this was that in the Juba situation a good number of children below 15 years were found to be employed. This should be borne in mind when material derived from PMU data is compared with the 1973 census.

Of those people of twelve years and above, 33% were found to be employed, 30% unemployed and 37% still receiving schooling. It must be

remembered that the timing of the PMU survey probably had an inflationary effect on the numbers recorded as attending school. Secondary schools in the Region were on holiday at the time of the survey and this would have boosted the number of school-aged children in Juba at the time. Also, a large number of junior and senior secondary pupils would be in town either looking for work or waiting for their examination results issued through the Regional Ministry of Education. Because of the bottlenecks in the education system previously described, a high percentage of both primary and junior secondary school leavers would classify themselves as still attending school when in fact they were waiting (often fruitlessly) for acceptance to the next stage of the educational ladder. Hence, the percentage for those attending school was undoubtedly overestimated, and some of these people should have been classified as unemployed or seeking work for the first time.

Of the employed almost 90% were male, whilst female activity was very low at 10% of the active workforce. The complete breakdown is given in Table 6.1 below. As the economically active population was defined by the census to include unemployed persons, the figure for the economically active population of Juba was therefore around 65-70% of the working age group. This compares favourably with the 58% given by the census for the Region overall, bearing in mind the difference in definition of this age group between the census and the PMU survey. The effective labour force of Juba was approximately 25% of the total population, i.e. 21,000 people, again, comparable with the 1973 census figures for the Region.

Unemployment, at over 30% of those of twelve years and above, was very high, but a large discrepancy between male and female unemployment was found. Male unemployment at 12.8% of the male workforce was on a similar scale to the Regional figures, but the PMU survey indicated a very

TABLE 6.1 : PMU Sample Population : Percentage of respondents of 12 years and above employed, unemployed and attending school

	Male		Female		Total	
	No.	%	No.	%	No.	%
Employed	375	48.1	54	10.3	429	30.3
Unemployed	100	12.8	294	56.3	394	33.0
Attending school	304	39.0	174	33.3	478	36.7
TOTAL	779	100.0	522	100.0	1301	100.0

SOURCE : PMU Survey 1979, Part 2

high level of female unemployment, at over 55%, largely due to the problems of definition previously outlined. Of the unemployed over 80% were less than 30 years old and over 50% less than 20, even higher rates than for those of the Region. This indicates something of the nature of the employment problem in Juba, with a high percentage of the population in the younger age groups competing for jobs and education, both of which are inadequate in number to keep pace with the population increase.

From PMU data, a breakdown of the employed by economic sector is possible and is illustrated in Table 6.2. Very little primary activity is to be found in Juba Town as would be expected and the largest group of workers (almost 70%) was engaged in tertiary activity - for the most part in the civil service. Secondary activity was also high at 27% of workers, a reflection of Juba being the main centre in the Southern Region for the manufacturing of articles, largely in the informal sector. A comparison with Equatoria Province and the Southern Region indicates the very different

nature of the Juba employment composition, and this is to be found in Table 6.3 below.

TABLE 6.2 : PMU Sample Population : Percentage distribution of Employed Employed Persons by Economic Sector

	Male		Female		Total	
	No.	%	No.	%	No.	%
Primary	16	4.3	0	-	16	3.7
Secondary	108	28.8	6	11.0	114	26.6
Tertiary	251	66.9	48	88.9	299	69.7
TOTAL	375	100.0	54	100.0	429	100.0

SOURCE : PMU Survey 1979, Part 2

TABLE 6.3 : A comparison of data showing the distribution of working population by economic sector for Juba (1979), Equatoria Province (1973) and Southern Region (1973)

	Economic Sector (%)				
Area	Total	Primary	Secondary	Tertiary	Undetermined
Juba [1]	100.0	3.7	26.6	69.7	-
Equatoria Province [2]	100.0	66.5	4.5	20.5	8.5
Southern Region [2]	100.0	73.4	2.2	12.3	12.2

SOURCES : 1 PMU Survey 1979, Part 2

2 1973 Census

Analysis of occupational status also reveals some interesting results. Worker distribution by occupational status varies from that of the Region overall. In Juba there were more employers (4.5% as compared with less than 1% of the workforce of the Region) and also more employees (84% as compared with 20% overall). This is again explained by Juba being the centre of much of the Region's paid employment and hence modern sector activity. Own account workers, from the PMU results, formed almost 12% of the working population. If, as Mills and fieldwork indicate, these own account workers account for some 90% of the informal sector population, then PMU results would suggest an overall informal sector comprising at least 13-15% of the total workforce. Figures from Mills and the 1973 census data would suggest an informal sector accounting for over 20% and perhaps nearer 25% of the labour force, and these figures probably come nearer to the true situation in Juba. There are various reasons to explain that the PMU survey underestimated the size of the informal sector by virtue of the size of its sample and the distinct clustering of informal sector workers and activity in various parts of the town. On the other hand, fieldwork showed that inaccuracies would arise from the confusion over the term 'unemployed'. A number of respondents classified themselves as unemployed while being engaged in informal sector activity, if only part-time. Others preferred not to give any details of how they earned money and classified themselves as 'not working'.

6.2. Informal Sector Workers

As 90% of the informal sector workforce is estimated to be composed of own-account workers, an investigation of the characteristics of the own-account group is useful to an analysis of the informal sector overall. Table 6.4 shows the breakdown by occupation of these workers. As was found with the 1973 census data, certain occupations were most prevalent : retailing

TABLE 6.4 : PMU Sample Population : Own-Account Workers' Activities

Activity	Male		Female		Total	
	No.	%	No.	%	No.	%
Retail trade	14	37.8	-	-	14	26.4
Beer and spirit production and selling	-	-	14	87.5	14	26.4
Butchering	7	18.9	-	-	7	13.2
Cattle keeping	4	10.8	-	-	4	7.6
Sale of animals	3	8.1			3	5.7
Tailoring	2	5.4	-	-	2	3.8
Prostitution	-	-	2	12.5	2	3.8
Barbering	1	2.7	-	-	1	1.9
Cobblering	1	2.7	-	-	1	1.9
Catering	1	2.7	-	-	1	1.9
Fishing	1	2.7	-	-	1	1.9
Petty trading	1	2.7	-	-	1	1.9
Photography	1	2.7	-	-	1	1.9
Activity not stated	1	2.7	-	-	1	1.9
TOTAL	37	100.0	16	100.0	53	100.0

SOURCE : PMU Survey 1979, Part 2

(27%), beerbrewing (27%) and butchery (13%) being the largest groups. It is felt that some occupations e.g. production of foodstuffs, were underestimated because they are predominantly female activities which are often not reported. It is hoped that some of these shortcomings are remedied in the Konyo-Konyo survey. Obviously the sample size was too small with the PMU survey (in the

case of own-account workers) to place too great an emphasis on the numerical values of the data but they do show general trends comparable to those of the 1973 census material.

The occupation of fathers of own-account workers was noted to see if own-account work was an inherited activity. The results are presented in Table 6.5. Own-account workers appear to be largely first generation, with little influence from parents. This could be expected since, as described in Chapter 2, the growth of Juba has occurred largely in very recent times and particularly since the end of the civil war in 1972. The largest group of fathers was involved in agriculture and cattle keeping, indicating the rural origins of a large proportion of Juba's own-account workers. This rural background is not only a feature of the informal sector: of the total population (above 12 years) in the PMU survey only one third of the fathers of respondents were in paid employment, the majority being subsistence farmers. The breakdown is shown in Table 6.6. This is further confirmed by recording place of birth of workers, as in Table 6.7. Only one third of the respondents were born in Eastern Equatoria Province, and others had travelled considerable distances to come and work in Juba. An interesting point is that males were clearly demonstrated to be more mobile than females: only 14% of males had been born in Eastern Equatoria, compared with 81% of the women. The largest single migration from outside Eastern Equatoria was that of men from Bor, the nearest sizeable settlement to Juba, almost 200 km to the north and little more than a village with most of the inhabitants still engaged in subsistence activities. The attraction of Juba to young Bor inhabitants is obvious with the town being easily reached by river and being only hours away on a recently completed road.

A tabulation of the age distribution of own account workers was carried out (Table 6.8.).The majority, more than 80%, were less than 40 years old,

TABLE 6.5 : PMU Sample Population : Occupations of Fathers of own-account workers

	Male		Female		Total	
	No.	%	No.	%	No.	%
Peasant Farmer	12	32.4	11	68.8	23	43.4
Cattle rearer & seller	15	40.5	0	-	15	28.3
Trader	6	16.2	0	-	6	11.3
Butcher	2	5.4	0	-	2	3.8
Soldier	1	2.7	1	6.3	2	3.8
Policeman	0	-	2	12.5	2	3.8
Medical Assistant	1	2.7	1	6.3	2	3.8
Forestry worker	0	-	1	6.3	1	1.9
TOTAL	37	100.0	16	100.0	53	100.0

SOURCE : PMU Survey 1979, Part 2

TABLE 6.6 : PMU Sample Population : Father in Paid Employment (For respondents of twelve years of age and above)

Employment Status	Male		Female		Total	
	No.	%	No.	%	No.	%
Father in paid employment	275	35.3	186	35.6	461	35.4
Father not in paid employment	504	64.7	336	64.4	840	64.6
TOTAL	779	100.0	522	100.0	1301	100.0

SOURCE : PMU Survey 1979, Part 2

TABLE 6.7 : PMU Sample Population : Place of Birth of Own-Account Workers by Province

Province	Male		Female		Total	
	No.	%	No.	%	No.	%
Eastern Equatoria	5	13.5	13	81.3	18	34.0
Jonglei	8	21.6	0	-	8	15.1
Lakes	7	18.9	0	-	7	13.2
Upper Nile	5	13.5	0	-	5	9.4
Bahr el Ghazal	2	5.4	1	6.3	3	5.7
Western Equatoria	2	5.4	1	6.3	3	5.7
Khartoum	2	5.4	0	-	2	3.8
White Nile	1	2.7	0	-	1	1.9
Blue Nile	1	2.7	0	-	1	1.9
Northern	1	2.7	0	-	1	1.9
Kordofan	1	2.7	0	-	1	1.9
Zaire	1	2.7	0	-	1	1.9
Uganda	0	-	1	6.3	1	1.9
Tanzania	1	2.7	0	-	1	1.9
TOTAL	37	100.0	16	100.0	53	100.0

SOURCE : PMU Survey 1979, Part 2

TABLE 6.8 : PMU Sample Population : Own-Account Workers Age Distribution

Age Group	Male		Female		Total	
	No.	%	No.	%	No.	%
10-14	1	2.7	0	-	1	1.9
15-19	1	2.7	2	12.5	3	5.7
20-24	1	2.7	2	12.5	3	5.7
25-29	11	29.7	5	31.3	16	30.2
30-34	8	21.6	3	18.8	11	20.8
35-39	9	24.3	1	6.3	10	18.9
40-44	2	5.4	1	6.3	3	5.7
45-49	1	2.7	2	12.5	3	5.7
50-54	1	2.7	0	-	1	1.9
55-59	1	2.7	0	-	1	1.9
60+	1	2.7	0	-	1	1.9
TOTAL	37	100.0	16	100.0	53	100.0

SOURCE : PMU Survey 1979, Part 2

with the bulk falling in the 25-40 age group for men and 25-35 age group for women. Again these results were comparable with the 1973 census figures. It was thought that those in the younger age groups were probably underestimated as the children who attend school would list education as their main occupation, whilst carrying out jobs in the informal sector in their free time and vacations - jobs which would not have been included in their responses to the questionnaire. Again this has been more closely

looked at in the Konyo-Konyo field survey.

Table 6.9 shows the level of schooling attained by the own-account workers. Almost two thirds had never attended school and the percentages for males and females differed only slightly. Again, those who were attending school were probably underestimated by the PMU survey. Only a small percentage had therefore received any formal education, and the levels attained are shown in the table.

A facet of the employment situation not considered by the 1973 census was that of training. This was investigated in the PMU survey, but it was found that of the total working population very few workers had undergone any form of training. The most important groups of training are given in Table 6.10 and of these nearly all were geared to the modern sector as opposed to help for the self-employed, an additional handicap to the development of informal sector activity.

Some comparison of the status of own-account workers with respect to other workers i.e. employers and employees, can be made from the tabulations. Looking at incomes each month various trends can be seen (Table 6.11). As expected, a large percentage of own-account workers and employers declined to answer the question of income, whilst employees were more willing, since they were normally, and particularly those in government service, on a set salary scale for specific jobs and incomes were common knowledge. Of the own-account workers who answered, 49% were earning less than LS 100 per month, with 30% earning less than LS 50. Of those who declined to answer, many, from field observation, would probably be in these two categories. Of employees, 87% were also on salaries of less than LS 100 and several own-account workers commented that the advantages of being self-employed became apparent in such a situation, where one could earn comparable wages to civil servants in the lower grades and also be one's own boss. At the higher end of the income scale, there was a larger precentage of own-account workers than

employees earning high incomes; 11% of own-account workers were earning over LS 200 per month as compared with 3% of employees. Employers were obviously higher up the earnings ladder with only 28.5% earning less than LS 100 per month and over 28% earning more than LS 200. However, these figures should be viewed with some caution since a bias towards inflating one's income would probably be greater in the self-employed and employer categories than with employees.

TABLE 6.9 : PMU Sample Population : Level of Schooling Attained by Own-Account Workers

Level of Schooling	Male		Female		Total	
	No.	%	No.	%	No.	%
Never attended school	23	62.2	11	68.8	34	64.0
Currently in primary	2	5.4	1	6.3	3	5.7
Currently in jun. secondary	0	-	0	-	0	-
Currently in sen. secondary	1	2.7	0	-	1	1.9
Left at primary level	6	16.2	2	12.5	8	15.1
Left at jun.sec. level	2	5.4	1	6.3	3	5.7
Left at sen.sec. level	1	2.7	1	6.3	2	3.8
Left at post sen.sec. level	1	2.7	0	-	1	1.9
Left at University level	1	2.7	0	-	1	1.9
	37	100.0	16	100.0	53	100.0

SOURCE : PMU Survey 1979, Part 2

TABLE 6.10 : PMU Sample Population : Training of those of 12 years old and above

	No.	%
No training	1047	80.5
Military training	46	3.5
Driving instruction	29	2.2
Police training	27	2.1
Mechanical training	14	1.1
Book-keeping training	10	0.8
Clerical training	10	0.8
Carpentry training	11	0.8
Nursing training	11	0.8
No response to question	96	7.4
	1301	100.0

SOURCE : PMU Survey 1979, Part 2

TABLE 6.11 : PMU Sample Population : Income Per Month

LS per month	own-account workers		employees		employers		TOTAL	
	No.	%	No.	%	No.	%	No.	%
0 - 50	16	30.2	255	65.7	2	9.5	273	59.1
51 - 100	10	18.9	82	21.1	4	19.0	96	20.8
101 - 150	3	5.7	17	4.4	1	4.8	21	4.5
151 - 200	3	5.7	8	2.1	1	4.8	12	2.6
200 +	6	11.3	11	2.8	6	28.6	23	5.0
No response	15	28.3	15	5.9	7	33.3	37	8.0
TOTAL	53	100.0	388	100.0	21	100.0	462	100.0

SOURCE : PMU Survey 1979, Part 2

Turning to working hours, Table 6.12 illustrates the situation. It was found that an insufficient number of own-account workers had responded to the question to draw any significant conclusions, but almost two-thirds of employees worked between 40 and 50 hours per week, a figure to be borne in mind for comparison with Konyo-Konyo data.

6.3 Unemployment

Unemployment, at 33% of the population of twelve years and above, was much higher than the 1973 census data. This is largely due to the fact that the PMU survey ran into similar problems as the census over the definition of 'unemployed'. Of the 33%, just over one-third were actually housewives, bringing the unemployment figure down to approximately 20% of the working age population. This would probably also include some underemployed people in addition to those in open unemployment. Several major reasons for unemployment were given and these are to be found in Table 6.13. For both male and female (41% overall) sizeable percentages were not interested in working and had never looked for a job, presumably as the extended family system is capable of absorbing those who cannot or will not look after themselves. Almost 16% of males and 21% of females gave lack of qualifications or education as their main reason for unemployment. The paradox of vacant jobs in many government offices whilst many are out of work has already been mentioned and this is a reflection of the inadequacy of the education system to cope with the needs of the population and produce suitable qualified candidates.

Some of the reasons for employment problems were discovered when enquiring about activities which respondents had previously undertaken but had been compelled to stop. These are listed in Table 6.14. The primary handicap had been shortage of commodities, followed closely by problems with the health authorities (many food and beverage producers had been

put out of business during recurrent cholera epidemics). A number had given up employment to continue with their studies whilst others had found that their past activities did not bring in enough money. The two major problems, commodities and health regulations, were seen to seriously affect informal sector activities.

TABLE 6.12 : PMU Sample Population : Hours worked per week

No.of hours worked	own-account workers		Employees		TOTAL	
	No.	%	No.	%	No.	%
0 - 9	1	1.9	31	8.0	32	7.3
10 - 19	2	3.8	1	0.3	3	0.7
20 - 29	1	1.9	5	1.3	6	1.4
30 - 39	1	1.9	28	7.2	29	6.6
40 - 49	3	5.7	250	64.4	253	57.4
50 - 59	1	1.9	20	5.2	21	4.8
60 - 69	1	1.9	12	3.1	13	2.9
70 - 79	3	5.7	23	5.9	26	5.9
80 - 89	3	5.7	17	4.4	20	4.5
90 - 99	0	-	0	-	0	-
100 and above	0	-	0	-	0	-
not definite	1	1.9	0	-	1	0.2
no reply	36	67.9	0	-	36	8.2
TOTAL	53	100.0	388		441	100.0

SOURCE : PMU Survey 1979, Part 2

TABLE 6.13 : PMU Sample Population : Reasons for Unemployment

	Male		Female		TOTAL	
	No.	%	No.	%	No.	%
Not interested/ never sought a job	31	31.0	76	47.2	107	41.0
Lack of qualific-ations/education	16	16.0	34	21.1	50	19.2
Too old	12	12.0	15	9.3	27	10.3
Too young	7	7.0	15	9.3	22	8.4
Legal problems	10	10.0	12	7.5	22	8.4
Refugee	5	5.0	0	-	5	1.9
Other	19	19.0	9	5.6	28	10.7
	100	100.0	161	100.0	261	100.0

SOURCE : PMU Survey 1979, Part 2

TABLE 6.14 : PMU Sample Population : Reasons for Termination of Activities no longer carried out

Reasons	Male		Female		TOTAL	
	No.	%	No.	%	No.	%
Lack of commodities	2	3.8	27	43.5	29	25.2
Stopped by health authorities	2	3.8	19	30.6	21	18.3
Continued with studies	11	20.8	2	3.2	13	11.3
Too little pay	8	15.1	1	1.6	9	7.8
War/refugee	5	9.4	2	3.2	7	6.1
Old age	5	9.4	2	3.2	7	6.1
Natural hazards	6	11.3	1	1.6	7	6.1
End of contract	7	13.2	-	-	7	6.1
Sickness	2	3.8	4	6.5	6	5.2
Marriage	2	3.8	2	3.2	4	3.5
Political disputes	3	5.7	-	-	3	2.6
Imprisoned	-	-	2	3.2	2	1.7
TOTAL	53	100.0	62	100.0	115	100.0

SOURCE : PMU Survey 1979, Part 2

Methods of finding employment did not seem to be efficient. Only 16% of those looking for jobs were registered at the labour office, whilst one third were visiting potential employers and 30% were writing job applications. Again major difficulties were identified and are listed in Table 6.15. When questioned about the kind of job they required, over 60% stated that they would consider any job, whilst other desirable jobs were found to be in the formal sector only i.e. clerk, book-keeper, messenger, driver etc. Of the 60% mentioned above it is probable that most would have preferred jobs in the formal sector since informal sector work usually requires some small starting capital and a degree of initiative, and involves a certain risk factor. Table 6.16 provides further details. Table 6.17 illustrates the minimum monthly acceptable wages that unemployed persons would have considered working for. The wages seem surprisingly low when compared with the wage rates discussed earlier, 64% of respondents being willing to work for under LS 20 per month. The informal sector could therefore be an attractive proposition for a worker with initiative, but many potential candidates were discouraged by lack of interest and support by the authorities, and sometimes even outright hostility.

In summary, the small sample of own-account workers from the PMU survey produced some interesting results and several general themes may be picked out. These are explored in the following chapter on the Konyo-Konyo market informal sector survey.

TABLE 6.15 : PMU Sample Population : Respondents looking for Employment but facing difficulties

Difficulties	Male		Female		TOTAL	
	No.	%	No.	%	No.	%
Lack of correct documents	16	18.0	6	10.3	22	15.0
Insufficient experience or qualifications	9	10.1	3	5.2	12	8.2
Transport	5	5.6	3	5.2	8	5.4
Tribal discrimination	5	5.6	-	-	5	3.4
Delays in appointment	4	4.5	-	-	4	2.7
Language	2	2.2	1	1.7	3	2.0
No difficulties	48	53.9	45	77.6	93	63.3
TOTAL	89	100.0	58	100.0	147	100.0

SOURCE : PMU Survey 1979, Part 2

TABLE 6.16 : PMU Sample Population : Kind of job required by those looking for employment

Job Required	Male		Female		TOTAL	
	No.	%	No.	%	No.	%
Any suitable job	46	51.7	43	74.1	89	60.5
Clerk/book-keeper	12	13.5	3	5.2	15	10.2
Messenger	1	1.1	9	15.5	10	6.8
Driver	7	7.9	-	-	7	4.8
Mechanic	4	4.5	-	-	4	2.7
Teacher	3	3.4	1	1.7	4	2.7
Watchman	3	3.4	-	-	3	2.0
Carpenter	3	3.4	-	-	3	2.0
Wireless Operator	3	3.4	-	-	3	2.0
Assistant Driver	2	2.2	-	-	2	1.4
Plumber	1	1.1	-	-	1	0.7
Trader	1	1.1	-	-	1	0.7
Weights & measures Officer	1	1.1	-	-	1	0.7
Administrative Officer	1	1.1	-	-	1	0.7
Accountant	1	1.1	-	-	1	0.7
Food Seller	-	-	1	1.7	1	0.7
Nurse	-	-	1	1.7	1	0.7
	89	100.0	58	100.0	147	100.0

SOURCE : PMU Survey 1979, Part 2

TABLE 6.17 : PMU Sample Population : Minimum Monthly Acceptable Wage for those looking for employment

Monthly Wage	Male		Female		TOTAL	
	No.	%	No.	%	No.	%
LS 15 - 19	51	54.8	49	77.8	100	64.1
20 - 24	4	4.3	2	3.1	6	3.9
25 - 29	4	4.3	6	9.5	10	6.4
30 - 34	6	6.5	4	6.4	10	6.4
35 - 39	3	3.2	1	1.6	4	2.6
40 - 44	4	4.3	-	-	4	2.6
45 - 49	6	6.5	1	1.6	7	4.5
50 - 54	6	6.5	-	-	6	3.9
55 - 59	2	2.2	-	-	2	1.3
60+	7	7.5	-	-	7	4.5
TOTAL	93	100.0	63	100.0	156	100.0

SOURCE : PMU Survey 1979, Part 2

CHAPTER 7

KONYO-KONYO MARKET SURVEY

7.1 Introduction

The history of the development of Juba's markets was described in Chapter 2. As mentioned, Juba's population swelled rapidly after the end of hostilities in 1972 and the existing markets, particularly Malakia in the original native quarter, became overcrowded. As a result the town council reorganised the markets in that area firstly removing the blacksmiths and metal workers to Konyo-Konyo, east of Malakia, and originally a town refuse dump. The location of the two markets is illustrated in Fig. 7.1. Since 1973 Konyo-Konyo has expanded into Juba's largest and most diverse market as can be seen from Fig. 7.2 (the number of workers increased by 25% during the study period March 1979 to May 1980). Booths run by Northern Sudanese surround an open square where fresh produce, grain and nuts are sold. Basket and pot makers, thatch and firewood sellers form the periphery, and across the main road on a plot south of the main market are charcoal sellers, blacksmiths and metalworkers, and Juba's beer and spirit brewing centre.

In 1980 over 1500 people worked in the market each day, providing the essentials of living for a large percentage of Juba's population. Survey results suggest strongly that the market assumes an important role in the day-to-day life of Juba. The standard of living of most of Juba's inhabitants denies them the imported luxuries of the largest shops and Konyo-Konyo's manufacturing activity provides local alternatives for commodities such as charcoal stoves for example, for which there is no imported equivalent and hence the informal sector is a mainstay of the majority of the urban population.

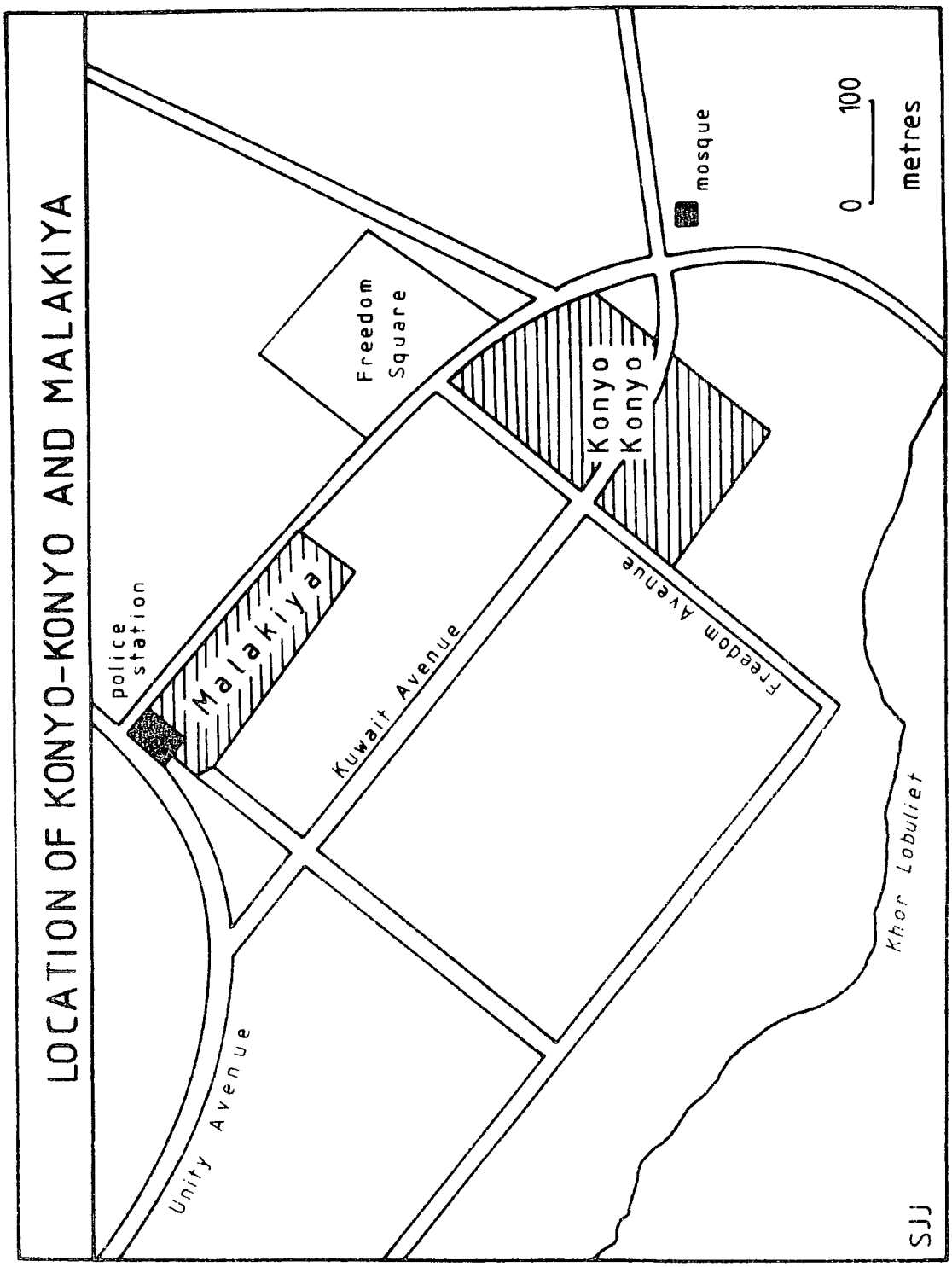
LOCATION OF KONYO-KONYO AND MALAKIYA
police station
Malakiya
Kuwait Avenue
Freedom Square
Konyo Konyo
Freedom Avenue
mosque
0 100
metres
Unity Avenue
Khor Lobuliet
SJJ

FIG 7.1

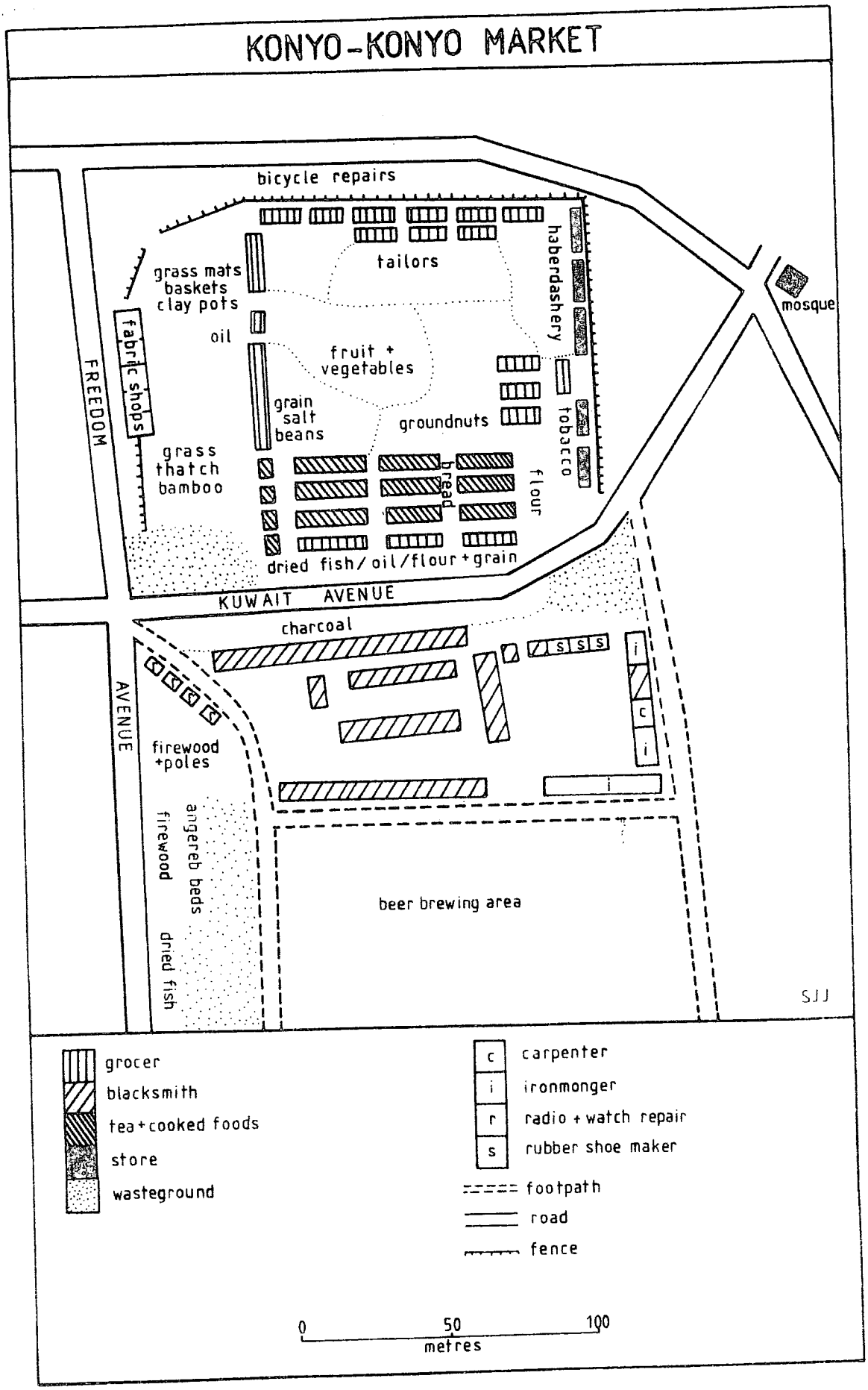
KONYO-KONYO MARKET
bicycle repairs
tailors
haberdashery
mosque
grass mats
baskets
clay pots
oil
fabric shops
FREEDOM
fruit +
vegetables
grain
salt
beans
groundnuts
tobacco
grass
thatch
bamboo
bread
flour
dried fish/ oil/flour+grain
KUWAIT AVENUE
charcoal
AVENUE
firewood
+poles
angereb beds
firewood
dried fish
beer brewing area
SJJ
grocer
blacksmith
tea+cooked foods
store
wasteground
carpenter
ironmonger
radio + watch repair
rubber shoe maker
footpath
road
fence
0
50
100
metres

FIG 7.2

It is on the composition and activities of this market that interest was focused in fieldwork to obtain a cohesive picture of Juba's main centre of informal sector activity.

The procedures of research have been described in Chapter 4 and are summarised briefly here:

1. Counting and mapping of people and their activities in the market. This was done on two separate occasions, one at the beginning of the fieldwork and one at the end, to note changes in overall numbers and activities.

2. Sample of 57 interviews using local enumerators. Emphasis was on informal discussion, observation of surroundings and suitable format for an informal questionnaire. Recording of data as case studies.

3. Final design of formal questionnaire (Appendix 8) and its use with 150 additional respondents. Use was made of 30 second year students undertaking a course in Social Survey Techniques at the University of Juba.

4. Processing of all data by extracting information from the questionnaires and putting onto grids for each activity group. Comparison and tabulation of results.

Over the period of study 207 interviews were carried out in 22 of the 26 groups of market activity already categorised. In almost all groups at least 10% of the workers were interviewed, and overall the sample consisted of 13.4% of the working population engaged in activities in Konyo-Konyo as of May 1980. Details of the main activity groups and the sampling are to be found in Table 7.1. It can be seen that for most groups there was an increase in numbers during the study period. Decreases in numbers were due to the lack of commodities and to closure ordered by the town

TABLE 7.1 : Konyo-Konyo Survey : Sample coverage

ACTIVITY	No.of workers March 1979		No. of workers May 1980		% change in numbers	Total sample coverage	Sample as % of each activity group
	No.	%	No.	%			
Fruit & vegetables, groundnuts, beans & grain selling	228	18.3	344	22.3	+ 50.9	29	8.4
Beer & spirits brewing and selling	160	12.9	155	10.0	- 3.1	20	12.9
Tea & food booths	156	12.6	145	9.4	- 7.1	20	13.8
Blacksmith & metalwork	50	4.0	108	7.0	+116.0	23	21.3
General trading	92	7.4	89	5.8	- 3.3	20	22.5
Dried fish	45	3.6	93	6.0	+106.7	4	4.3
Cigarettes & sweets	45	3.6	77	5.0	+ 71.1	5	6.5
Cassavaflour	60	4.8	65	4.2	+ 8.3	5	7.7
Haberdashery	70	5.6	63	4.1	- 10.0	10	15.9
Firewood	50	4.0	61	4.0	+ 22.0	-	-
Cooking oil	30	2.4	51	3.3	+ 70.0	6	11.8
Grass mats	45	3.6	48	3.1	+ 6.7	7	14.6
Grass tinder	30	2.4	42	2.7	+ 40.0	-	-
Legemat [1] & bread	47	3.8	38	2.5	- 19.1	9	23.7
Charcoal	33	2.7	33	2.1	0.0	5	15.2
Tobacco & pipes	12	1.0	29	1.9	+141.7	9	31.0
Thatch & bamboo	15	1.2	26	1.7	+ 60.0	5	19.2
Tailoring	25	2.0	23	1.5	- 8.0	15	65.0
Clay pots	13	1.0	15	1.0	+ 15.4	7	46.7
Angereb [2]	12	1.0	16	1.0	+ 33.0	-	-
Rubber tyre work [3]	15	1.2	8	0.5	- 46.7	5	62.5
Carpentry	5	0.4	7	0.5	+ 40.0	1	14.3
Radio repair	2	0.2	4	0.3	+100.0	-	-
Local medicine	3	0.2	3	0.2	0.0	2	66.0
TOTAL	1243	100.0	1543	100.0	24.1	207	

1. Locally made cake similar to doughnut
2. Traditional wooden bed with hide or rope thongs
3. Shoes and straps made from scrap rubber

council after periodic bouts of cholera.

The largest single group of workers was involved in the selling of fruit and vegetables, groundnuts, beans and grain (22%), followed by beer brewing and selling (10%), tea and food production (9%) and blacksmithing (7%). The outline of overall characteristics of all informal sector workers covered in the survey is given here.

7.2 Konyo-Konyo Survey : Part I Data

Part I of the Konyo-Konyo survey consisted of information on age, sex, tribe, birthplace, place of residence, literacy, languages spoken and education, the details being summarised in Tables 7.2 to 7.11.

The age/sex distribution of the sample population is outlined in Table 7.2 and the data are displayed graphically in Fig. 7.3. Of the workers, 76% were male and 24% female. These figures probably reflect more accurately the sex composition of informal sector workers than the PMU survey, where the number of workers in the sample was really too small for an accurate determination.

Although census data for Juba in 1973 quoted by Mills did not give a male/female breakdown, the Regional figures showed almost 90% of workers in this sector as male. It was mentioned previously that the size of the female workforce was thought to be underestimated and this was borne out by the Konyo-Konyo survey where the female participation rate was more than twice that measured in the 1973 census. The larger percentage of women can probably be explained in two ways: firstly, in an urban setting there appear to be more job opportunities for women than in their villages, with a large market for their produce (beer, cakes, bread, etc.), and secondly, women were interviewed at their place of work in activities which they may not have considered as "employment" when interviewed at home in

TABLE 7.2 : Konyo-Konyo Survey : Age/Sex distribution of Informal Sector Workers

Age group	Male		Female		TOTAL	
	No.	%	No.	%	No.	%
12 - 14	6	3.8	0	-	6	2.9
15 - 19	38	24.1	8	16.3	46	22.2
20 - 24	35	22.2	4	8.2	39	18.8
25 - 29	25	15.8	19	38.8	44	21.3
30 - 34	20	12.7	6	12.2	26	12.6
35 - 39	18	11.4	8	16.3	26	12.6
40 - 44	7	4.4	1	2.0	8	3.9
45 - 49	5	3.2	1	2.0	6	2.9
50 - 54	2	1.3	1	2.0	3	1.4
55 - 59	1	0.6	1	2.0	2	1.0
60+	1	0.6	0	-	1	0.5
TOTAL	158	100.0	49	100.0	207	100.0

the census. An example of this is baking which is a part-time, home-based activity but which is nevertheless contributing to the economy of the town.

The age distributions show marked differences from that of PMU data. As predicted, the percentages in the younger age groups were higher since at Konyo-Konyo the schoolboys working in the informal sector during their free time were also enumerated. In the 12-14 years cohort the difference between the two sets of results was minor (1.9% PMU as opposed to 2.9%) but major differences occurred the 15-19 age group (6% PMU compared with 22%), and in the 20-24 years age group (6% as compared with 19%). For

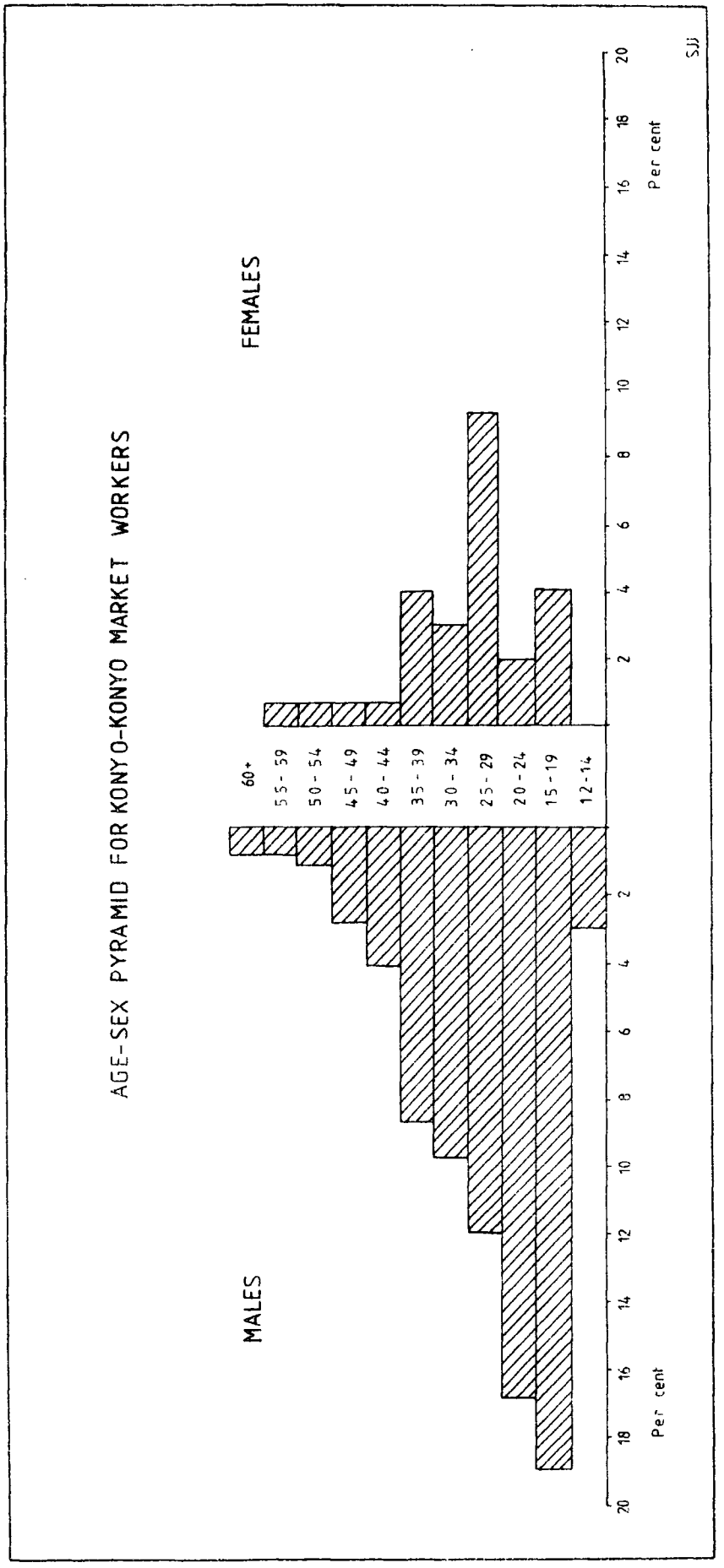
AGE-SEX PYRAMID FOR KONYO-KONYO MARKET WORKERS
FEMALES
MALES
60+
55-59
50-54
45-49
40-44
35-39
30-34
25-29
20-24
15-19
12-14
Per cent
Per cent
SJJ

FIG 7.3

males working in Konyo-Konyo, 28% were less than 20 years old and over 65% less than 30 years, with the figures for females being 16% and 64% respectively. The bulk of the men fell in the 15-40 age group (a wider age spread than from PMU data) and women in the 25-40 category.

Table 7.3 lists the tribal groups that were found in Konyo-Konyo market, and Fig. 7.4 shows the distribution of tribes in the Southern Region. When compared with tribal composition for Juba Town some interesting features emerged. A smaller range of tribes were found in the market and certain groups predominated, the major ones being Bari (23%), Northern tribes (20%), Dinka (19%) and Pajalu (12%). Comparable figures for Juba of the same groups were Bari 15%, Northern tribes less than 5%, Dinka 11% and Pajalu 7%. Bari predominance is to be expected as this is the local tribe of the area. Pajalu and Dinka came in large numbers from the nearest neighbouring sizeable settlements of Yei and Bor.

Results of the field survey showed a large percentage of Northerners in the informal sector compared with the population overall, and this is an indication of the major occupation of the Northerners in Juba: trading. Almost all the grocery and hardware booths, clothing and haberdashery enterprises were owned and run by Northerners, often young men saving money to get married. It was found that these workers were in the top end of the income spectrum (discussed later in this chapter) and were sending much of their savings back to familiesand friends in the North. This part of informal sector activity is therefore reinvesting very little in the Region but rather drawing off capital to the Northern provinces. Conversely, the Northerners provide a vital service in the provision of goods for the South. The question of the dominance of trading in this way is a very interesting one and would merit much further investigation.

TABLE 7.3 : Konyo-Konyo Survey : Informal Sector Workers by Tribe

Tribe	Male		Female		TOTAL	
	No.	%	No.	%	No.	%
Abukaya	2	1.3	2	4.1	4	1.9
Acholi	1	0.6	2	4.1	3	1.4
Azande	3	1.9	0	-	3	1.4
Bari	23	14.6	24	49.0	47	22.7
Dinka	39	24.7	1	2.0	40	19.3
Kakua	3	1.9	6	12.2	9	4.3
Kuku	8	5.1	1	2.0	9	4.3
Madi	3	1.9	1	2.0	4	1.9
Moro	6	3.8	0	-	6	2.9
Mundari	3	1.9	2	4.1	5	2.4
Latuku	1	0.6	0	-	1	0.5
Pajalu	21	13.3	3	6.1	24	11.6
Other Southern Tribes	2	1.3	1	2.0	3	1.4
Northern Tribes	41	25.9	0	-	41	19.8
Ugandan	0	-	6	12.2	6	2.9
Zairean	2	1.3	0	-	2	1.0
	158	100.0	49	100.0	207	100.0

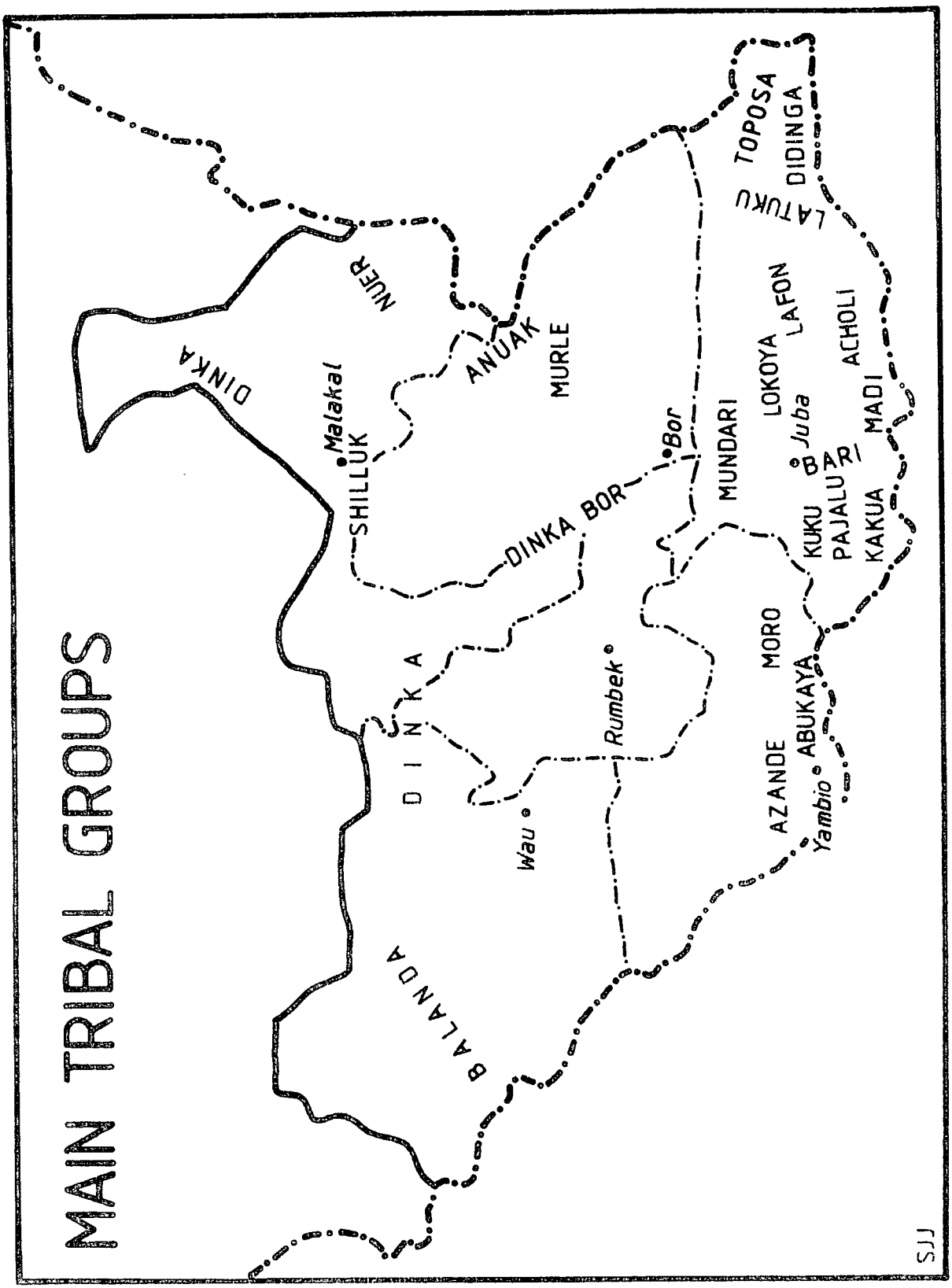
MAIN TRIBAL GROUPS
DINKA
NUER
Malakal
SHILLUK
ANUAK
MURLE
TOPOSA
LATUKU
DIDINGA
Bor
DINKA BOR
MUNDARI
LOKOYA
LAFON
Juba
BARI
ACHOLI
MADI
KUKU
PAJALU
KAKUA
Rumbek
MORO
ABUKAYA
Wau
AZANDE
Yambio
BALANDA
SJJ

FIG 7.4

Over 75% of the activity in the market was organised however by Southerners and it is in such markets throughout Juba that the Southern entrepreneur is beginning to emerge. Handicapped by lack of capital and low educational standards, the Southerner has found it difficult to develop enterprises on the same scale as the Northerner. This is slowly beginning to change in Konyo-Konyo:in 1980 one or two of the grocery booths were being run by Southern Sudanese. In such activities as blacksmithing and brewing the possibility of earning sizeable incomes (LS 100 per month and over) had increased. The number of blacksmiths and metal workers in the market increased by over 100% 1979 to 1980, demonstrating its popularity and viability. Problems for the Southern entrepreneur however still exist. Whilst beer brewing, for example, is a lucrative business, the number of people involved in such enterprises actually fell slightly during the study period, a result both of shortage of raw materials (particularly sugar and dura which were virtually only obtainable on the black market in any quantity) and because of pressure from the town council as such activity was seen as a major health risk during the cholera epidemics which occur in Juba. The Southern entrepreneur has little or no encouragement from the authorities, and if this attitude could be changed, the potential for growth of enterprises would be great and would be a useful contribution towards alleviating the unemployment problem. Instances of changed attitudes have been noted e.g. Government and international aid support of a leather co-operative resulted in the development of an enthusiastic and skilled group of ten or so leather workers producing high quality merchandise at prices relevant to the Juba population (shoes, belts, bags etc.). Facilities were minimal (a covered, open-sided work place with a lockable store) but clean and permanent and which had helped to foster a community spirit between the workers not always apparent in the market where "survival of the fittest"

is the general rule in a working population hampered by problems of supply of materials and poor working conditions.

Male/female distributions by tribe show that migrants were predominantly male, whilst among the females the largesttribal groupings were the local ones: Bari (49%) and Kakua (12%). No women from Northern tribes were to be found in the sample, most probably as a result of the influence of their Islamic culture and the distance from their home area. One group, that of Ugandan refugees, consisted entirely of women. These formed 12% of the female workforce in the market and were engaged mainly in baking bread and cakes. No Ugandan males were to be found working in Konyo-Konyo, the majority being agriculturalists at the refugee camps in the area. Some Ugandan males were found setting up quite sizeable enterprises in the town. Juba's newest restaurant was Ugandan run and Ugandans were also found operating bus and lorry services with vehicles brought from Uganda when people fled the country and which provided a valuable contribution to the Region's economy. The Ugandan male seems to prefer private enterprise outside of the market, rather than facing the strong competition within it, and a strong feeling of resentment by the local people was detected, largely because of the Ugandan's more advanced entrepreneurial skills. Many had assets and capital brought from Uganda and far beyond the reach of the informal sector worker of Konyo-Konyo. Again, this would be an extremely interesting area of further study.

A more detailed analysis of the origin of Konyo-Konyo workers can be made from data about birthplace. Table 7.4 indicates place of birth by province and is illustrated by Fig. 7.5. Eastern Equatoria was the birthplace of over 50% of workers, Jonglei 15%, and Blue Nile Province in the North 9%. The large number of workers born in Blue Nile seemed anomalous and after extensive enquiries, no valid explanation for this

TABLE 7.4 : Konyo-Konyo survey ; Place of Birth by Province

PROVINCE	Male		Female		TOTAL	
	No.	%	No.	%	No.	%
Southern Region						
Eastern Equatoria	70	44.3	40	81.6	110	53.1
Jonglei	31	19.6	0	-	31	15.0
Western Equatoria	6	3.8	2	4.1	8	3.9
Bahr El Ghazal	5	3.2	0	-	5	2.4
Upper Nile	3	1.9	1	2.0	4	1.9
Lakes	2	1.3	0	-	2	1.0
	117	74.1	43	87.7	160	77.3
Northern Region						
Blue Nile	19	12.0	0	-	19	9.2
Kordofan	8	5.1	0	-	8	3.9
White Nile	5	3.2	0	-	5	2.4
Northern	2	1.3	0	-	2	1.0
Darfur	2	1.3	0	-	2	1.0
Khartoum	1	0.6	0	-	1	0.5
Nile	1	0.6	0	-	1	0.5
Kassala	1	0.6	0	-	1	0.5
Red Sea	0	-	0	-	0	-
	39	24.7	0	-	39	19.0
Others						
Uganda	0	-	6	12.2	6	2.9
Zaire	2	1.3	0	-	2	1.0
	2	1.3	6	12.2	8	3.9
GRAND TOTAL	158	100.0	49	100.0	207	100.0

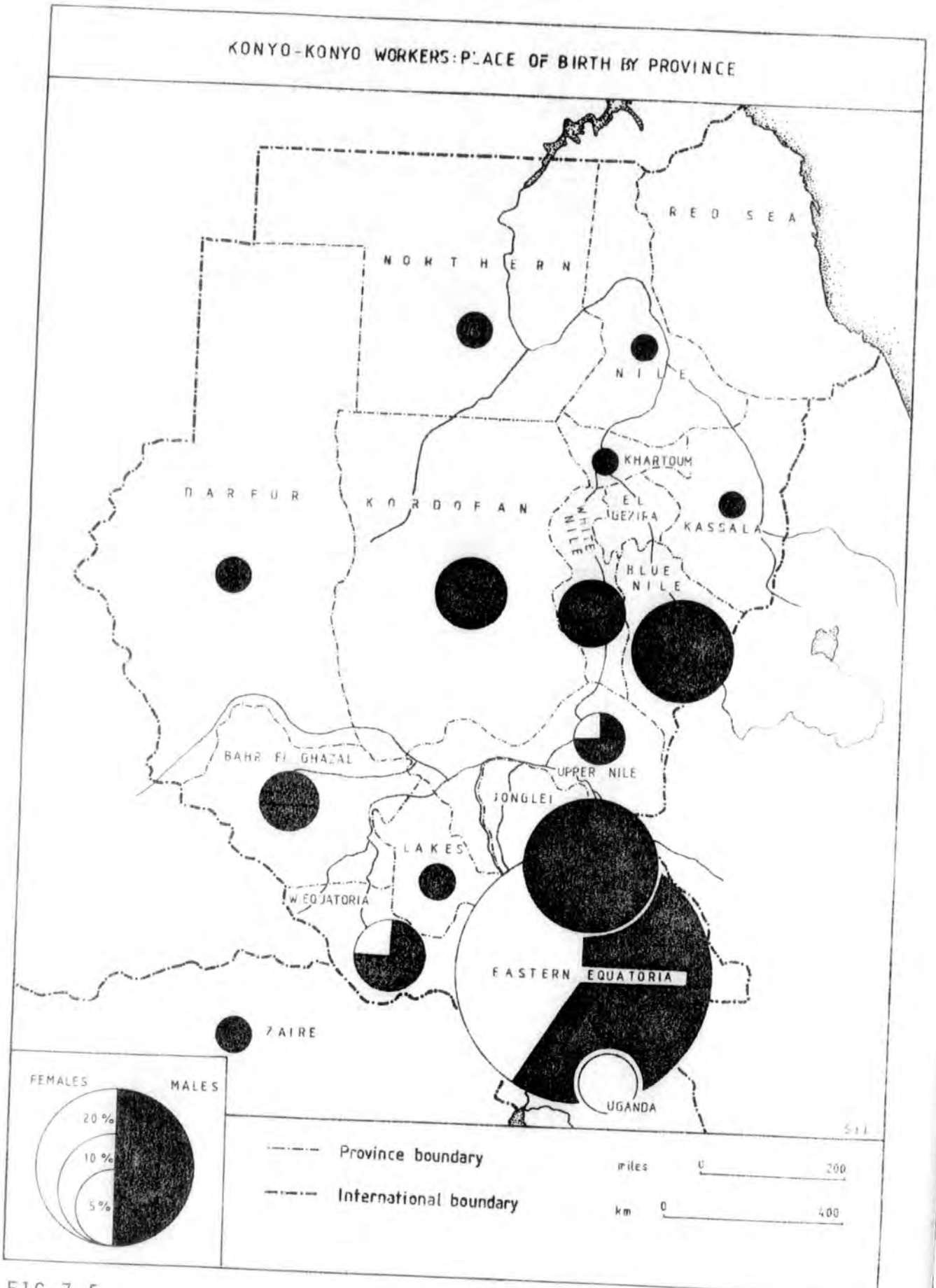
KONYO-KONYO WORKERS: PLACE OF BIRTH BY PROVINCE
RED SEA
NORTHERN
NILE
KHARTOUM
DARFUR
KORDOFAN
WHITE NILE
EL GEZIRA
KASSALA
BLUE NILE
BAHR EL GHAZAL
UPPER NILE
JONGLEI
LAKES
W EQUATORIA
EASTERN EQUATORIA
ZAIRE
UGANDA
FEMALES
MALES
20 %
10 %
5 %
Province boundary
International boundary
miles 0 200
km 0 400

FIG 7.5

could be found. Over 80% of the women were born in Eastern Equatoria, 12% in Uganda, 4% in Western Equatoria, and 2% in Upper Nile.

Table 7.5 shows the breakdown by district of birth-place in the Southern Region and demonstrates further that the two nearest sizeable settlements of Bor and Yei are the main feeders of informal sector workers to Juba. Yei is a market centre to the south-west of Juba, three hours away on a reasonable road, with a population (1973) of 12,000. Transport being fairly regular by lorry and bus, many Pajalu from the Yei area bring goods to sell in Konyo-Konyo and a sizeable percentage have permanently migrated to Juba. The large number of Dinka in Juba, and particularly in the informal sector, can be explained as a migration to Juba of young men from the agricultural and fishing town of Bor, again only hours away by road and of a comparable size to Yei. The Dinka way of life itself has contributed to this large scale migration of males, since many Dinka working in the informal sector in Juba are earning money to buy their own cattle - the Dinka measure of wealth, and vital for the bride price. After earning enough money to purchase cattle and enable them to marry, many of these young men return to their home area as cattle herders and therefore return to the traditional way of life.

Visits were made to both Bor and Yei markets during the course of research and it is interesting to note that the markets seemed very small with only a few crafts and skills to be found. Yei is notable for its local wooden furniture but this is usually sold piece by piece in the town and surrounding villages and no large scale market outlet exists. This craft is beginning to appear on a small scale in Juba, and it has obvious potential for the future. Its development will be interesting to follow. Similarly in Bor, a local skill is the making of pipes for smoking tobacco and recently one or two Dinka had begun to manufacture them in Konyo-Konyo though in small quantities. The demand from tourists and expatriates, as

TABLE 7.5 : Konyo-Konyo : Place of Birth by District

DISTRICT	Male		Female		TOTAL	
	No.	%	No.	%	No.	%
Eastern Equatoria						
Juba	40	25.3	28	57.1	68	32.9
Yei	24	15.2	9	18.4	33	15.9
Torit	6	3.8	3	6.1	9	4.3
	70	44.3	40	81.6	110	53.1
Jonglei						
Bor	31	19.6	0	0	31	15.0
	31	19.6	0	0	31	15.0
Western Equatoria						
Maridi	5	3.2	2	4.1	7	3.4
Yambio	1	0.6	0	0	1	0.5
	6	3.8	2	4.1	8	3.9
Bahr El Ghazal						
Aweil	1	0.6	0	0	1	0.5
Gogrial	1	0.6	0	0	1	0.5
Wau	3	1.9	0	0	3	1.4
	5	3.1	0	0	5	2.4
Upper Nile						
Malakal	3	1.9	1	2.0	4	1.9
	3	1.9	1	2.0	4	1.9
Lakes						
Yirol	2	1.3	0	0	2	1.0
	2	1.3	0	0	2	1.0
Northern Districts	39	24.7	0	0	39	19.0
	39	24.7	0	0	39	19.0
Other Areas						
Uganda	0	0	6	12.2	6	2.9
Zaire	2	1.3	0	0	2	1.0
	2	1.3	6	12.2	8	3.9
GRAND TOTAL	158	100.0	49	100.0	207	100.0

well as the local population for such crafts is growing, and it is encouraging to see it developing in the Regional capital. An advantage of encouraging such activity is that it needs no special training facilities or equipment to produce attractive and marketable items at relatively low prices (a chair sells for LS 2-3, and a pipe for LS 2-5).

Of the informal sector sample only 9% of workers had been born in Juba, 91% being born elsewhere. Migrants formed 67% of Juba's population overall (as discussed in Chapter Two), and approximately 80% of the working age group throughout the town had been born outside Juba. The higher percentage of migrants in the informal sector, as compared to that of the town, indicates that the informal sector attracted more migrants as workers, as has been found in many other informal sector studies.

Further data on population movement can be extracted from the PMU survey and Table 7.6 illustrates the main reasons for migrants coming to Juba of those in the population twelve years and above. Almost half had come for social reasons (visits, marriage, to join family) and one third for reasons connected with employment i.e. looking for work or transfer of job.

For Konyo-Konyo workers, normal place of residence was also investigated. Almost 80% of the sample were resident in the town, an additional 16.0% in the area around Juba (i.e. within a 15 km radius), and 4% in other areas, some up to 150 km away. For the Juba residents, an analysis of housing areas was carried out: over three-quarters were living at fourth class housing standard or below (as per housing classification in Chapter 2) i.e. at the lowest standard of living in the town, in mud tukls with no running water or electricity. Under one-quarter were living in second and third class areas and these were predominantly Northern traders in the "Jallaba" [1] areas of town. No informal sector worker was found in a first

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1 "Jallaba" is derived from the traditional Arab dress, the jellabeer and generally refers to the Northern traders.

TABLE 7.6 : PMU Sample Population : Population aged 12 years and above not born in Juba : Reasons for first coming to Juba

REASON	Male		Female		TOTAL	
	No.	%	No.	%	No.	%
ECONOMIC						
Employment						
Job transfer	315	48.7	34	8.5	349	33.3
Trading						
EDUCATION						
Schooling	110	17.0	24	6.0	134	12.8
SOCIAL						
Came with family to join family, or marriage	124	19.2	249	61.9	373	35.6
Short term: medical, funerals visits, holidays	36	5.6	62	15.4	98	9.3
WAR						
Civil war: security during war and repatriation afterwards	37	5.7	20	5.0	57	5.4
Refugee	25	3.9	13	3.2	38	3.6
TOTAL	647	100.0	402	100.0	1049	100.0

class housing area. The data are summarised in Table 7.7 and Fig. 7.6.

Of those living in the Juba area, rather than actually in the town, most commuted to market three or four times a week bringing local produce, firewood, mats and pots. The location of these main villages is illustrated in Fig. 7.7. Transport is a major problem, all respondents came by foot but stated that they would have come more frequently and produced more if transport had been available.

Of the 4% coming from other areas (predominantly Bor, Nimule and Yei) the majority were periodic visitors reliant on local lorry and bus services for transport. They tended to bring bulk commodities such as groundnuts and dried fish when there was surplus in their home areas.

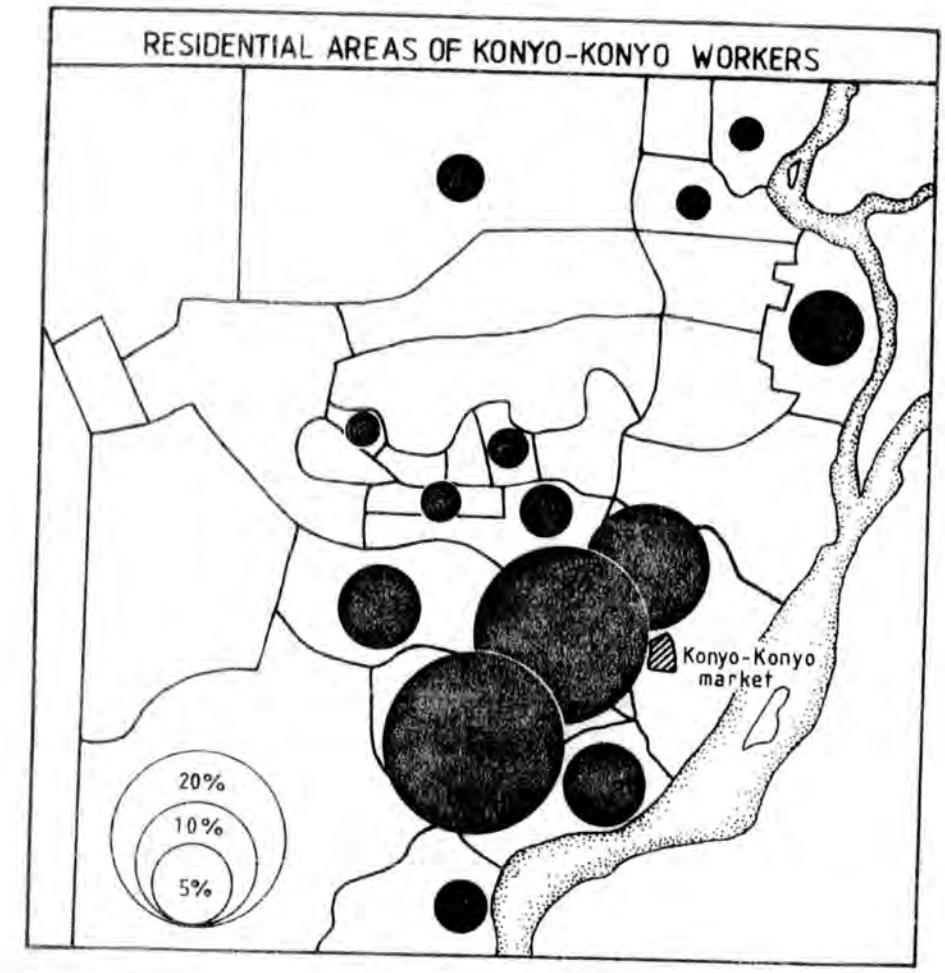
Of those respondents living in Juba but not born there, almost 40% had arrived within the last two years, illustrating the recent boom in migration and the rapid growth in size of the informal sector. Table 7.8 illustrates these characteristics. This trend is to be found in the population overall as can be seen from the PMU data given in Table 7.9. Almost 30% of those above 12 years old in the town had also arrived within the last two years.

Turning to literacy, a question not covered by the PMU survey, it was found that less than half the sample were literate (44%), as in Table 7.10. Of the sample, 11% were currently attending school and 33% had left school, of whom over half had only completed six years of primary education, indicating a low level of educational attainment throughout. This is illustrated in Table 7.11. When compared with PMU data for the town as a whole these figures of non-attendance seem high as of the population of twelve years and above in Juba, 35% had not attended school. This is a further indication of the characteristics of the informal sector - it being favoured by those with particularly low educational levels.

TABLE 7.7 : Konyo-Konyo Survey : Normal Place of Residence of Workers

PLACE	Male		Female		TOTAL	
	No.	%	No.	%	No.	%
JUBA						
2nd class res.areas						
Juba Town	9	5.6	-	-	9	4.3
	9	5.6	-	-	9	4.3
3rd class res.areas						
Nimra Talata	5	3.2	-	-	5	2.4
Hay Malakal	20	12.7	2	4.1	22	10.6
	25	15.9	2	4.1	27	13.0
4th class res.areas						
Hay Commercial	3	1.9	-	-	3	1.4
Hay Thowra	3	1.9	-	-	3	1.4
Atlabara	9	5.6	2	4.1	11	5.3
Malakiya	36	22.8	6	12.2	42	20.3
Kator(part) [1]	17	10.8	4	8.2	21	10.0
	68	43.0	12	24.5	80	38.4
Unclassified res. areas						
Airport	4	2.5	-	-	4	1.9
Nyaying	-	-	2	4.1	2	1.0
Ghabat	2	1.3	-	-	2	1.0
Hay Zindiya	1	0.6	1	2.0	2	1.0
Kator (part)	18	11.4	5	10.2	23	11.3
Kasaba	8	5.1	2	4.1	10	4.8
Lologo	4	2.5	1	2.0	5	2.4
	37	23.4	11	22.4	48	23.4
JUBA TOTAL	139	88.0	25	51.0	164	79.1
JUBA AREA						
Rejaf	-	-	5	10.2	5	2.4
Rokon	-	-	1	2.0	1	0.5
Gondokoro	-	-	4	8.2	4	1.9
Gumba	4	2.5	3	6.1	7	3.4
Bilinyang	-	-	7	14.3	7	3.4
Luri	4	2.5	1	2.0	5	2.4
Jebel Lado	3	1.9	2	4.1	5	2.4
JUBA AREA TOTAL	11	6.9	23	46.9	34	16.4
OTHER AREAS						
Yei	1	0.6	-	-	1	0.5
Lainya	2	1.3	-	-	2	1.0
Nimule	-	-	1	2.0	1	0.5
Mongalla	2	1.3	-	-	2	1.0
Kajokaji	1	0.6	-	-	1	0.5
Bor	2	1.3	-	-	2	1.0
OTHER AREAS TOTAL	8	5.1	1	2.0	9	4.5
GRAND TOTAL	158	100.0	49	100.0	207	100.0

1 Kator residential area is divided into two housing categories, part being class 4 housing and part being unclassified.


RESIDENTIAL AREAS OF KONYO-KONYO WORKERS
Konyo-Konyo market
20%
10%
5%

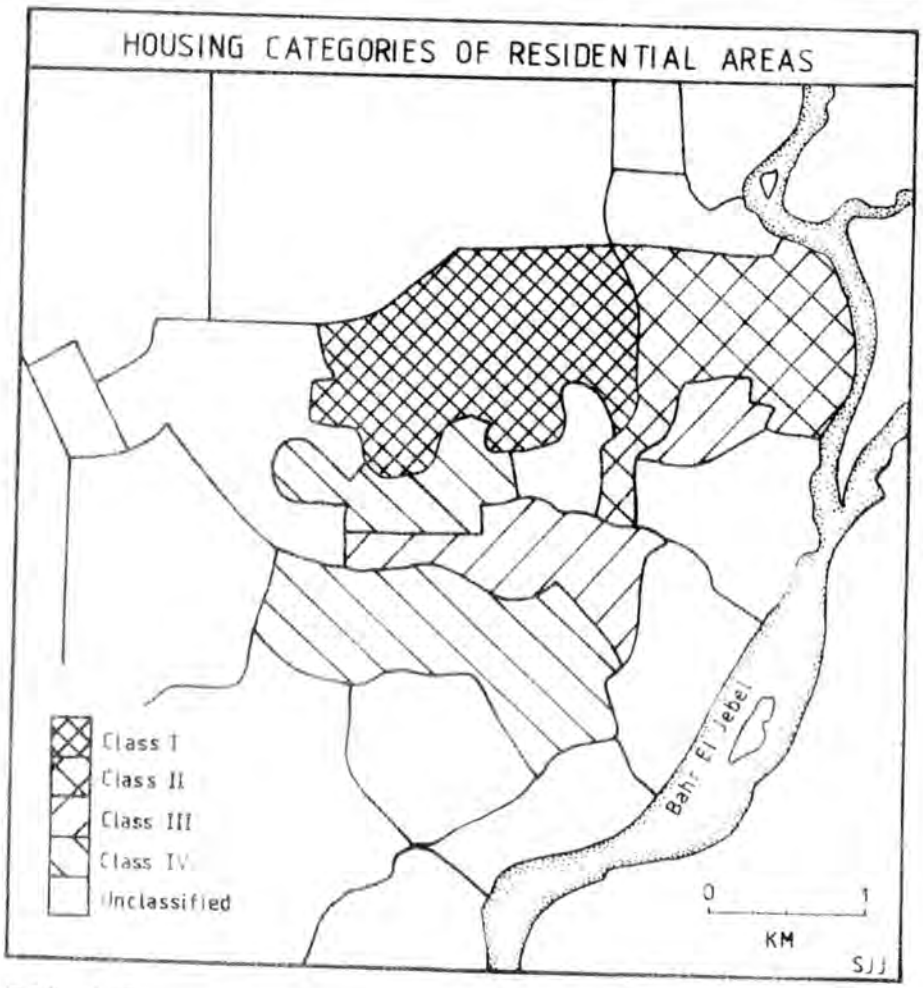

HOUSING CATEGORIES OF RESIDENTIAL AREAS
Class I
Class II
Class III
Class IV
Unclassified
Bahr El Jebel
0
1
KM
SJJ

FIG 7.6

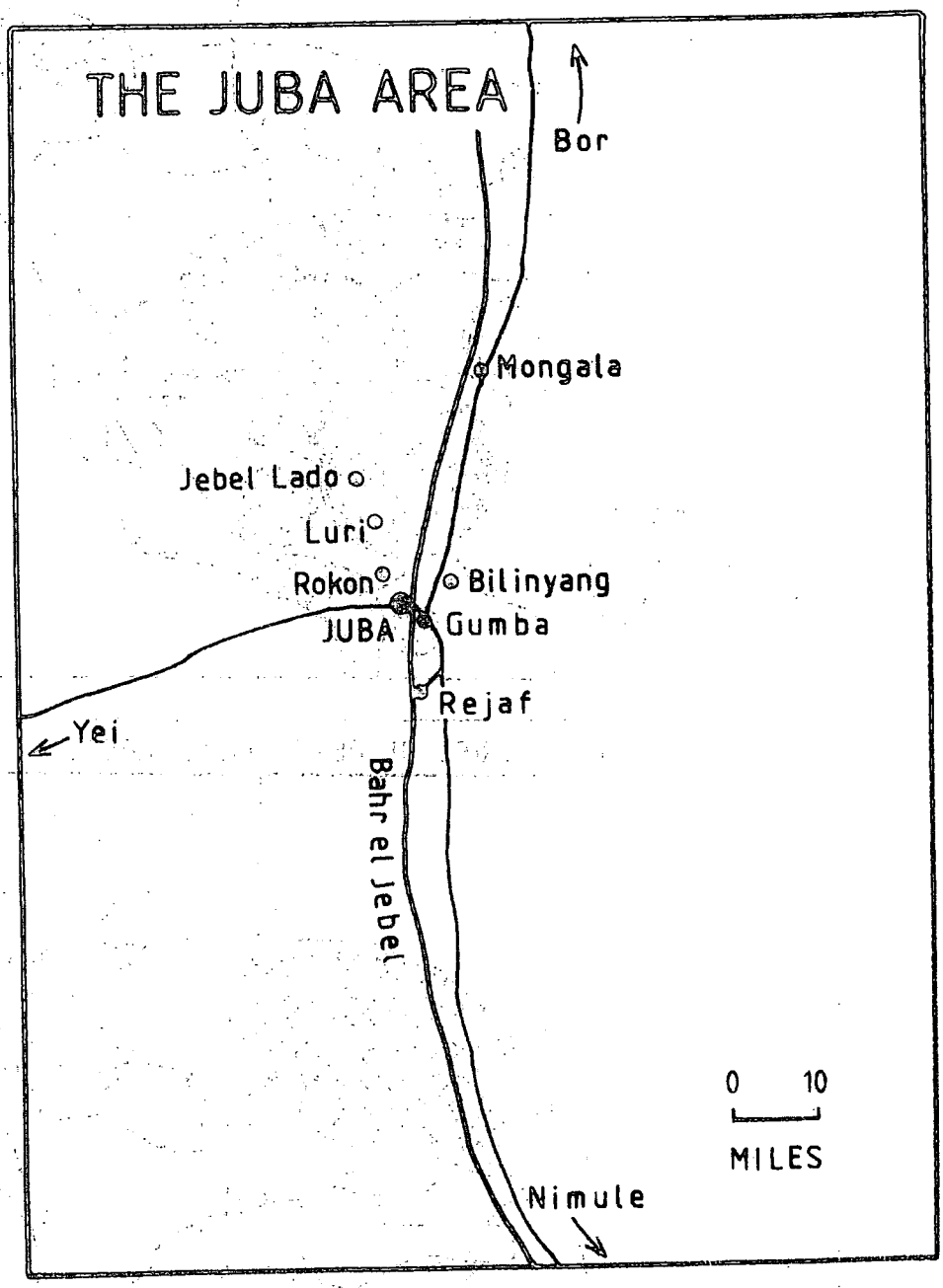

THE JUBA AREA
Bor
Mongala
Jebel Lado
Luri
Rokon
Bilinyang
JUBA
Gumba
Rejaf
Yei
Bahr el Jebel
0 10
MILES
Nimule

FIG 7.1

TABLE 7.8 : Konyo-Konyo Survey : Respondents Resident in Juba
Number of Years in Residence

No. of Years	Male		Female		TOTAL	
	No.	%	No.	%	No.	%
Less than 1	16	11.2	6	21.4	22	12.9
1	17	11.9	4	14.3	21	12.3
2	23	16.1	1	3.6	24	14.0
3	17	11.9	2	7.1	19	11.1
4	7	4.9	2	7.1	9	5.3
5	13	9.1	0	-	13	7.6
6	7	4.9	1	3.6	8	4.7
7	7	4.9	0	-	7	4.1
8	5	3.5	0	-	5	2.9
9	5	3.5	0	-	5	2.9
10	4	2.8	1	3.6	5	2.9
11	1	0.7	0	-	1	0.6
12	1	0.7	1	3.6	2	1.2
13	1	0.7	0	-	1	0.6
14	0	-	0	-	0	-
15	5	3.5	1	3.6	6	3.5
16	0	-	2	7.1	2	1.2
17	0	-	2	7.1	2	1.2
18	2	1.4	0	-	2	1.2
19	0	-	0	-	0	-
20	4	2.8	1	3.6	5	2.9
More than 20	8	5.6	4	14.3	12	7.0
TOTAL	143	100.0	28	100.0	171	100.0

TABLE 7.9 : PMU Survey : Population aged twelve years and above not born in Juba : Year first came

Year	Male		Female		TOTAL	
	No.	%	No.	%	No.	%
1979	135	20.9	65	16.2	200	19.1
1978	72	11.1	41	10.2	113	10.8
1977	64	9.9	30	7.5	94	9.0
1976	56	8.7	33	8.2	89	8.5
1975	38	5.9	28	6.9	66	6.3
1974	52	8.0	25	6.2	77	7.3
1973	42	6.5	26	6.5	68	6.5
1972	63	9.7	37	9.2	100	9.5
1971	9	1.4	10	2.5	19	1.8
1970	20	3.1	6	1.5	26	2.5
1969	13	2.0	11	2.7	24	2.3
1968	7	1.1	4	1.0	11	1.0
1967	7	1.1	4	1.0	11	1.0
1966	4	0.6	10	2.5	14	1.3
1965	9	1.4	12	3.0	21	2.0
1964	12	1.9	13	3.2	25	2.4
1963	9	1.4	9	2.2	18	1.7
1962	5	0.8	6	1.5	11	1.0
1961	5	0.8	2	0.5	7	0.7
1960	2	0.3	6	1.5	8	0.8
Pre 1960	23	3.6	24	5.7	47	4.5
TOTAL	647	100.0	402	100.0	1049	100.0

7.3 Sumary of Part I Data

Part I of the Konyo-Konyo survey has outlined the major characteristics of Juba's informal sector workers. Predominantly male (76% of the sample), the informal sector occupied a young workforce with the bulk falling in the 15-40 age group, with 65% of the workers being less than 30 years old.

Dominated by certain major tribal groups, the market formed an attraction to migrants, particularly from the neighbouring towns of Bor and Yei; and also to traders from the North. Migrants were largely male, women being more localised in their movements with over 80% of the females being born in Eastern Equatoria as compared with only 44% of the males. The figure of less than 10% of all workers being born in Juba demonstrates the pull of Juba and its attraction to those working in the surrounding rural areas of the Region. Its attraction particularly to informal sector workers is demonstrated by the fact that while 90% of market workers came from outside the town, the corresponding figure for the overall workforce of the town was only 80%.

Informal sector numbers were increasing rapidly, almost 40% having arrived during the previous two years as compared to 30% for the Juba workforce.

Finally, educational data show that informal sector workers were generally more poorly educated than the rest of the population, 56% being illiterate, whilst for the town's workers the figure was less than 35% .

TABLE 7.10 : Konyo-Konyo Survey : Literacy of workers

	Male		Female		TOTAL	
	No.	%	No.	%	No.	%
Literate	79	50.0	12	24.5	91	44.0
Illiterate	79	50.0	37	75.5	116	56.0
TOTAL	158	100.0	49	100.0	207	100.0

TABLE 7.11 : Konyo-Konyo : Education

	Male		Female		TOTAL	
	No.	%	No.	%	No.	%
Never attended full time education	79	50.0	37	75.5	116	56.0
Currently at primary school	8	5.1	1	2.0	9	4.4
Currently at junior secondary school	12	7.6	0	-	12	5.8
Currently at senior secondary school	0	-	2	4.0	2	1.0
Left at primary level	33	20.9	8	16.4	41	19.8
Left at junior secondary level	14	8.8	0	-	14	6.8
Left at senior secondary level	12	7.6	1	2.0	13	6.2
TOTAL	158	100.0	49	100.0	207	100.0

7.4 Konyo-Konyo Survey : Part II Data

Part II of the survey covered information on previous workplaces (to ascertain whether there was a step-like migration to Juba as a workplace or direct movement from home areas), number of years spent in a particular occupation, previous jobs and reasons for their termination, father's occupation, other jobs undertaken concurrently, reasons for choosing a particular occupation, job satisfaction, occupational status, market rent, income, hours worked, and methods of running the various activities. These details are to be found in Tables 7.12 to 7.21.

Table 7.12 shows previous workplaces, and this is illustrated in Fig. 7.8. It was found that approximately 35% of the sample had worked in other

TABLE 7.12 : Konyo-Konyo Survey : Previous places of work of informal Sector Workers

Place	Male		Female		TOTAL	
	No.	%	No.	%	No.	%
Southern Towns						
Malakal	10	16.1	0	-	10	13.7
Wau	5	8.1	0	-	5	6.8
Lainya	3	4.9	1	9.1	4	5.5
Torit	3	4.9	1	9.1	4	5.5
Renk	3	4.9	0	-	3	4.1
Nimule	1	1.6	2	18.2	3	4.1
Bor	2	3.2	0	-	2	2.7
Yei	0	-	2	18.2	2	2.7
Terakeka	1	1.6	0	-	1	1.4
Nasir	1	1.6	0	-	1	1.4
Rumbek	1	1.6	0	-	1	1.4
	30	48.5	6	54.6	36	49.3
Northern Towns						
Khartoum	11	17.7	0	-	11	15.1
Kosti	2	3.2	0	-	2	2.7
Wad Medani	2	3.2	0	-	2	2.7
New Halfa	2	3.2	0	-	2	2.7
Sennar	2	3.2	0	-	2	2.7
El Obeid	1	1.6	0	-	1	1.4
Gedaref	1	1.6	0	-	1	1.4
Gezira	1	1.6	0	-	1	1.4
Kadugli	1	1.6	0	-	1	1.4
Shendi	1	1.6	0	-	1	1.4
Kassala	1	1.6	0	-	1	1.4
	25	40.1	0	-	25	34.3
Ugandan Towns	7	11.3	5	45.5	12	16.4
	7	11.3	5	45.5	12	16.4
GRAND TOTAL	62	100.0	11	100.0	73	100.0


PREVIOUS WORKPLACES OF KONYO-KONYO WORKERS
RED SEA
Sherdi
KHARTOUM
Kassala
El Gezira
Wad Medani
Gedaref
El Obeid
Sennar
White Nile
Kosti
Kadugli
Renk
Malakal
Bahr el Jebel
Wau
Rumbek
Bor
Terakeka
Mongalla
JUBA
Torit
Lainya
Yei
Nimule
SJJ
Province Boundary
River
miles 0 200
km 0 400

FIG 7.8

places prior to migrating to Juba. As 90% of informal sector workers were migrants to Juba, only two fifths of them had therefore worked in other places, the rest having moved directly to Juba from their home area for employment. The major centres of previous activity were Uganda (16%), where many Sudanese found employment during the civil disturbances before returning to Juba at the end of hostilities; Khartoum (15%), which is the first centre of attraction for many Northerners; and Malakal (14%) which is often the second centre of attraction for Northerners after Khartoum in their movement south and ultimately to Juba. The number of women who had worked in other settlements was small, only 20% of the female sample, with almost half of these having worked in Uganda during the troubles, and the remainder only in the towns of Eastern Equatoria.

The number of years spent in a previous occupation is illustrated in Table 7.13. Over 40% had spent two years or less in their current job and 67% five years or less, a corollary to the statement that much informal sector development in the market is of relatively recent origin. Some workers had been long established in their line of work, for example some Northern traders and blacksmiths. These however formed a small minority in the market.

Of the males 38% had had previous jobs, and 20% of the females also had had other occupations, all of which are shown in Table 7.14. For males, only one quarter of those who have worked in other occupations (i.e. less than 10% of the male informal sector workforce) had found previous employment in the formal sector and none of the females had been engaged in such activities, indicating that there is little flow from formal to informal sector.

Occupation of father was similar to that shown by the PMU results, with over 60% of the workers' fathers being peasant farmers and cattle rearers, and the percentages for both male and female being similar. Less than 10% of fathers had been engaged in formal sector activity, whilst 11%

TABLE 7.13 : Konyo-Konyo Survey : Number of Years in Current Occupation

No. of years	Male		Female		TOTAL	
	No.	%	No.	%	No.	%
< 1	23	14.6	10	20.4	33	15.9
1	17	10.8	7	14.3	24	11.6
2	27	17.1	2	4.1	29	14.0
3	18	11.4	3	6.1	21	10.1
4	13	8.2	1	2.0	14	6.8
5	14	8.9	4	8.2	18	8.7
6	2	1.3	2	4.1	4	1.9
7	6	3.8	2	4.1	8	3.9
8	6	3.8	3	6.1	9	4.3
9	3	1.9	1	2.0	4	1.9
10	7	4.4	3	6.1	10	4.8
11	1	0.6	-	-	1	0.5
12	3	1.9	-	-	3	1.4
13	-	-	2	4.1	2	1.0
14	1	0.6	-	-	1	0.5
15	3	1.9	3	6.1	6	2.9
16	-	-	-	-	-	-
17	4	2.5	1	2.0	5	2.4
18	1	0.6	-	-	1	0.5
19	-	-	-	-	-	-
20	3	1.9	4	8.2	7	3.4
20+	6	3.8	1	2.0	7	3.4
TOTAL	158	100.0	49	100.0	207	100.0

TABLE 7.14 : Konyo-Konyo Survey : Previous jobs held by workers

Occupation	Males
Cultivator	13
*Driver	6
Cigarette Seller	5
Tailor	4
Waiter	4
Carpenter	3
*Mechanic	3
*Forester	3
Cattle Keeper	2
Fisherman	2
Labourer	2
Petty trader	2
Builder	1
Charcoal seller	1
Baker	1
Houseboy	1
Oil Seller	1
*Policeman	1
*Schoolmaster	1
*Soldier	1
*Timekeeper	1
Washerman	1
*Watchman	1
	60 (29% of informal sector workers)
Occupation	**Female**
Cultivator	4
Baker	2
Market stall holder	2
Vegetable seller	1
Basket maker	1
	10 (4.8% of informal sector workers

* formal sector occupation

were themselves informal sector workers. This is illustrated in Table 7.15.

Of the sample, just over 20% were in part-time employment, i.e. 20% of the males and 27% of the females. Of those in part-time employment 44% were students earning money for their education and attending evening school, 33% were also engaged in cultivation, and 22% were housewives, the data being shown in Table 7.16.

The main reasons for choosing a particular job are summarised in Table 7.17, with the largest group of respondents stating that their informal sector activities earned a satisfactory or good income (26%). The second major group (11%) complained that there were no alternatives to what they were doing, and smaller groups listed specific problems; no education for a better job (4%),failure to get government employment (2%), prevented from doing heavy work by illness (0.5%). Almost 5% of workers said they were following in their father's footsteps, and 8% had the ambition of doing their particular job since they were young. Ease of learning and doing a job was given as a reason by almost 8% of the respondents. Only 1% of the sample gave their main answer as "to be self-employed" and this does not seem therefore to be a priority with the majority, although it was mentioned as an advantage of informal sector work by a number of respondents.

Job satisfaction results are presented in Table 7.18 and almost two-thirds of the sample expressed satisfaction with their occupation. The distribution varies between men and women, 70% of the men as compared to only 47% of the women expressed job satisfaction. This is due to the nature of the activities and to circumstances, since several women in the sample had to work to support families due to lack or loss of husband. The women in beer brewing and baking complained that commodities were constantly in short supply and often only available at black market prices,

TABLE 7.15 : Konyo-Konyo Survey : Occupation of Father

Father's Occupation	Male		Female		TOTAL	
	No.	%	No.	%	No.	%
Peasant Farmer	92	58.2	29	59.2	121	58.5
Trader	9	5.7	4	8.2	13	6.3
Cattle herder	7	4.4	1	2.0	8	3.9
Soldier	4	2.5	3	6.1	7	3.4
Chief/sub-chief	4	2.5	1	2.0	5	2.4
Metalworker	5	3.2	0	-	5	2.4
Watchman	3	1.9	1	2.0	4	1.9
Fisherman	1	0.6	2	4.1	3	1.4
Policeman	2	1.3	1	2.0	3	1.4
Medical assistant	1	0.6	1	2.0	2	1.0
Petty trader	2	1.3	0	-	2	1.0
Tailor	2	1.3	0	-	2	1.0
Builder	1	0.6	0	-	1	0.5
Driver	1	0.6	0	-	1	0.5
Forestry Warden	0	-	1	2.0	1	0.5
House painter	1	0.6	0	-	1	0.5
Labourer	0	-	1	2.0	1	0.5
Messenger	0	-	1	2.0	1	0.5
Nurse	1	0.6	0	-	1	0.5
Prison Warder	0	-	1	2.0	1	0.5
Shoemaker	1	0.6	0	-	1	0.5
No answer	21	13.3	2	4.1	23	11.1
	158	100.0	49	100.0	207	100.0

TABLE 7.16 : Konyo-Konyo Survey : Respondents in Part-time Employment

Reasons	Male		Female		TOTAL	
	No.	%	No.	%	No.	%
Student	20	62.5	-	-	20	44.4
Cultivation	12	37.5	3	23.1	15	33.3
Housewife	-	-	10	76.9	10	22.2
Total	32	100.0	13	100.0	45	100.0

TABLE 7.17 : Konyo-Konyo Survey : Reaons for choosing present job

Reasons	Male		Female		TOTAL	
	No.	%	No.	%	No.	%
Satisfactory/good income	42	26.6	12	24.5	54	26.1
No alternative found	23	14.6	0	-	23	11.1
Always wanted to do this job	17	10.8	0	-	17	8.2
Easy to learn and do	11	7.0	5	10.2	16	7.7
To support family	5	3.2	10	20.4	15	7.2
Following father	10	6.3	0	-	10	4.8
To continue education	10	6.3	0	-	10	4.8
No education for a better job	9	5.7	0	-	9	4.3
To work in dry season when cultivation is impossible	7	4.4	-	-	7	3.4
Failed to get govt. employment	4	2.5	0	-	4	1.9
To sell produce grown at home	0	-	4	8.2	4	1.9
To supplement spouse's income	0	-	4	8.2	4	1.9
To be self employed	2	1.3	0	-	2	1.0
To save money for the future	2	1.3	0	-	2	1.0
Cannot do heavy work due to illness	1	0.6	0	-	1	0.5
No reason given	15	9.5	14	28.6	29	14.0
TOTAL	158	100.0	49	100.0	207	100.0

TABLE 7.18 : Konyo-Konyo Survey : Job Satisfaction

	Male		Female		TOTAL	
	No.	%	No.	%	No.	%
Satisfied with job	111	70.3	23	46.9	134	64.7
Not satisfied with job	47	29.7	26	53.1	73	35.3
	158	100.0	49	100.0	207	100.0

whilst there was pressure from the authorities with regard to health standards, and businesses were periodically shut down. Of the men dissatisfied with their jobs, many complained of inadequate income and lack of opportunity for improvement. Different activities obviously had very different levels of job satisfaction. For example, the Northern trader with his own premises was generally more satisfied than the charcoal seller or metal worker who was working in much worse conditions and often earning far less money.

The number of people supported by informal sector workers is outlined in Table 7.19. This question is very difficult to analyse successfully as the extended family system, often with several people contributing in part to the wellbeing of the whole makes the situation very complex. "Support" therefore in Table 7.19 can mean full or partial support and the validity of the table is basically in distinguishing those who had family responsibilities and those who did not. Of the sample, 30% had only themselves to support with their income, the figure for independent males at 35% being much higher than that of working females at 13%. The women were generally working as a necessity due to absence of husband to provide an income, or to supplement their husband's income, whilst the males had fewer obligations and responsibilities, particularly in the younger age groups.

Turning to the question of occupational status, as mentioned previously, less than 10% of the sample were employees and employers, the rest being self-employed. No female employees were found. Working relationships tended to be very informal with some sharing of responsibilities e.g. looking after a shop or stall by a group of friends, but very few formal business partnerships or other formal arrangements existed.

The nature of the rent system in Konyo-Konyo market is illustrated in Table 7.20. Those workers with permanent kiosks were charged at higher rents than those on open plots in the market square and around the periphery. Not all informal workers paid rent, particularly in certain categories of

TABLE 7.19 : Konyo-Konyo Survey : Number of people supported per worker

No. of people supported	Male		Female		TOTAL	
	No.	%	No.	%	No.	%
0	52	35.1	6	13.3	58	30.1
1	8	5.4	3	6.7	11	5.7
2	7	4.7	6	13.3	13	6.7
3	12	8.1	6	13.3	18	9.3
4	10	6.8	7	15.6	17	8.8
5	18	12.2	4	8.9	22	11.4
6	14	9.5	2	4.4	16	8.3
7	7	4.7	3	6.7	10	5.2
8	6	4.1	3	6.7	9	4.7
9	3	2.0	1	2.2	4	2.1
10	4	2.7	1	2.2	5	2.6
11	2	1.4	0	-	2	1.0
12	1	0.7	0	-	1	0.5
13	3	2.0	1	2.2	4	2.1
14	0	-	0	-	0	-
15	0	-	1	2.2	1	0.5
16	0	-	0	-	0	-
17	0	-	1	2.2	1	0.5
18	1	0.7	0	-	1	0.5
Total	148	100.0	45	100.0	193	100.0
No response	10	-	4	-	14	-
GRAND TOTAL	158	-	49	-	207	-

TABLE 7.20 : Konyo-Konyo Survey : Rents paid in the Market

Enterprise	Average Monthly Rent	% of workers actually paying rent
Arab traders in kiosks	LS 20 .0	100.0
Tea and food kiosks	12.5	100.0
Carpenter	12.5	100.0
Rubber shoe maker	4.0	100.0
Tailor	3.5	66.0
Blacksmiths	3.5	100.0
Tobacco sellers	3.5 (daily paid)	89.0
Fruit & vegetables	3.0 "	100.0
Grain & bean sellers	3.0 "	100.0
Grass mat sellers	3.0 "	70.0
Clay pot sellers	" "	70.0
Bamboo & thatch	" "	20.0
Cassava flour sellers	" "	100.0
Oil sellers	" "	100.0
Groundnut sellers	" "	100.0
Cigarettes & sweets	" "	100.0
Jewellery & Haberdashery	" "	100.0
Legemat & bread sellers	1.5 "	33.0
Charcoal sellers	" "	100.0
Local medicine seller	" "	100.0
Fish sellers	Taxed per sack of dried fish	100.0
Brewers	Taxed per barrel of beer produced	100.0

activity. Tailors, for example, if they were working on the verandahs of shops did not have to pay rent to the shopkeeper or the town council in most cases, whilst those working in the open area of the market all paid rent. Some groups, those who came from the rural areas three or four times a week, often arrived late after having walked some distance and missed the council's rent collector. Yet others, particularly thatch and bamboo sellers, were elusive by leaving their wares unattended or by selling outside of the market fence. Exceptions to the general work pattern were dried fish sellers and beer brewers, both of whom were taxed by quantity of commodity sold rather than at a flat rent.

Table 7.21 shows the distributions of estimated net income (after expenses) for informal sector workers. Of the sample who answered the question 22% earned less than LS 50 per month, compared to the figure of 30% for informal sector workers given by the PMU survey, and 59% for the town overall, indicating that in general informal sector wages are not predominantly the lowest in the town. For earnings of less than LS 100 per month, 50% of the sample were to be found in this group, with a comparable figure for PMU survey informal sector workers, and this was below the 80% for the town as a whole. A sizeable proportion (almost 20%) were earning over LS 100 per month, comparable with PMU results and similar to the town's workforce in general. These figures are only an indication of the earnings range since almost one-third of the Konyo-Konyo sample declined to answer and other responses may be distorted by both over and under exaggeration (the latter due to suspicion that research was connected with new taxation plans). Some workers could make only a rough estimate of their income, living a hand-to-mouth daily existence. Different activities had very different ranges of incomes.

Normal working hours for all groups were very long, from 7 am to 2-3 pm and then again for two to three hours in the evening from 5 pm.

TABLE 7.21 : Konyo-Konyo Survey : Net income per month

LS	Male		Female		TOTAL	
	No.	%	No.	%	No.	%
0 - 10	2	1.3	0	-	2	1.0
11 - 20	7	4.4	2	4.1	9	4.3
21 - 30	7	4.4	2	4.1	9	4.3
31 - 40	4	2.5	3	6.1	7	3.4
41 - 50	14	8.9	5	10.2	19	9.2
Total	34	21.5	12	24.5	46	22.2
51 - 60	11	7.0	3	6.1	14	6.8
61 - 70	12	7.6	4	8.2	16	7.7
71 - 80	7	4.4	4	8.2	11	5.3
81 - 90	6	3.8	3	6.1	9	4.3
91 -100	4	2.5	3	6.1	7	3.4
Total	40	25.3	17	34.7	57	27.5
101 -150	10	6.3	5	10.2	15	7.2
Total	10	6.3	5	10.2	15	7.2
151 -200	5	3.2	3	6.1	8	3.9
Total	5	3.2	3	6.1	8	3.9
201+	11	7.0	3	6.1	14	6.8
Total	11	7.0	3	6.1	14	6.8
No response	58	36.7	9	18.4	67	32.3
GRAND TOTAL	158	100.0	49	100.0	207	100.0

The exceptions to this were those bringing local produce from outside Juba, who generally worked the morning hours only. The market was open seven days a week, giving an average working week in the order of 70 hours - higher than average rates of 40-50 hours in the government sector. Again, this is only an indication since the informal arrangements of running activities previously mentioned means that each person may not work the full weekly hours, depending on his circumstances.

7.5 Summary of Part II Data

Part II has described some of the more specific characteristics relating to informal sector workers. About one-third had worked in other centres before moving to Juba, and the majority of these were male. Over 40% had spent two years or less in their current job, demonstrating the rapid expansion of informal sector activities. Of the 38% of males and 20% of females who had had previous jobs, only one-quarter had found employment in the formal sector. Almost two-third of fathers of informal sector workers were engaged in cultivation and herding, further confirming the idea of the rapid growth of the informal sector as a new phenomenon. One fifth were in part-time employment, with education, cultivation and looking after the household and family as other activities.

Contrary to ideas that informal sector work provides low earnings, 26% of the sample stated that their main reason for choosing such a job was because of a good/satisfactory income. Almost two-thirds of the sample expressed satisfaction in their jobs, again contrary to widely held ideas on the subject by theorists. Less than one-tenth of the workers were employees and employers, the majority being self-employed with a variety of informal working arrangements between themselves. Earnings could be favourably compared to those of the town overall, although working hours were generally longer than in government service, but with the advantage of greater flexibility.

CHAPTER 8

SUMMARY AND CONCLUSIONS

8.1 Summary

For a town which has been in existence for only 50 years Juba has been the focus of much change, and particularly in the eight years since the end of the civil war. Very little information exists on the Southern Region, particularly on Juba, and whilst the bulk of research has been directed towards a study of the employment situation it has been necessary to put this into the broader Regional and national context wherever possible.

The Southern Sudan is very different from the North in many respects both physically and culturally, and, as a result of its diversity, the country has great economic potential. Inhabited by over one-quarter of the population of Sudan in a range of tribal groups, the Region is predominantly rural in character. Only 10% of the population (1973) live in settlements of 4,000 inhabitants or more. The three towns of Juba, Wau and Malakal are the only settlements of over 20,000 inhabitants, of which Juba is by far the largest with an estimated population (1980) of almost 100,000. The Region is isolated and hindered by both problems of transport and communication and the legacy of the seventeen years of civil war which largely destroyed the infrastructure developed under British condominium rule. The problems have been further compounded by the necessity to settle and absorb large numbers of returnees and displaced persons and the situation will be slow to improve as the Southern Sudan has become a refuge for those fleeing from similar situations in neighbouring countries. The Region is economically far behind the rest of the Sudan with a very weak productive structure based predominantly on subsistence agriculture. Throughout the country the Government owns the majority of capital establishments and, particularly in the Southern Region, levels of investment and saving are very low. Because

of this, the Regional Government is severely restricted in its contribution to the development of the South. This is clearly demonstrated by the budget of the six year development plan where, of a planned spending of almost LS 300 million over the period 1977-1983, less than 18% was expected to be generated within the Region, the rest coming from Central Government funds and international aid. The Region is also dependent on the exterior for all goods of a modern type and little money is available for the initiation of industrial growth at this stage.

Since the end of the civil war the emphasis in the South has been on rebuilding and development, and much of this has naturally been in Juba and its environs. The scale of change is demonstrated by the rate of growth of the town, the population having doubled to 100,000 in less than a decade. The town's facilities are seriously overstretched having been designed for a population of less than 10,000. With the growth of population on such a scale overall conditions have not improved. The town to some extent could be described as an overgrown village with over 75% of the population living in very difficult conditions in traditional mud huts with no facilities.

The growth of Juba has been largely due to rural-urban migration: more than 80% of all persons twelve years and above had been born elsewhere. With such a rapid increase in population, employment conditions are obviously very difficult. Figures from the 1973 census and from the PMU survey bear this out: it is estimated that whilst employment in the period 1973-1979 increased at an annual rate of around 5%, the population increased at 7-8% per annum and unemployment rose at almost 10% per annum. The problem is further exacerbated by the nature of the education system which has inadequate facilities to allow more than a small percentage of the population to follow the educational ladder through the whole 12 years from primary to senior secondary school. Hence the population includes a large number of poorly educated people which adds further to the unemployment problem.

A paradox exists in that many Government posts remain unfilled despite the large pool of available labour since many unemployed do not have an adequate educational background or training.

In response to the economic plight of the town there has been in Juba a rapid and recent development of informal sector activities i.e. small enterprises largely run by individuals with limited capital and facilities, and labour-intensive techniques, as opposed to the large scale, mechanised, capital-intensive, Government run activities associated with the modern sector. A description of these informal sector activities has been presented in Chapters 5, 6 and 7. As the informal sector is a rapidly growing feature of urban settlements throughout the Third World where the modern sector fails to absorb a fast expanding labour force, a large amount of literature on the subject has been generated. Chapter 3 presented the theoretical background to this study and after a discussion of the major theoretical concepts it was decided that an approach such as that of Sethuraman (1975) and as used by the ILO was relevant for the task of basic data gathering in an almost unresearched society. A definition was needed which would cover the wide range of activities found in the town, from the Northern-run shops of the town centre to the pavement hawker. The analysis was carried out on three levels: on a Regional level using 1973 census data; on a town level using the 1973 census and 1979 PMU survey data; and on a still smaller scale with a survey of Konyo-Konyo market, one of the largest concentrations of informal sector activity in the town. First estimates of the size of the informal sector were made from the 1973 census, and for the Region overall it was estimated that over 13% of the economically active (outside subsistence agriculture) were involved in informal sector activities. An estimate for Juba Town's informal sector was also made from this data and between 20% and 25% of the labour force were found to be involved. The PMU Juba Town survey of 1979 allowed the characteristics of the population to be explored

in more depth but also revealed some of the major problems inherent in such a study. For example, the definition of "employed" was found to be unsatisfactory since many respondents did not reveal their informal sector activity if it was part-time and others were unwilling to reveal their work since it depended on commodities obtained through the black market or from questionable sources. This resulted in the number of unemployed in the working age population being overestimated, at over 30%, and in the masking of informal sector activity. The estimated size of the informal sector from the PMU survey of approximately 15% of the labour force was hence regarded as too low, and the figure of 20-25% obtained from the census data considered to be nearer the true situation.

The informal sector survey carried out in Konyo-Konyo market further emphasised characteristics of the workers which had been deduced from the 1973 census and the PMU survey and which were outlined in Chapters 5 and 6. It was felt that Konyo-Konyo was representative of some of the main kinds of informal activity to be found in the town and a sample of over 200 workers was made. It was found that the informal sector was dominated by males (76% of Konyo-Konyo workers) but that the female participation rate had been more adequately estimated than in previous surveys and, at 24% of the market workers, the figure for female employment was over twice the estimated rate of participation in the informal sector derived from the 1973 census material. The informal sector occupied a predominately young workforce (65% of market workers were less than 30 years old) and was an attraction to newly arrived migrants. Less than 10% of the market workers had been born in Juba and most had arrived recently, 40% in the preceding two years as compared with 30% for the town overall. The informal sector was dominated by certain tribal groups, with the nearest neighbouring settlements of Bor and Yei being the sources of many migrants, in addition to a sizeable migrant population from the North. Differences in mobility

between males and females were noted, with the male being much more mobile and travelling further to find work. Only 44% of the males had been born in Eastern Equatoria as compared to 80% of the females. The educational status of workers was investigated and it was found that over half were illiterate, as compared to 35% for the town overall, and a large number who had been to school had only completed primary education. Analysis of the employment background of the workers revealed that of the 38% of males and 20% of females who had had other jobs only one-quarter had previously found employment in the formal sector. It was discovered that most workers had a subsistence agriculture background since almost two-thirds of the fathers of informal sector workers were subsistence farmers, with only 10% having been employed in the formal sector, whilst 11% had themselves been informal sector workers. Attitudes of workers to the nature of their activities were investigated and it was found that over 60% were satisfied with their jobs. Over one-quarter felt that their incomes were satisfactory or good and it was found that when compared with the working population of the town as a whole, informal sector workers were able to earn comparable or higher wages than, for example, employees in the lower cadres of government service. An added advantage of more flexible working hours and a sharing of responsibilities for enterprises on a part-time basis was noted, although in general working hours per week were longer than those in the formal sector.

8.2 Conclusions

This study of the informal sector within Juba has touched upon many subject areas considered in other informal sector studies. Throughout the literature runs the question of whether this sector is a useful feature of the economy which contributes to development or whether its growth should be dissuaded. In the light of the Juba example, a number of

comments may be made.

The informal sector is beneficial to the Juba economy at present in that employment is being created to absorb those who cannot find jobs in the formal sector. Employment is being created by the unemployed in a situation where the Government faces both financial and organisation difficulties. It offers opportunities to those who would find it extremely difficult to find jobs in the formal sector: the poorly educated; those wishing to maintain themselves whilst continuing their education; and females who need to support themselves or supplement their husband's incomes. Using predominantly local materials and wastes the sector is supplying a large percentage of the population of the town with alternative commodities to the expensive imported items which most of Juba's inhabitants are unable to afford. In some cases, informal sector workers are producing articles (such as charcoal stoves and oil lamps) for which there is no imported equivalent, and which are widely used throughout the town. Informal sector activities may also draw on traditional craft backgrounds and stimulate initiative on the part of the participants. Encouragement of such activity for example through cooperatives, whilst at present on a very limited scale has shown promising results, with the development of a strong community spirit and enthusiastic attitude to work. This indicates potential for the future as it seems unlikely that the economic structure of the town, and indeed the Region, will be radically altered even within the next few decades. If associated projects such as small-scale savings schemes were initiated, the informal sector could in fact contribute more viably to the economy of the Region.

Conversely, the development of the informal sector is held back by many factors. So far there has been little interest and in some cases even hostility towards the informal sector as a whole. This is partly because the shortage of commodities within the Region results in a sizeable black market in which informal sector workers must necessarily participate, and

partly because certain activities such as brewing and food production are in a precarious position, being periodically shut down during outbreaks of disease. The situation is unlikely to change as long as informal sector workers are restricted to working in poor conditions and with inadequate facilities. To participate in the informal sector involves a certain risk factor and this dissuades potential entrants. In addition, within this sector there is strong competition and some groups develop at the expense of others; for example, Ugandan refugees with their more developed entrepreneurial skills, and Northern Sudanese migrants with their long history of trading and with larger capital resources. Such aspects need to be explored in depth, and, as stressed throughout this study, much work remains to be done before an opinion as to the long-term viability of the informal sector in Juba terms can be made.

In the light of present research however, Juba's informal sector is an indispensable part of life in the town and its surrounding rural areas and it is to be hoped that future development policies can be shaped to take advantage of what is a response by the population to a very difficult economic situation and one which is unlikely to change given present constraints for a considerable time to come.

APPENDIX 1 : Estimation of Population of Juba 1979

1.1 Methodology

To enable a socio-economic survey of Juba to be carried out, it was first necessary to estimate the population of the town and its density, to enable a suitable sample population to be selected for the survey.

Use was made of aerial photographs of Juba produced in January 1977 by Mefit, a team of consulting engineers involved with the production of a Southern Region Development Study for the Government. Coverage of Juba at 1:5000 scale enabled data at the level of the individual tukl to be discerned. An overlay of grid squares, each representing 150 m x 150 m on the ground, was produced for the aerial photograph, and within each grid, the number of tukls and the number of square buildings [1] was counted and noted. The distinction between the two types of dwellings was made because it was expected, due to the generally larger size of the square buildings, that higher occupancy rates, and possibly different socio-economic standards would prevail. (The construction of a concrete building, even on a small scale is an undertaking requiring several thousand pounds due to the scarcity of the raw materials and the need to import many items from neighbouring Kenya). This counting was done for all grid squares which fell within the boundary delimited by PMU to form the "urban area" i.e. the built-up area of the town. A total for the number of tukls in the urban area, and also for the number of square buildings, was produced. Buildings were discounted if they were known (from field observation) to be non-residential e.g. religious places, schools, workshops, shops etc.

A random selection of squares across the grid was then made to produce a group of 250 buildings in total (both tukls and square buildings) in the following way:- in each randomly selected square, as far as possible, one square building and one tukl were chosen at random to form part of a sample. Some selected squares did not have both kinds of buildings, but selection of random grid squares continued until a sample of 250 buildings was produced.

The next step was to estimate the population of these selected buildings, and a team of schoolboy enumerators, supervised by PMU members, visited each of the 250 buildings in turn to ask the question, "How many people slept here last night?" In this way an average occupancy rate for both square buildings and tukls was produced. The overall estimate of population for Juba could then be estimated:

JUBA POPULATION ESTIMATE	=	No. of square buildings x occupancy rate	+	No. of tukls x occupancy rate

As the Mefit aerial photograph had been produced in January 1977, an attempt was made to allow for growth during this two year period by obtaining from Juba Town Council & Eastern Equatoria Land's Office official figures for the number of additional building plots allocated in the town since this time. Juba is divided into residential areas by housing class : Class I, II & III have to be permanent structures i.e. square buildings; whilst Class IV

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1. A 'square' building was generally constructed of concrete faced walls with a tin roof and was larger than the circular, mud walled, thatched roofed tukl.

housing consists predominantly of tukls. From these figures an estimate of increase in building between January 1977 and early 1979, i.e. structures which did not appear on the map, could be made

1.2 Results

a) From Mefit aerial photograph:-

Total number of tukls in Juba urban area 16,541

Total number of square buildings " " 4,147

Enumerators visited 123 tukls and 127 square buildings i.e. a sample of 250 buildings in the Juba urban area

250 buildings = 1,112 persons recorded as resident on the night before (440 in tukls, 672 in square buildings)

Average occupancy rate per building = $\frac{1112}{250}$ = 4.45

Average occupancy rate per tukl = $\frac{440}{123}$ = 3.58

Average occupancy rate per sq.bldg = $\frac{672}{127}$ = 5.29

Juba Population Estimate = (16,541 x 3.58) + (4,147 x 5.29) = 81,171

i.e. 81,171 estimated population Jan. 1977 from Mefit data.

b) From Town Council & E.Equatoria Land's Office

"Square building" plots allocated Jan.1977 - Jan. 1979 (one square building per plot allowed) in Class I, II and III areas = 13 plots

69 persons

"tukl" plots allocated Jan. 1977 - Jan. 1979 (approx 3 tukls constructed on each plot)

= 255 plots

= 765 tukls

= 2739 persons

c) Revised estimated for Jan. 1979:-

81,171 + 69 + 2739 = 83,979

84,000

i.e. 84,000 estimated population Jan. 1979.

1.3 Shortcomings

Obviously there were certain shortcomings in this approach, but it is useful in producing a first working estimate. The main inaccuracies are likely to have occurred in three specific areas:-

a) Although Juba is categorised by housing class into four housing groups, it is estimated that over 30% of dwellings are in unclassified areas and are, in the strictest sense, illegal dwellings. Whilst all dwellings, whether legal or squatter, were counted from the 1977 Mefit map, the Town Council & Land's Office could give no indication of the increase in size of this group 1977-79 and it is suspected that a considerable amount of growth has occurred in these areas over that period. Growth in particular has occurred at the edges of the town e.g. Munuki, and across the river at Gumba, both areas unaccounted for at the time of the population estimate.

b) A large amount of house building in Juba during field observation has been noted to be "infilling" of existing plots with additional dwellings rather than the acquisition of new plots. Again this is not shown in official records and has been remedied in the further work of PMU during 1980.

c) The third source of inaccuracy was the small size of the building sample used to estimate average occupancy rates. This small size is due to several constraints (similar to those encountered in personal informal sector research): (1) Lack of manpower necessitated using a small group of secondary school-leavers; (2) the complexity and lack of planning of Juba has produced a very confusing town layout and locating on the ground the theoretical sample from the air photo proved difficult and time consuming; (3) constraints of time and money with a limited budget and a desire for rapid results necessitated using a relatively small sample; (4) finally some difficulties were encountered due to suspicion on the part of the interviewees due to language and tribal differences. However, these were largely overcome by the enumerators.

In summary, the population estimate for Juba produced by PMU was considered to be of reasonable reliability and was used as the basis for the Juba Town Survey described in Appendix 2.

1.4 A re-estimate of the Population of Juba, 1980

Following the Juba Town Survey in 1979 a further estimate of Juba's population was made in June 1980. The methodology and results are given below.

From the base maps used in the original population estimate 50 areas were systematically randomly selected using the same process as in 1979. The number of buildings were counted as of 1977. A group of students were sent into the field to recount in the chosen areas the number of buildings and their occupants for 1980. A percentage increase was calculated and this was applied to the total number of buildings in Juba 1977 to produce a revised figure of total dwellings for 1980. Multiplying this figure (which was comprised of both tukls and square buildings) by the new occupancy rates, a new estimate of Juba's total population was derived.

For 50 areas selected on Mefit maps

1977 building count : 430 tukls
158 square buildings

1980 building count: 474 tukls
168 square buildings

Percentage increases tukls 10.2%
sq.bldgs. 6.3%

16541 tukls in Juba (1977) + 10.2% = 18,228 in 1980
increase (16541 + 1687)

4147 sq.bldgs. " (1977) + 6.3% = 4,408
increase (4147 + 261)

Occupancy rates

tukls 3.8

sq.b. 5.9

18228 x 3.8 = 69,266

4408 x 5.9 = 25,930

Juba Total Population 1980 = 95,196 persons

In addition, to the above estimate, a survey was undertaken (again in 1980) at Gumba on the east bank of the Nile. This is a rapidly growing suburb of Juba that has developed across the river since the completion of the bridge in 1975. A minimum estimate of around 3,000 persons were then living in that area. In total this would bring the population estimate for the whole town to over 98,000 and rounding this to a figure 100,000 for Juba Town is a reasonable estimate for 1980.

APPENDIX 2 : Juba Town Survey 1979

2.1 Methodology of Survey Design

After estimating the population of Juba, the next stage was to design a survey to gauge socio-economic conditions in the town. To make a sample as representative as possible of Juba's population, the following sample selection technique was used:-

a) The population of Juba's urban area was stratified by density into six density classes.

b) The elementary unit for the sample was determined as the compound,[1] and the size of the sample determined as 200 compounds (2% of the estimated 10,000 in Juba). These compounds were proportionally selected from the six density strata.

c) The penultimate selection of compound location was determined by a systematic random sample of the grid squares in each stratum. One elementary unit, i.e. compound, was then randomly selected from each chosen grid square and all the individuals within it enumerated.

These stages are discussed in more detail below.

(a) Stratification of the sample

Six density strata were devised. Within each stratum, several factors, such as building structures and type of public services tended to be similar. The population of each stratum was calculated as a percentage of the overall estimated population.

	STRATA	POPULATION AS % OF TOTAL POPULATION
(1)	0 - 2,499 persons per km^2	21%
(2)	2,500 - 4,900 " "	15.5%
(3)	5,000 - 7,499 " "	14.0%
(4)	7,500 - 9,999 " "	13.0%
(5)	10,000 - 12,499 " "	9.5%
(6)	12,500 + " "	27.0%
		100.0

(b) Allocation of the sample

200 compounds were selected from the six strata above in proportion to the percentage of the total population found in each stratum by the following method:-

Let N = total estimated number of compounds in Juba Town

Nh = total number of compounds in the h^{th} density stratum

nh = required number of sample compounds in h^{th} density stratum

The stratum sample is found in the following manner

$$nH = \frac{Nh}{N} \times 200$$ (where 200 = overall sample size)

1. See definition in Appendix 3.

e.g. for Stratum (1)

$$Nh = \frac{2100}{10,000} \times 200 = 42 \text{ compounds}$$

Results for the six strata (i.e. no. of compounds selected from each)

(1)	42	(4)	26
(2)	31	(5)	19
(3)	28	(6)	54

(c) Selection of sample grid squares

A density overlay for the aerial photograph was compiled of 0.5 inch grid squares, at 1:5000 scale each representing 65 m x 65 m on the ground. The sample selection of grid squares was undertaken separately in each stratum, grid squares being numbered serially in a serpentine fashion from 1 to Gh, the stratum size. To then achieve a geographic stratification within each stratum, a systematic random sample of grids was executed:

Let Gh = stratum size (total no. of grid squares in h^{th} stratum)

gh = stratum sample size (number of grid squares to be included in the sample) for h^{th} stratum

This provides a "sampling fraction" of $\frac{gh}{Gh}$. The stratum size of sample, gh, was selected by choosing 1 in Gh/gh, where Gh/gh is the "sampling interval". Within each stratum the sample was selected by taking a starting number at random between 1 and Gh/gh inclusive and subsequent grid squares selected for the sample were determined by successively adding the sampling interval to the starting number.

e.g. Stratum (1)

Gh (total no. of grid squares) = 1840

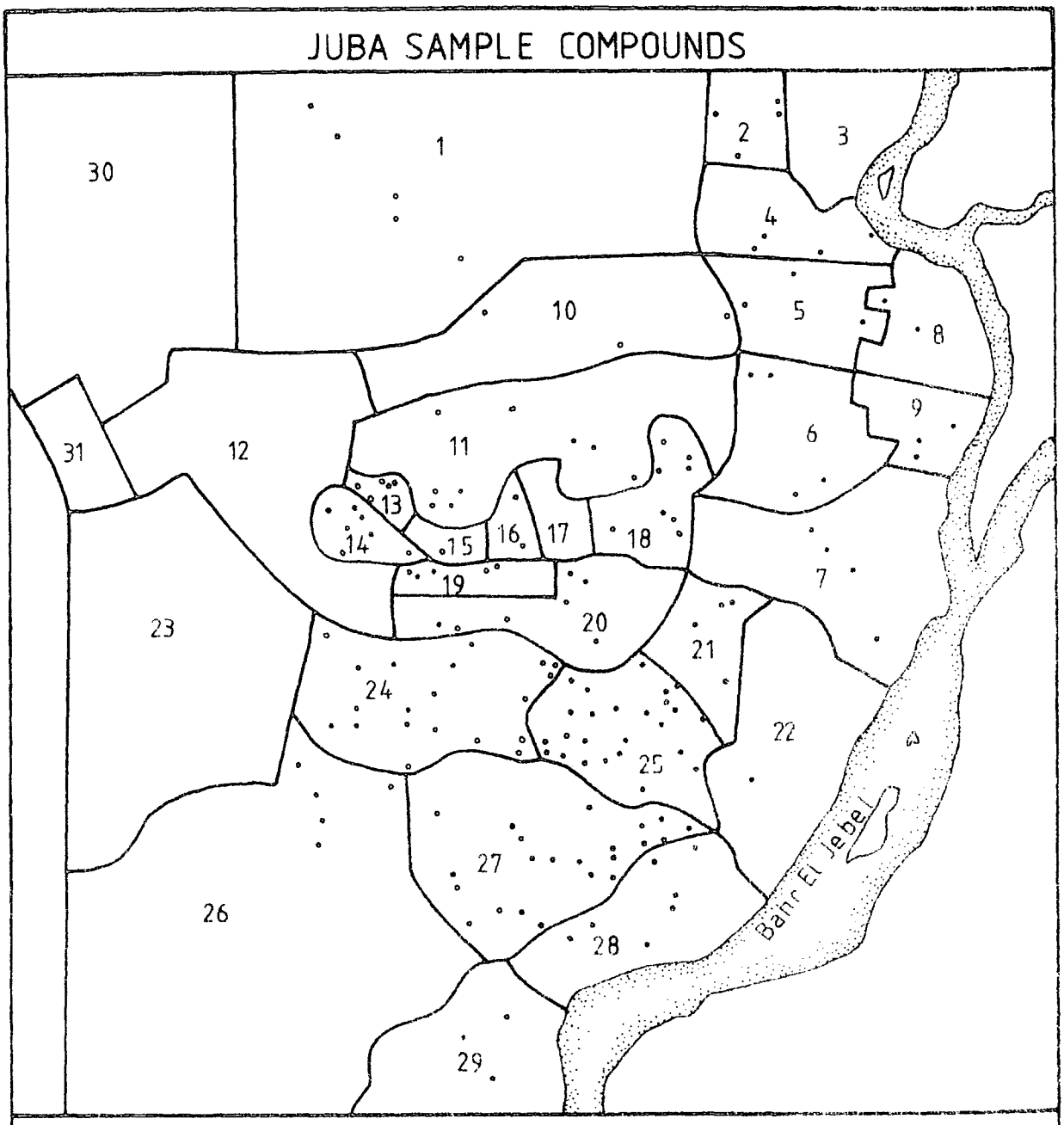
gh (required sample size) = 42

sampling interval I = Gh/gh = 44

The starting number was therefore chosen at random from the range 1 to 44 using 2-digit random number tables. For stratum (1) this was 10. The grid square serially numbered 10 thus became the first member of the sample, and 44's added after this to produce the series 10, 54, 98 ... 1814. A similar process was carried out for each stratum to produce the sample grid squares. The final selection of sample compounds, one per selected grid square, was done on a random basis. The distribution of the sample is indicated on the map, overleaf.

2.2 Devising the Questionnaire

It was decided that the questionnaire be divided into two parts : Part 1 - Compound data; Part 2 - individual data on Education, Employment & Mobility to cover research areas of members of PMU, for all persons of 12 years of age and above. From the combustion of the two parts it was hoped to obtain an overall general picture of socio-economic conditions in Juba.



1. Airport
2. Beteri
3. Nyaying
4. Ghabat
5. Hay Jallaba
6. Officials Qtrs
7. MTC/CMS
8. Juba Town
9. Juba Town
10. Ministers
11. Officials Qtrs
12. University
13. Zindiya
14. Bulluk
15. Bulluk
16. Game Reserve
17. Commercial
18. Temergia
19. Thowra
20. Nimra Talata
21. Hay Malakal
22. Girls' Senior
23. Hila Saha
24. Atlabara
25. Malakiya
26. Military Area
27. Kator
28. Kasaba
29. Lologo
30. Nimra Wahid
31. Munuki

Both parts were produced in a draft form and tested in early March 1979 over a period of one week, incorporating approximately 50 questionnaires. Enumerator errors (the same team of secondary school leavers were used) were noted and questionnaires subsequently modified to produce the final copies.

Finally, the two questionnaires were coded so that each response had an identity number and letter, using responses from the test of the draft to draw up lists of likely responses which could then be coded.

2.3 The carrying out of the survey

(a) Enumeration

As mentioned above, a small team of secondary school boys was trained in the methods of interview for completing the questionnaires. For every compound visited, one Part 1 questionnaire was completed and as many Part 2's as there were persons of 12 years old and above living in the compound.

(b) Time Span

The survey was conducted over the period March - June 1979

(c) Data Coding

For both Part 1 and Part 2 a coding card was designed with a grid square for each item on the coding list. Coding from questionnaires to cards was carried out by enumerators, closely supervised and cross-checked by PMU members at all stages. A coding card was completed for each questionnaire and cards arranged in files as follows:

(1) Part 1 - Compound Data
(2) Part 2 - Males of 12 years and above
(3) Part 2 - Females of 12 years and above
(4) Part 2 - Males less than 12 years
(5) Part 2 - Females less than 12 years

(d) Data Processing

Enumerators extracted desired information from each coding card in the filing system. This involved, for each tabulation required, looking at the same grid square on each coding and in sequence, counting and tabulating the results. Again work was closely supervised by PMU members at all stages.

2.4 Data on the Survey

In total, 158 compounds were enumerated (the target of 200 was not reached since by the sample selection procedure for the compounds described previously, some randomly selected grid squares occurred in areas within the urban boundary where no dwelling existed, and also several of the selected dwellings were empty/had only a watchman in residence)

Population within these compounds:-

	Male	Female	Total
Less than 12 yrs.	225	180	405
12 yrs and above	779	522	1301
	1004	702	1706

Sample size:-

Compounds $\frac{158}{10,000} = 1.6\%$

Population $\frac{1706}{84,000} = 2.0\%$

The material derived from these questionnaires provided a background and a basis on which my own field data could later be built and comparisons made.

N.B. With regard to Part 1 of the Survey, compound data, it should be noted that a similar, though much smaller scale survey was carried out by the PMU, before the writer's arrival in 1978, covering 108 compounds (randomly selected, though without the use of stratified random sampling) and 856 people. It is interesting to make a comparison of the data between this 1978 survey and 1979 results to gain an impression of short term changes in Juba occurring within the study period and this is to be found in Appendix 6.

APPENDIX 3 : Survey Definitions

HOUSEHOLD

A household is a group of persons who normally live and eat together, or at least share a house without necessarily having common cooking arrangements.

COMPOUND

A compound is a group of tukls, square buildings or both surrounded generally by a bamboo fence and forming a recognisable unit on the street plan and in the field. It may comprise one or more households.

TUKL

A hut, generally round, and constructed to a traditional pattern, with mud walls and thatched roof.

SQUARE BUILDING

A dwelling usually of a more substantial nature and larger size than a tukl and generally constructed of concrete with a tin roof.

EMPLOYMENT STATUS

Employee — A person who works for an employer such as a bank or a contractor and is paid by the employer, whether paid regular wage or by results of his work.

Employer — A person who operates an economic enterprise or works on his own in trade or profession and engages one or more employees. A person who engages only a domestic servant is not an employer.

Own Account Worker — A person who operates an enterprise or works on his own in a trade or a profession etc., and does not engage any employees but may get help of an unpaid worker.

Unpaid Family Worker — A person who helps in an economic enterprise, etc. of his/her family without being paid.

Unpaid Worker for Others — A person who works without pay for someone who is not a member of his/her family, e.g. an apprentice.

Unemployed — A person who for most of the time during the twelve months preceding census day has not been working, but has been seeking work for pay or profit, including those seeking work for the first time.

Economically Active Population — The economically active population comprises employed and unemployed, including those seeking work for the first time.

APPENDIX 4 : Summary of Juba Town Survey 1979 Questionnaire Content

PART ONE : COMPOUND DATA

1. Location
   - Date of interview
   - Name of interviewer
   - Residential Area
   - Compound Number
   - Sketchmap of location of compound

2. Layout
   - Sketchman of compound layout

3. Ownership of the Compound
   - Place of residence of compound owner
   - Relationship of owner to inhabitants of compound
   - Rent details
   - Sub letting of compound
   - Plot charges

4. Compound composition
   - Identification of those who slept in compound the night before the survey
     - Name
     - Relationship to head of household
     - Sex
     - Age
     - Tribe

5. For all children below the age of 12 years
   - Place of birth
   - Level of schooling

6. Building materials of living quarters

7. Details of any maintenance to buildings during the period year

8. Electricity and water supply
   - Availability
   - Amount spent on those commodities

9. Toilet facilities

10. Type of fuel used for cooking and amounts spent

11. Material possessions owned by compound members

12. Livestock kept in the compound

13. Ownership of other property by compound members

PART TWO ; EDUCATION, EMPLOYMENT, MOBILITY

To be answered by all persons aged 12 and above. A separate questionnaire completed for each person

1. Location
   - Date of Interview
   - Name of Interviewer
   - Residential Area
   - Compound Number

2. Identification Particulars
   - Name of respondent
   - Sex
   - Age
   - Marital status
   - Religion
   - Nationality
   - Country of Birth if outside Sudan
   - Tribe

3. Mobility
   - List of all the places where respondents lived for more than six months duration, beginning with place of birth.
   - Respondent's normal place of residence
   - Reasons for coming to Juba
   - Means of transport used in coming to Juba
   - Respondent's contacts with home area
   - Respondent's connections in Juba before arriving
   - When respondent intends to leave Juba
   - Reasons for leaving
   - Place respondent would go to

4. Education
   - Respondent's level of schooling
   - Whether respondent is currently at school or has left

5. Employment and Occupational Status
   - Unemployed
   - Reasons for Unemployment
   - Respondents occupation
   - Training, other than formal schooling, received
   - Occupation of Father
   - Occupational status
     - employer
     - employee
     - own-account worker
     - unpaid family worker
     - unpaid worker for others
   - Place of employment
     - premises
     - services available
   - Previous income earning activities
   - For those unemployed, whether respondent:
     - looking for employment
     - looking for employment for the first time
     - looking for self employment
     - not looking for any form of employment
   - For those looking for employment, whether respondent:
     - registered at labour office
     - visiting potential employers
     - writing application letters
   - Difficulties faced in seeking employment
   - Kind of job respondent is seeking
   - Minimum monthly acceptable wage

APPENDIX 5 : CALCULATION OF POPULATION PERCENTAGE INCREASES

Let initial population = i

final population = f

number of years between i and f = n

assume an x% increase p.a. in population

$$f = i\left(1 + \frac{x}{100}\right)^n$$

$$x = 100\left\{\left(\frac{f}{i}\right)^{\frac{1}{n}} - 1\right\}$$

1930-1956

i = 1000; f = 10,600; n = 26

x = 9.4% p.a.

1956-1973

i = 10,600; f = 56,723; n = 17

x = 10.4% p.a.

1973-1980[1]

i = 56,723; f = 96,000; n = 7

x = 7.6% p.a.

1973-1980[2]

i = 56,723; f = 100,000; n = 7

x = 8.3% p.a.

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1 1980 population estimate for Juba Town used.

2 1980 population estimate including Gumba settlement used

APPENDIX 6: A COMPARISON OF PART 1 DATA FOR 1978 AND 1979/80

		1978	1979/80
Total number of compounds		108	158
Total number of living quarters		245	563
Average no. of living quarters per compound		2.3	3.6
Total Population		856	1706
Total No. of males		441	1004
Total No. of females		415	702
Sex Ratio		106.4	143.0
Total No. of Males < 12 years		139	225
Total No. of Females < 12 years		138	180
Density Per Living Quarter		3.49	3.0
Density Per compound		7.9	10.8
Owner resident in compound		45.4%	57.0%
Owner non-resident		38.0%	30.4%
Govt.owned compound		16.7%	12.7%
Compound owner related to residents of compound		14.8%	50.6%
Compound owner not related		23.1%	49.4%
Mains Electricity YES		22.2%	13.9%
Mains Electricity NO		77.8%	86.1%
Piped Water within compound YES		24.1%	17.1%
Piped Water within compound NO		76.0%	83.9%
Water obtained by lorry		7.4%	3.8%
by donkey		3.7%	4.4%
by man		17.6%	14.6%
from public tap		40.7%	43.7%
from well		5.6%	1.3%
from river		26.9%	15.2%
Toilets used YES		37.0%	31.6%
Toilets used NO		63.0%	68.4%
Type of toilet Bucket		22.2%	13.9%
Pit		9.3%	13.9%
WC		5.6%	3.8%
Location of toilet - inside compound		24.1%	25.3%
outside compound		13.0%	6.3%
Members of compound owning other property	YES	18.5	19.0
in Juba	NO	81.5	81.0

APPENDIX 7

TABLE 7.1 JUBA POPULATION BY AGE AND SEX 1979 (PERCENTAGE DISTRIBUTION)

AGE	MALE	FEMALE	TOTAL
0-4	10.4	10.5	10.4
5-9	10.2	11.7	10.8
10-14	10.6	15.8	12.7
15-19	19.1	19.2	19.2
20-24	12.6	15.0	13.6
25-29	13.5	9.7	12.0
30-34	7.6	7.4	7.5
35-39	6.8	4.3	5.7
40-44	3.6	1.9	2.9
45-49	2.9	2.4	2.7
50-54	1.0	0.4	0.8
55-59	0.5	0.9	0.6
60-64	1.0	0.2	0.7
65-69	0.2	0.4	0.3
70-74	0.1	-	0.1
75 and above	-	0.1	0.1
Total	100.0	100.0	100.0
(Sample)	(1004)	(702)	(1706)

TABLE 7.2 JUBA POPULATION BORN IN JUBA BY AGE AND SEX (PERCENTAGE DISTRIBUTION)

AGE	MALE	FEMALE	TOTAL
0-4	29.8	23.0	26.8
5-9	23.9	21.8	23.0
10-14	15.5	22.6	18.7
15-19	15.2	15.3	15.3
20-24	7.2	8.1	7.5
25-29	4.2	3.2	3.8
30-34	1.6	2.0	1.8
35-39	1.3	1.6	1.4
40-44	0.3	0.8	0.5
45-49	-	1.2	0.5
50-54	0.3	0.4	0.4
55-59	0.3	-	0.2
60-64	0.3	-	0.2
65	-	-	-
Total	100.0	100.0	100.0
(Sample)	(309)	(248)	(557)

Percentages may not add up to 100 due to rounding.
SOURCE: University of Juba Population and Manpower Unit Juba Town Survey 1979

TABLE 7.3 JUBA POPULATION 1979 NOT BORN IN JUBA BY AGE AND SEX (PERCENTAGE DISTRIBUTION)

AGE	MALE	FEMALE	TOTAL
0-4	1.7	3.7	2.5
5-9	4.0	6.2	4.9
10-14	8.3	12.1	9.8
15-19	20.9	21.4	21.1
20-24	15.1	18.7	16.5
25-29	17.7	13.2	15.9
30-34	10.2	10.4	11.1
35-39	9.2	5.3	7.8
40-44	5.0	2.4	4.0
45-49	4.2	3.1	3.7
50-54	1.3	0.4	1.0
55-59	0.6	1.3	0.9
60-64	1.3	0.4	1.0
65-69	0.3	0.7	0.4
70-74	0.1	-	0.1
75 and above	-	0.2	0.1
Total	100.0	100.0	100.0
(Sample)	(695)	(454)	(1149)

TABLE 7.4 JUBA POPULATION 1979 BY SEX AND COUNTRY OF BIRTH (PERCENTAGE DISTRIBUTION)

COUNTRY OF BIRTH	MALE	FEMALE	TOTAL
SUDAN	94.1	92.2	93.3
UGANDA	5.0	6.4	5.6
ZAIRE	0.9	1.1	1.0
TANZANIA	-	0.1	0.1
ETHIOPIA	--	0.1	0.1
Total	100.0	100.0	100.0
(Sample)	(1004)	(702)	(1706)

Percentages may not add up to 100 due to rounding.

SOURCE : University of Juba Population and Manpower Unit Juba Town Survey 1979

TABLE 7.5 JUBA POPULATION 1979 BY PROVINCE OF BIRTH AND SEX (PERCENTAGE DISTRIBUTION)

PROVINCE	MALE	FEMALE	TOTAL
KHARTOUM	2.5	1.4	2.1
WHITE NILE	0.2	0.1	0.2
BLUE NILE	0.2	-	0.1
NORTHERN	0.2	0.1	0.2
KASSALA	0.1	-	0.1
RED SEA	-	0.1	0.1
KORDOFAN	0.6	0.6	5.9
NORTHERN DAFUR	-	0.1	0.1
SOUTHERN DAFUR	0.2	-	0.1
EASTERN EQUATORIA	63.0	72.6	67.0
WESTERN EQUATORIA	8.9	9.0	8.9
JONGLEI	9.4	3.3	6.9
UPPER NILE	2.7	1.1	2.1
BAHR EL GHAZAL	5.2	2.3	4.0
LAKES	1.0	1.3	1.1
ETHIOPIA	-	0.1	0.1
TANZANIA	-	0.1	0.1
UGANDA	5.0	6.4	5.6
ZAIRE	0.9	1.1	1.0
TOTAL	100.0	100.0	100.0
(Sample)	(1004)	(702)	(1706)

Percentages may not add up to 100 due to rounding.

SOURCE : University of Juba Population and Manpower Unit Juba Town Survey 1979

APPENDIX 8

TOPICS COVERED BY THE INFORMAL SECTOR SURVEY OF KONYO-KONYO MARKET

Date

Enumerator's Name

PART ONE

Name of respondent

Occupation of respondent

Age

Sex

Tribe

Place of Birth by locality, district, province

Normal place of residence

Length of residence in Juba (if in Juba)

Frequency of visits to Juba (if not in Juba)

Literacy

Languages spoken

Education status

PART TWO

Localities lived in between place of birth and coming to Juba

Commencement of present job

Previous Jobs

Reasons for stopping previous occupations

Father's occupation

Whether current job full- or part-time

Why current occupation chosen

Job satisfaction

People supported

Employment status

Market rent

Income

Usual working hours

Management of enterprise

APPENDIX -9 OCCUPATIONAL STATUS BY OCCUPATION AND SEX IN THE SOUTHERN REGION 1973.

0/1 PROFESSIONAL, TECHNICAL AND RELATED.

CODE	OCCUPATION	EMPLOYERS			OWN-ACCOUNT WORKERS			EMPLOYEES			TOTAL		
		M	F	T	M	F	T	M	F	T	M	F	T
011	Chemists	-	-	-	-	-	-	6	-	6	6	-	6
014	Physical Science Technicians	-	-	-	-	-	-	21	7	28	21	7	28
021	Architects and Town Planners	-	-	-	-	-	-	38	-	38	38	-	38
022	Civil Engineers	-	-	-	-	-	-	14	-	14	14	-	14
023	Electrical and Electronics Engineers	-	-	-	-	-	-	27	-	27	27	-	27
024	Mechanical Engineers	-	-	-	-	-	-	133	-	133	133	-	133
027	Mining Engineers	-	-	-	-	-	-	7	-	7	7	-	7
032	Draughtsmen	-	-	-	-	-	-	12	-	12	12	-	12
033	Civil Engineering Technicians	-	-	-	-	-	-	19	-	19	19	-	19
034	Electrical & Electronics Engineering Technicians	-	-	-	-	-	-	12	-	12	12	-	12
035	Mechanical Engineering Technicians	-	-	-	-	-	-	35	-	35	35	-	35
041	Aircraft Pilots, Navigators and Flight Engineers	-	-	-	-	-	-	6	-	6	6	-	6
043	Ships' Engineers	-	-	-	-	-	-	27	-	27	27	-	27
061	Medical Doctors	-	-	-	6	-	6	92	-	92	98	-	98
062	Medical Assistants	-	-	-	-	-	-	708	-	708	708	-	708
063	Dentists	-	-	-	-	-	-	14	-	14	14	-	14
065	Veterinarians	-	-	-	-	-	-	54	-	54	54	-	54
066	Veterinarian Assistants	-	-	-	-	-	-	220	6	226	220	6	226
071	Professional Nurses	-	-	-	-	-	-	2,518	409	2,927	2,518	409	2,927
072	Nursing Personnel n.e.c.	-	-	-	-	-	-	1,665	530	2,195	1,665	530	2,195
073	Professional Midwives	-	-	-	-	-	-	207	252	459	207	252	459
077	Medical X-ray Technicians	-	-	-	-	-	-	75	-	75	75	-	75
079	Medical,Dental,Veterinary and Related Workers n.e.c.	-	-	-	-	-	-	103	7	110	103	7	110
081	Statisticians	-	-	-	-	-	-	11	-	11	11	-	11
110	Accountants	-	-	-	6	-	6	169	-	169	175	-	175
121	Lawyers	-	-	-	-	-	-	2	-	2	2	-	2
122	Judges	-	-	-	-	-	-	15	-	15	15	-	15
129	Jurists n.e.c.	-	-	-	-	-	-	124	-	124	124	-	124
132	Secondary Education Teachers	-	-	-	-	-	-	35	-	35	35	-	35
133	Primary Education Teachers	-	-	-	-	-	-	4,156	659	4,815	4,156	659	4,815
135	Special Education Teachers	-	-	-	-	-	-	49	12	61	49	12	61
136	Junior-Secondary Education Teachers	-	-	-	-	-	-	375	-	375	375	-	375
139	Teachers n.e.c.	-	-	-	14	-	14	131	6	137	145	6	151
141	Islamic Religion Teachers	-	-	-	12	-	12	233	6	239	245	6	251
142	Christian Religion Teachers	-	-	-	-	-	-	122	-	122	122	-	122
149	Workers in Religion n.e.c.	-	-	-	12	-	12	353	6	359	365	6	371
151	Authors, Writers	-	-	-	-	-	-	-	6	6	-	6	6

0/1 PROFESSIONAL, TECHNICAL AND RELATED (CONTINUED).

CODE	OCCUPATION	EMPLOYERS			OWN-ACCOUNT WORKERS			EMPLOYEES			TOTAL		
		M	F	T	M	F	T	M	F	T	M	F	T
159	Journalists, Editors, Reporters	-	-	-	-	-	-	7	-	7	7	-	7
163	Photographers and Cameramen	27	-	27	14	-	14	18	-	18	59	-	59
171	Composers, Musicians and Singers	-	-	-	6	-	6	25	-	25	31	-	31
172	Choreographers and Dancers	-	-	-	-	-	-	6	-	6	6	-	6
180	Athletes and Sportsmen & Related	-	-	-	-	-	-	31	-	31	31	-	31
191	Librarians	-	-	-	-	-	-	11	-	11	11	-	11
193	Social Workers	-	-	-	-	-	-	27	-	27	27	-	27
	TOTAL	27	-	27	70	-	70	11,913	1,906	13,819	12,010	1,906	13,916

2: ADMINISTRATIVE & MANAGERIAL WORKERS.

202	Government Administrators	-	-	-	-	-	-	769	27	796	769	27	796
211	General Managers	-	-	-	-	-	-	63	-	63	63	-	63
212	Production Managers (except farm)	-	-	-	-	-	-	40	-	40	40	-	40
219	Managers n.e.c.	6	-	6	6	-	6	47	-	47	59	-	59
	TOTAL	6	-	6	6	-	6	919	27	946	931	27	958

APPENDIX 9 CONTINUED

3: CLERICAL AND RELATED

CODE	OCCUPATION	EMPLOYERS			OWN-ACCOUNT WORKERS			EMPLOYEES			TOTAL		
		M	F	T	M	F	T	M	F	T	M	F	T
300	Clerical Supervisors	-	-	-	-	-	-	236	18	254	236	18	254
210	Government Executive Officials	-	-	-	-	-	-	3,629	6	3,635	3,629	6	3,635
321	Stenographers, Typists	-	-	-	-	-	-	100	108	208	100	108	208
331	Book-keepers and Cashiers	-	-	-	-	-	-	200	-	200	200	-	200
339	Book-keepers, Cashiers and Related Workers n.e.c.	-	-	-	6	-	6	748	6	754	754	6	760
351	Railway Station Masters	-	-	-	-	-	-	6	-	6	6	-	6
352	Postmasters	-	-	-	-	-	-	65	-	65	65	-	65
359	Transport and Communications Supervisors n.e.c	-	-	-	-	-	-	23	-	23	23	-	23
360	Transport Conductors	-	-	-	-	-	-	24	-	24	24	-	24
370	Mail Distribution Clerks, Messengers	-	-	-	-	-	-	70	-	70	70	-	70
380	Telephone and Telegraph Operators	-	-	-	-	-	-	569	13	582	569	13	582
391	Stock clerks, Stock Keepers	-	-	-	-	-	-	900	-	900	900	-	900
392	Material and Production Clerks	-	-	-	-	-	-	134	-	134	134	-	134
393	General Office Clerks	-	-	-	-	-	-	2,246	184	2,430	2,246	184	2,430
394	Receptionists	-	-	-	-	-	-	35	25	60	35	25	60
399	Clerks n.e.c.	-	-	-	-	-	-	607	-	607	607	-	607
	TOTAL	-	-	-	6	-	6	9,592	360	9,952	9,598	360	9,958

4: SALES WORKERS

CODE	OCCUPATION	EMPLOYERS			OWN-ACCOUNT WORKERS			EMPLOYEES			TOTAL		
		M	F	T	M	F	T	M	F	T	M	F	T
400	Managers	-	-	-	-	-	-	31	-	31	31	-	31
410	Working Proprietors (Wholesale and Retail Trade)	1,260	-	1,260	7,367	91	7,458	340	30	370	8,967	121	9,088
421	Sales Supervisors	-	-	-	-	-	-	76	-	76	76	-	76
422	Buyers	-	-	-	-	-	-	27	-	27	27	-	27
441	Insurance Agents, Real Estate Agents	-	-	-	22	-	22	-	-	-	22	-	22
442	Business Services Salesmen	-	-	-	6	-	6	23	-	23	29	-	29
443	Auctioneers	-	-	-	-	-	-	4	-	4	4	-	4
451	Salesmen, Shop Assistants and Demonstrators	-	-	-	256	-	256	1,934	18	1,952	2,190	18	2,208
452	Street Vendors, Canvassers and Newsvendors	-	-	-	842	109	951	370	12	382	1,212	121	1,333
490	Sales Workers n.e.c	69	-	69	844	92	936	259	81	340	1,172	173	1,345
	TOTAL	1,329	-	1,329	9,337	292	9,629	3,064	141	3,205	13,730	433	14,163

APPENDIX 9 CONTINUED

5: SERVICE WORKERS

CODE	OCCUPATION	EMPLOYERS			OWN-ACCOUNT WORKERS			EMPLOYEES			TOTAL		
		M	F	T	M	F	T	M	F	T	M	F	T
500	Managers (Catering and Lodging Services	165	120	285	115	-	115	5	12	17	285	132	417
510	Working Proprietors (Catering and Lodging Services)	70	-	70	137	6	143	41	6	47	248	12	260
520	Housekeeping and Related Service Supervisors	-	-	-	-	-	-	58	13	71	58	13	71
531	Cooks	-	-	-	20	-	20	1,242	902	2,144	1,262	902	2,164
532	Waiters, Bartenders and Related Workers	-	-	-	-	-	-	358	32	390	358	32	390
540	Maids and Related Workers	-	-	-	-	12	12	5,340	1,626	6,966	5,340	1,638	6,978
551	Building Caretakers	-	-	-	-	-	-	5,726	1,210	6,936	5,726	1,210	6,936
552	Charworkers, Cleaners and Related Workers	-	-	-	6	-	6	49	13	62	55	13	68
560	Launderers and Pressers	-	-	-	171	-	171	662	17	679	833	17	850
570	Hairdressers, Barbers	-	-	-	62	7	69	75	-	75	137	7	144
581	Firefighters	-	-	-	-	-	-	486	-	486	486	-	486
582	Policemen and Detectives	-	-	-	-	-	-	17,186	161	17,347	17,186	161	17,347
589	Protective Service Workers n.e.c.	-	-	-	27	-	27	4,743	320	5,063	4,770	320	5,090
591	Guides	-	-	-	-	-	-	69	-	69	69	-	69
599	Other Service Workers	-	103	103	145	589	734	4,082	89	4,171	4,227	781	5,008
	TOTAL	235	223	458	683	614	1,297	40,122	4,401	44,523	41,040	5,238	46,278

6·	AGRICULTURAL WORKERS, ANIMAL HUSBANDRY AND FORESTRY WORKERS, FISHERMEN AND HUNTERS												
CODE	OCCUPATION	EMPLOYERS			OWN-ACCOUNT WORKERS			EMPLOYEES			TOTAL		
		M	F	T	M	F	T	M	F	T	M	F	T
600	Farm Managers and Supervisors	-	-	-	27	-	27	202	27	229	229	27	256
611	General Farmers	171	27	198	338	157	495	2,634	176	2,810	3,143	360	3,503
612	Specialized farmers	-	-	-	-	-	-	7	-	7	7	-	7
621	General farmworkers and helpers	-	-	-	130	-	130	20,591	4,236	24,827	20,721	4,236	24,957
622	Field Crop and Vegetable Farm Workers	-	-	-	-	-	-	683	14	697	683	14	697
623	Orchard and Related Tree and Shrub Crop Workers	-	-	-	-	-	-	6	-	6	6	-	6
624	Livestock Workers	-	-	-	130	-	130	1,524	292	1,816	1,654	292	1,946
625	Dairy Farm Workers	-	-	-	15	-	15	48	-	48	63	-	63
626	Poultry Farm Workers	-	-	-	-	-	-	6	6	12	6	6	12
627	Nursery Workers and Gardeners	-	-	-	69	-	69	1,856	31	1,887	1,925	31	1,956
628	Farm Machine Operators	-	-	-	-	-	-	180	-	180	180	-	180
629	Agricultural and Animal Husbandry Workers n.e.c	-	-	-	-	-	-	2,454	-	2,454	2,454	-	2,454
631	Loggers and General Forestry Workers	-	-	-	53	-	53	592	-	592	645	-	645
641	Fishermen	-	-	-	1,332	15	1,347	1,184	6	1,190	2,516	21	2,537
649	Fishermen, Hunters and Related Workers n.e.c	-	-	-	-	-	-	283	-	283	283	-	283
	TOTAL	171	27	198	2,094	172	2,266	32,250	4,788	37,038	34,515	4,987	39,502

APPENDIX 9 CONTINUED

7/8/9: PRODUCTION AND RELATED WORKERS, TRANSPORT EQUIPMENT OPERATORS AND LABOURERS

CODE	OCCUPATION	EMPLOYERS			OWN-ACCOUNT WORKERS			EMPLOYEES			TOTAL		
		M	F	T	M	F	T	M	F	T	M	F	T
700	Production Supervisors and General Foremen	-	-	-	-	-	-	2,222	-	2,222	2,222	-	2,222
713	Well Drillers,Borers & Related Workers	-	-	-	-	-	-	108	-	108	108	-	108
722	Metal Pipe and Tube Makers	-	-	-	-	-	-	30	-	30	30	-	30
731	Wood Treaters	-	-	-	-	-	-	60	-	60	60	-	60
732	Sawyers and Related Wood Processing Workers	-	-	-	-	-	-	108	-	108	108	-	108
742	Chemical Cookers, Roasters and Related Treaters	-	-	-	-	-	-	6	-	6	6	-	6
744	Still Operators	-	-	-	-	-	-	28	-	28	28	-	28
749	Chemical Processors and Related Workers n.e.c.	-	-	-	761	60	821	-	-	-	761	60	821
752	Spinners and Winders	-	-	-	-	-	-	108	-	108	108	-	108
754	Weavers and Related Workers	-	-	-	-	-	-	161	108	269	161	108	269
759	Spinners, Weavers, Dyers and Related Workers n.e.c	-	-	-	-	-	-	162	-	162	162	-	162
761	Tanners and Fellmongers	-	-	-	-	-	-	7	-	7	7	-	7
771	Grain Millers and Related Workers	-	-	-	-	-	-	527	11	538	527	11	538
772	Sugar Processors and Refiners	-	-	-	-	6	6	22	22	44	22	28	50
773	Butchers and Meat Preparers	109	-	109	833	6	839	298	-	298	1,240	6	1,246
776	Bakers	6	-	6	7	6	13	617	522	1,169	630	558	1,188
778	Brewers and Beverage Makers	-	109	109	68	1,336	1,404	41	60	101	109	1,505	1,614
779	Food and Beverage Processors n.e.c	-	-	-	-	-	-	6	-	6	6	-	6
791	Tailors and Dressmakers	227	-	227	3,066	42	3,108	1,509	6	1,515	4,802	48	4,850
795	Sewers and Embroiderers	-	-	-	-	-	-	43	-	43	43	-	43
796	Upholsterers and Related Workers	-	-	-	6	-	6	-	-	-	6	-	6
801	Shoemakers and Shoe Repairers	-	-	-	19	-	19	99	-	99	118	-	118
802	Shoe Cutters, Lasters, Sewers and Related Workers	-	-	-	-	-	-	23	-	23	23	-	23
803	Leather Goods Makers	-	-	-	54	-	54	-	-	-	54	-	54
812	Woodworking Machine Operators	-	-	-	-	-	-	6	-	6	6	-	6
820	Stonecutters and Carvers	-	-	-	-	-	-	47	-	47	47	-	47
831	Blacksmiths	-	-	-	60	-	60	207	-	207	267	-	267
832	Toolmakers	-	-	-	-	-	-	7	-	7	7	-	7
833	Machine Tool Setter Operators	-	-	-	-	-	-	7	-	7	7	-	7
834	Machine Tool Operators	-	-	-	-	-	-	-	7	7	-	7	7
839	Blacksmiths, Toolmakers and Operators n.e.c	6	-	6	109	6	115	377	-	377	492	6	498
841	Machinery Fitters & Machinery Assemblers	-	-	-	117	-	117	117	6	123	234	6	240
842	Watch and Clock Repairers	-	-	-	66	-	66	91	-	91	157	-	157
843	Motor Vehicle Mechanics	-	-	-	57	-	57	1,776	6	1,782	1,833	6	1,839

7/8/9: PRODUCTION AND RELATED WORKERS, TRANSPORT EQUIPMENT OPERATORS AND LABOURERS (CONTINUED).

CODE	OCCUPATION	EMPLOYERS			OWN-ACCOUNT WORKERS			EMPLOYEES			TOTAL		
		M	F	T	M	F	T	M	F	T	M	F	T
851	Electrical Fitters	-	-	-	6	-	6	436	-	436	442	-	442
852	Electronics Fitters	-	-	-	-	-	-	54	-	54	54	-	54
854	Radio & Television Repairers	-	-	-	6	-	6	7	-	7	13	-	13
855	Electrical Wiremen	-	-	-	-	-	-	46	-	46	46	-	46
856	Telephone & Telegraph Installers	-	-	-	-	-	-	33	-	33	33	-	33
871	Plumbers and Pipe Fitters	-	-	-	-	-	-	94	-	94	94	-	94
872	Welders and Flame Cutters	-	-	-	-	-	-	74	-	74	74	-	74
873	Sheet Metal Workers	-	-	-	28	-	28	196	27	223	224	27	251
880	Jewellery & Precious Metal Workers	-	-	-	13	-	13	-	-	-	13	-	13
921	Compositors and Type Setters	-	-	-	-	-	-	7	-	7	7	-	7
925	Photo-Engravers	-	-	-	-	-	-	6	-	6	6	-	6
931	Painters, Construction	-	-	-	207	-	207	330	-	330	537	-	537
942	Basket Weavers & Brush Makers	-	-	-	6	-	6	-	-	-	6	-	6
943	Non-Metallic Mineral Product Makers	-	-	-	-	-	-	6	-	6	6	-	6
949	Other Production & Related Workers	-	-	-	-	-	-	158	-	158	158	-	158
951	Bricklayers,Stonemasons & Tile Setters	-	-	-	56	-	56	3,305	-	3,305	3,361	-	3,361
952	Reinforced Concreters,Cement Finishers, Terazzo Workers	-	-	-	-	-	-	1,856	54	1,910	1,856	54	1,910
953	Roofers	-	-	-	-	-	-	14	-	14	14	-	14
954	Carpenters,Joiners & Parquetry Workers	-	-	-	852	-	852	2,458	-	2,458	3,310	-	3,310
955	Plasterers	-	-	-	-	-	-	7	-	7	7	-	7
959	Construction workers n.e.c	-	-	-	6	-	6	611	-	611	617	-	617
961	Power-Generating Minery Operators	-	-	-	-	-	-	44	-	44	44	-	44
969	Stationary Engine & Related Equipment Operators n.e.c	-	-	-	-	-	-	201	-	201	201	-	201
971	Dockers and Freight Handlers	-	-	-	-	-	-	82	-	82	82	-	82
979	Material Handling Equipment Operators	-	-	-	-	-	-	12	-	12	12	-	12
981	Ships' Deck Ratings, Barge Crews and Boatmen	-	-	-	-	-	-	248	-	248	248	-	248
982	Ships' Engine Room Ratings	-	-	-	-	-	-	18	-	18	18	-	18
983	Railway Engine Drivers & Firemen and Related workers	-	-	-	6	-	6	13	-	13	19	-	19
985	Motor-Vehicle Drivers	13	-	13	398	-	398	4,067	103	4,170	4,478	103	4,581
986	Animal & Animal-Drawn Vehicle Drivers	-	-	-	30	-	30	5	-	5	35	-	35
989	Transport Equipment Operators	-	-	-	-	-	-	559	6	565	559	6	565
999	Labourers	-	-	-	849	13	862	30,973	1,322	32,295	31,822	1,335	33,157
	TOTAL	361	109	470	7,686	1,475	9,161	54,740	2,290	57,030	62,787	3,874	66,661

APPENDIX 9

EXTRACTS FROM MILLS's 1975 AND 1977 INTERPRETATIONS OF 1973 CENSUS RESULTS USED IN ESTIMATING THE SIZE OF THE INFORMAL SECTOR

A : AN ESTIMATE OF INFORMAL SECTOR ACTIVITY FROM 1973 DATA ON OWN ACCOUNT WORKERS

OCCUPATION	MALE	FEMALE	TOTAL	%
SALES WORKERS				
Working Proprietors (wholesale & retail trade)	7367	91	7458	
Salesmen, shop assistants etc.	256	-	256	
Street vendors, canvassers etc.	842	109	951	
Salesworkers n.e.c.	844	92	936	
Total	9309	292	9601	43.2
SERVICE WORKERS				
Managers (catering & lodging)	115	-	115	
Working proprietors(")	137	6	143	
Cooks	20	-	20	
Launderers etc.	171	-	171	
Hairdressers	62	7	69	
Other service workers*	145	589	734	
Total	650	602	1252	5.6

(* A residual group, almost all undertaking personal services, but not classified in the ISCO list)

AGRICULTURAL WORKERS, ANIMAL HUSBANDRY & FORESTRY WORKERS, FISHERMEN & HUNTERS				
General farmers	338	157	495	
General farmworkers	130	-	130	
Livestock Workers	130	-	130	
Dairyfarm workers	15	-	15	
Garden workers	69	-	69	
Forestry workers	53	-	53	
Fishermen	1332	15	1347	
Total	2067	172	2239	10.1

APPENDIX 9 (Cont)

OCCUPATION	MALE	FEMALE	TOTAL	%
PRODUCTION AND RELATED WORKERS				
Chemical and related workers	761	60	821	
Butchers etc.	833	6	839	
Sugar processers etc.	-	6	6	
Bakers	7	6	13	
Brewers etc.	68	1336	1404	
Tailors & Dressmakers	3066	42	3108	
Shoemakers, repairers	19	-	19	
Leather goods makers	54	-	54	
Blacksmiths	60	-	60	
Blacksmiths, tool makers n.e.c.	109	6	115	
Machinery fitters, assemblers	117	-	117	
Watch, clock repairers	66	-	66	
Vehicle mechanics	57	-	57	
Electrical fitters	6	-	6	
Radio repairers	6	-	6	
Sheet metal workers	28	-	28	
Painters (construction)	207	-	207	
Basket weavers, brush makers	6	-	6	
Bricklayers, stonemasons	56	-	56	
Carpenters, joiners etc.	852	-	852	
Construction workers n.e.c.	6	-	6	
Motor vehicle drivers	398	-	398	
Animal drawn vehicle drivers	30	-	30	
Labourers	849	13	862	
Total	7,661	1,475	9,136	41.1
GRAND TOTAL	19,687	2,541	22,228	100.0

Total modern sector workers = 197,760, therefore own-account workers (22,228) = 11.0% of whom 88.6% male, 11.4% female.

B. OCCUPATIONS OF THE ECONOMICALLY ACTIVE POPULATION IN THE JUBA MODERN SECTOR, 1973

Juba total population	56,723
Total economically active	19,613
Unemployed	1,225
Total employed in modern sector	15,467

PROFESSIONAL AND TECHNICAL WORKERS	Number	%
Physical scientists	6	-
Architects, engineers and related	81	0.5
Aircraft and ships officers	6	-
Medical, dental,veterinary and related workers	608	3.9
Accountants	50	0.3
Jurists	19	0.1
Teachers	769	5.0
Workers in religion	50	0.3
Authors, journalists and related	6	-
Sculptors, painters, photographers and other creative artists	19	0.1
Composers and performing artists	12	0.1
Others	19	0.1
Total	1,645	10.6
ADMINISTRATIVE AND MANAGERIAL WORKERS		
Legislative officials and government administrators	19	0.1
Managers	37	0.2
Total	56	0.3
CLERICAL AND RELATED WORKERS		
Clerical supervisors	62	0.4
Government executive officials	105	0.7
Stenographers and typists	37	0.2
Bookkeepers and cashiers	260	1.7
Transport and communications supervisors	31	0.2
Mail distribution clerks	12	-
Telephone and telegraph operators	43	0.3
Others	329	2.1
Total	879	5.7
SALES WORKERS		
Managers (wholesale and retail trade)	19	0.1
Working proprietors (wholesale and retail trade)	620	4.0
Sales supervisors and buyers	6	-
Insurance and real estate salesmen	6	-
Salesmen and shop assistants	279	1.8
Others	167	1.1
Total	1097	7.1

Appendix 9 B (Cont.)

SERVICE WORKERS	Number	%
Managers (catering and lodging)	56	0.4
Working proprietors (catering and lodging)	37	0.2
Housekeeping and related supervisors	6	-
Cooks, waiters and bar tenders	304	1.9
Other housekeeping services	614	4.0
Building caretakers, cleaners	651	4.2
Launderers	43	0.3
Hairdressers, barbers	19	0.1
Protective service workers	3621	23.4
Other service workers	527	3.4
Total	5878	38.0
AGRICULTURAL, ANIMAL HUSBANDRY, FORESTRY, FISHING AND HUNTING WORKERS		
Farm managers and supervisors	12	0.1
Farmers	43	0.3
Agricultural and Animal husbandry workers	273	1.8
Forestry workers	74	0.5
Fishermen, hunters and related	205	1.3
Total	607	3.9
PRODUCTION AND RELATED WORKERS : TRANSPORT EQUIPMENT OPERATORS AND LABOURERS		
Production supervisors, general foremen	136	0.9
Miners, quarrymen, well diggers	6	-
Wood preparation workers	6	-
Chemical processors and related	6	-
Food and beverage processors	453	2.9
Tobacco preparers, tobacco product makers	12	0.1
Tailors and dressmakers	422	2.7
Shoemakers and leather workers	12	0.1
Cabinet makers and related woodworkers	267	1.7
Stonecutters and carvers	19	0.1
Blacksmiths and tool makers	93	0.6
Machinery fitters, machine assemblers	360	2.3
Electrical fitters and related	167	1.1
Plumbers, welders, sheet metal workers	19	0.1
Potters	6	-
Painters	81	0.5
Printers	6	-
Production workers n.e.c.	6	-
Bricklayers, carpenters & related	186	1.2
Stationery engine & related operators	12	0.1
Freight handlers	6	-
Transport equipment operators	1494	9.7
Labourers n.e.c.	329	2.1
Not classified by occupation	1207	7.8
Total	4098	26.5
GRAND TOTAL	15,467	100.0

(Percentages are rounded to nearest 0.1% and not indicated where less than 0.05%)

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