MIGRATION PATTERNS TO AND WITHIN LOW-INCOME RESIDENTIAL AREAS IN PORT OMAN (1964-1980).

Thesis submitted for the Master Degree in Geography at the University of Khartoum.

By

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DEDICATION

To my parents,
brothers, and
sisters.

With
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literature preparation of the work.
The low-income residential areas in Port Sudan challenge the planners with a variety of technical, economic, and social problems, with unclear future dimensions. This study traces the spatial, economic, and social forces that govern the rural-urban migration to, and the residential mobility within, these residential areas. A theoretical approach that combines various migration models is followed to analyze the data in a chronological scheme since the foundation of the town (1954) until 1982. Purposefully, the findings are compared with other findings by researchers in some Third World settings.

Depending on secondary data sources, Chapter Two provides a background about Port Sudan. The physical, and the socio-economic factors that have shaped the morphology of the town are illustrated. A discussion about economic activities and the labor market is maintained. Finally, the population structure, growth and some socio-economic characteristics are examined.

In Chapter Three, using the survey results, the rural-urban migration pattern is studied. The linear pattern is examined first. Then, the socio-economic characteristics of migrants before, during, and after the migration process are systematically traced.

The mechanisms regarding the expansion of, and the residential mobility within, the residential areas that has led to their problems of overcrowding, unemployment, and inadequate housing conditions represent the focus in Chapter Four.

The final chapter summarizes the research findings, recommends some planning actions, and raises some questions regarding the future plans of the town.
نوعية

تعاني البلدان المكتوبة لذوي الدخل المنخفض في مدينة

بورتوغالي من مشكلات ذاتية واقتصادية واجتماعية متسددة ،
والمستقبل لم يراعي للمستقبل، فيما يشير التحليل الأشكال لحل
هذه الحالة ؛ حيث أن الملاحظة في هذا البلد يشارك في من المكتبة بدراسة
المواطن المختلفة لحالة الزيادة السريعة لهذه البلدان وتشملهم .

فيما يبين هنا الحسابات الاقتصادية والاجتماعية المختلفة .

بديل البيع أحياناً خليباً خليباً في حالة الطارفة ؛ إذ أن أحدث
العديد عام 1976 ؛ حتى عام 1982 ، كما يكون البيع المتاح
العلية التي تصل إليها بمناطق بيعها أخرى في دول
العالم الثالث.

الفضل الثاني يمثل خليفة من المدينة ساكناً الأسباب التي
 أدت إلى تركز المدينة بشكلها الحالي ؛ ثم يقدم نمو البناء
الاقتصادية والاجتماعية فيها نمو وتركز المكتبة وأهم
.Methods التعليمية والاجتماعية ،

ناتج الحساب الاجتماعي الذي أجريت في الفصل الثالث
تحتمل أساليب المبحة إلى النمو لمدينة . يدرس البحث أولاً حالة
البانيون في المبحة أحادياً وأحادياً ثم يتشكل للدراسة
المستجبيات التي تحققها والتجار التي يتولون عندما توفر
ال.buffer بعد وصولهم للمدينة ، وكان هذا يمربى لهذه الفترة من
الانضمامات المختلفة وعلي عام 1982 .

أما تقييم الطاقم المكتبة المبحة وكيفية تقلل المباشرين
نهاية البنية للمستودع المراكز والرسوم في مراكز

الأكاذيب والمباني والمباني والمباني غير المفقود ؛ فقد توفر
في الفصل الرابع ،

الفضل الآخر يثبط تقرار البيع ويقدم مبررات قيمة
نماذج المكتبة المثالية ثم يجري بعض الأسئلة التي تختص
بالتدقيق المستقل لحل هذه المكتبة .
CHAPTER ONE

INTRODUCTION

1. INTRODUCTION
2. METHODOLOGY
3. LITERATURE REVIEW
The world urban growth during this century has received a great deal of attention among social scientists, planners and policy makers. According to United Nations reports (United Nations 1970, 1980), the population of the world was 1,560 million in 1920, of whom 267 million or 16.3 percent were living in agglomerations of 20,000 or more; by 1960, the total had risen to 2,991 million, of whom 760 million or 25.4 percent were urban dwellers, and by mid 1979 the total reached 4,208 million of whom 95.7 percent were urban dwellers. It was estimated that by the year 2000 the total population of urban dwellers will increase to 5,297 million or 98.8 percent of the total population.

However, there are wide variations in the level and rate of urbanization in different regions of the world. In the more developed parts (Europe, North America, the Soviet Union and Canada) the urban population increased at an annual growth rate of 2.1 percent between 1950 and 1960, and 2.6 between 1960 and mid 1979. It is expected to increase at a rate less than that between 1960 and 2000. In the less developed parts (South Asia, South Asia, Latin America and Africa), the rate was 3.6 between 1960 and 1962 and 4.7 between 1960 and mid 1979.

Such high annual growth rate of urban population, particularly in the less developed regions, is directly reflected in the economic, social, and political conditions of the rapidly growing urban centers.
In many Third World countries, towns have developed so fast that administrative authorities find it difficult to keep control of the urban growth. People may flock to a town at a much higher rate than expected and even in the central part of a town, planners cannot keep pace with the housing and development demand of the urban population. On the economic side, urban unemployment is a direct result of a rural to urban migration at a rate consistently higher than the rate of new job openings. Furthermore, substantial costs are incurred in the provision of housing, sewage and water facilities, schools, and other amenities. The increase in crime and other forms of unrest are believed to be associated with unemployment in urban areas. Regarding security, property, potentially explosive situation exists in that a large number of unemployed people are continuously present in the midst of the signs of rapid development.

One of the results of this uncontrollable urban growth is the appearance of squatter settlements on the edges of towns which are officially illegal and not provided with basic urban services.

Jordan is one of the least industrialized countries in the world. Until 1950, it remained predominantly rural, with the non-urban population representing 90 percent of the total population (O'Neill, 1950).

Yet the urban population is increasing mainly both through migration from the countryside and increase levels of urban fertility. Between the two national censuses of 1955/56 and 1973, the country's total population
is thought to have increased at a little over 2 percent per annum, with the rural population growing at about 1.5 percent per annum and the urban at 6.5 percent per annum. However, the Southern provinces showed a higher rate of urban growth because of the political instability (Table 1-1) and Fig. 1.1.1., which encouraged people to flock to the relative security of urban areas.

<table>
<thead>
<tr>
<th>PROVINCE</th>
<th>POPULATION GROWTH RATE (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Khorasan</td>
<td>6.29 (4.87)</td>
</tr>
<tr>
<td>Northern</td>
<td>3.72 (4.03)</td>
</tr>
<tr>
<td>Blue Nile</td>
<td>7.21 (7.30)</td>
</tr>
<tr>
<td>Red Sea</td>
<td>4.29 (4.57)</td>
</tr>
<tr>
<td>Kassala</td>
<td>6.57 (6.12)</td>
</tr>
<tr>
<td>Kerenfog</td>
<td>4.37 (4.13)</td>
</tr>
<tr>
<td>Darfur</td>
<td>6.22 (7.10)</td>
</tr>
<tr>
<td>Bahir Dar-Gedif</td>
<td>10.43 (10.71)</td>
</tr>
<tr>
<td>Upper Nile</td>
<td>6.55 (6.35)</td>
</tr>
<tr>
<td>Equatoria</td>
<td>9.23 (9.34)</td>
</tr>
<tr>
<td>Sudan</td>
<td>6.29 (6.5)</td>
</tr>
</tbody>
</table>


The first column is based on population figures and the second one is based on de facto population. The 1975 Census was conducted on de jure basis, whereas the 1975/36 were on both de jure and de facto basis.

In the 1950's and early 1960's, problems of urbanization in the Sudan were certainly recognized, but their future magnitude was not even dully perceived. It was not until the late 1960's that the rural depopulation and the urban uncontrollable growth were fully recognized. Very early in 1961, Bein wrote a paper, based on the 1955/36 census in which the 'prevailing trend in migration' was not to such one of 'urbanization' as of 'ruralization' by which he means
the adoption by decades of a settled way of life in country towns around towns (Rizki, 1962).

Rizki's views were shared by others and the urban problem was in the forefront of national discussion and became a regular topic of academic study. One index of these changes in the steady flow in the 1970's of post-graduates overseas and closely related subjects such as rural-urban migration, fertility, the class structure, the incorporation of immigrants, the slum town problem, and the prospects for industrialisation. (EI-Doss, 1971; Constantinides, 1973; Lobb, 1973; Winter, 1973; Colas-El-Din, 1973; Ahmed, 1974; Bedri, 1974; Rashid, 1974; Rashed, 1974; Ahmad, 1975; EI-Doss, 1975; Hammad, 1975; and others).

West Sudan represents a good example to show the increase of population in urban centres in the Sudan; the population in the 1923/26 census was 47,563; and, according to the 1954/5 Household survey, the population reached 20,000. In the 1973 census the figure jumped to 125,652. No statistical figures are available for the present population in West Sudan, but as the rate of population growth for the 1964/65 survey and the 1973 census was 4.9, the population now is probably 225,000. Such a rapid increase in the population caused a number of problems, one of which is the growth of squatter settlements in one. Here the people pay no rates and they have no services such as provision of water supply, sanitation, electricity, and so forth.

Although it may not be clear which of the problems are most sensitive for politicians and economic planners, it
appear clear that the magnitude of these problems is sufficient to impede and disturb the economic and social development of the town.

To throw more light on the economic and socio-cultural problems of two-income residential areas in Port Sudan, it is worthwhile reviewing some major findings of a survey carried out by a researcher in 1981. The researcher was a member in the research project "Population Education in Sudan" conducted by researchers from the University of Khartoum to be used by the Ministry of Education. Some cases were chosen for comprehensive investigation on socio-cultural characteristics of the Sudanese society. The writer of this thesis reported on Port Sudan case study.

Economically, Port Sudan is a unique town in that it is artificially constructed for its harbour facilities at the beginning of this century. In less than eighty years its population reached a huge figure (200,000) mainly through rural-urban migration. In the process of its fast evolution, Port Sudan has been able to attract migrants, with various skills, from different regions of the Sudan.

In cultural terms, Port Sudan population is a peculiar one. In Islamic traditions, men are responsible for supporting women. Men are superior and make the decisions on financial and familial matters. Some Islamic societies, perhaps due to some social transformations, are not very strict on that. However, in the culture of eastern Sudan tribes (e.g., Hadendwa, Bani Harir, Asem) women are of very minor role in
Making decisions. Women migrating from regions other than eastern Sudan are somehow different. Yet, they do not take a very decisive role, such as moving to a distant, unfamiliar place. Women in low-income residential areas in Port Sudan are productive as far as the household activities -- housework -- are considered. However, occasionally, women vary out and take informal jobs to earn money. Culturally, these are considered as special cases. In most cases, such women are either widowers or divorced wives, who are in bad need of money to support their children.

Describing the cultural characteristics of Port Sudan population, it is important to mention that many of residential quarters in the town are inhabited by people belonging to various or one ethnic group. Some residential quarters are named after ethnic groups, e.g., Fellata and Arab. This indicates that ethnicity plays a decisive role in both the migration and the urbanization processes.

In such unique conditions of the town, the future is hardly predictable. As far as planning and management are concerned, the issue needs intensive investigation.

However, the main concern of this study is the low-income residential areas in Port Sudan. This study uses a comprehensive approach to investigate the spatial, economic, and cultural characteristics of both the rural-urban migration to, and the intra-urban migration within, Port Sudan. The data is collected and analyzed in a chronological manner since the foundation of the town until the present. In conclusion, the study offers some recommendations and ideas concerned with.
future planning and management of the town. Testing the
following set of hypothesis represents the core of the thesis:

(1) Migration to Port Sudan from different rural
areas in Sudan takes place in stages or stopdocks.
Form the longer the distance from a migrant's
origin to Port Sudan the more numerous the
stages he undertakes to reach it;

(2) Ethnicity underlies the formation of voluntary
associations, especially among new arrivals in
a strange setting; and

(3) There are three functional priorities that
govern decision making in the residential
search behavior: (a) tenure; (b) family
attributes, i.e., origin, kinship ties, social
status, and number of dependents in the family;
and (c) distance from one residential area to
another.

(2) METHODOLOGY

The study faced the usual problem of lack of reliable
published data concerning urban adaptation and urban
residential mobility, thus necessitated the use of a
nonstructured survey.

The town was divided into three broad zones according
to location and levels of development process, viz. (1) the
old town; (2) the intermediate area; and (3) the peripheral
zone.

The objectives of the study made it necessary to take
the sample from three low-cost sub-division residential
quarters of varying ages, each representing a different
level of development. Moreover, each of the three "localites"
(the Swahili word for a residential quarter) is meant to
represent a group of slums that have similar features in common, and more particularly that are located at the same zone of the urban arrangement. The three slums from which the sample was taken are: (1) slum Bashia, to represent the old town; (2) slum Salama, to represent the intermediate zone; and (3) slum Dar Sama'a, to represent the peripheral zone.

The old town, referred to throughout the thesis as the town centre, includes the older slums around the centre of the town, viz: Al-sanaa, Madina, Aqab, Makti, Gana, Sida Sallam, Al-Mir, and Sunkin. These slums are located around the main shopping area (Fig. 1-5 and 2-1). These parts of the town have been built prior to 1950, but most of its slums were planned later by the authorities. According to a classification of residential areas -- decided by the planning authorities in the town in accordance with land plot size and building materials of houses -- the old town includes much of the first and second classes part of the third class, and only some of Sunkin and Bashia of the fourth class residential areas. Although the old town has been gradually rehabilitated by the authorities, these two slums remain as they were more than fifty years ago (Fig. 1-3). Therefore, they are referred to throughout this research, as low-income residential areas.

In the sample survey, slum Sunkin was chosen to represent the town centre. Slum Sunkin was established as early as 1950, when Port Sudan building regulations were published in the Sudan Gazette on the 30th of August, 1950. It is a poor, unplanned, cramped residential area inhabited;
FIG. 1-2
PHASES OF GROWTH OF PORT SUDBURY

Source: Survey Department (Port Sudbury).
Source: Survey Department (Port Said).
migrants of different origins. In spite of the fact that
it is located close to the market area on the town’s centre,
it remained unplanned and lacking in primary services such as
drinking and sewage systems. Its population according to the
1972 census was 2384, making up approximately 282 households.

The second group of dais includes those located in the
intermediate zone of the town, viz: Turah Amul, Funjist,
Kurra, Shab, Asaia, Mayo, Nuur, Taadona, Polic, and dal
Salamon (Fig. 1-4). This group of dais dates back to the
period between 1920 and 1930 (Fig. 1-2). Many of these dais
are squatter settlements that were replanted. According to
the class classification, this group of dais includes the
larger part of the third class residential area, and much of
the fourth class, while it includes some of the second class
residential areas.

Dai Salomon, a recently replanted squatter settlement,
was chosen to represent this intermediate zone. It was formed
Dai Jaa-Shaich, a squatter settlement that has been replanted
in the year 1956 by the Ministry of Planning, Port Sudan
Department. The plots were redistributed and registered for
those who resided for more than 10 years in the same area.
It is inhabited mostly by Northerners who came with the
development of the town as early as 1950. They are mostly
Gazrians, Shagalla, and Beida. After the replanting in 1956,
it was provided with electricity, plumbing, as well as
sanitation services. Its population according to the 1972
census was 1,071 persons, grouped in 213 households.
The third group of da'imas is located on the peripheral zone of the town. Most of the da'imas are illegal agitator settlements that emerged after 1960 as a result of the uncontrolled rapid migration to the town. These da'imas include two types of settlements: those that were originally small villages around the old town and had later been integrated into the town organization, such as Marash Kusut and Adam Dikba da'imas, and those that are inhabited by migrants who were not able to cope with the expense of urban life and so built temporary dwellings on the edge of the town. These da'imas include: Babolak, Dar Rasim, Soltan Jibril, Dina Beharic, Dina Sabah el-Kheir, Dina Ganas, Dina Tawerih, and Marash Kusut. However, this zone of the town includes many of the industries, the military area, and the airport (Fig. 3-2).

The da'ima of Dar Rasim has been chosen to represent the da'imas located at the peripheral zone mainly because of its rich variety of da'ima groups and its recent origin. It has grown up from a core of rural Soja tribal hordes. It has, however, grown more quickly than other da'imas; the main began as late as 1960. The inhabitants of this da'ima include more worker-student groups than any of the other illegal da'imas, and provide a great contrast to the older agitator settlements. Its population in 1973 was 6,038, which included approximately 14,000 households.

The questionnaire is divided into four parts. The first part is concerned with the household socio-economic characterization. The second part is designed to examine...
stopwise migration, family ties, and ethnic lines, while the third part examines employment conditions. The final part of the questionnaire is designed to trace the residential mobility within the town in a chronological sense, i.e., its history format. However, housing components are not typical in each of the three zones, described above. Therefore, questions regarding specifications of house components, tenure, and costs were maintained.

The head of the household formed the primary sampling unit, and the inquiry was directed at him. This became necessary because in a male dominated society like the Sudanese one, women are always reluctant to give the interviewer and to answer the questions in the absence of their husbands. Moreover, the questions are more appropriately answered by the head of the household, since he takes decisions and since the mobility of the other members of the family, in most cases, is directed by the head.

Assuming a normal distribution of households in the three zones, the formula used to decide the size of the sample took the form:

\[ n = \frac{Z^2 \cdot \sigma^2}{\epsilon^2} \]

where:
- \( n \) = Number of households in the survey
- \( Z \) = The standard error
- \( \sigma \) = Standard deviation
- \( \epsilon \) = Size of the sample

Accordingly, the sample size amounted to 153 with a tolerable error of 20 percent, for the three zones in the 1975
The focus of the study is to investigate the socio-cultural conditions of newly arrived and already settled low-income migrants in Port Sudan. However, methodologically, it is difficult to recognize the status of the interviewee, i.e., newly arrived migrants, settled migrants, or Port Sudan-born people, before the interview. Interviewers used to enter any of the chosen sites from different directions, choose randomly houses, and interview the heads. However, the sample included young single men, who are inhabiting individual houses in groups. Interviews were conducted in the afternoons, when heads of households were mostly available. In such procedure, interviewees may happen to be Port Sudan born. Therefore, it was decided to interview a number of people that is higher than the objectively calculated sample.

As the town is artificially constructed since 1954, it is expected the majority of the people are either settled or newly arrived migrants. During the interviewing term, the expectation proved to be valid. It was, therefore, estimated that interviewing 15 to 20 persons more will ensure the sample from being insufficient. Thus, the sample was increased to 161 instead of 157.

The census happened to be students, and do not represent heads of households. Nevertheless, they were considered as members who migrated to the town, experienced events facing migrants and shared the economic conditions of their original households. Moreover, the sample included 8 respondents who are Port Sudan born. However, they provided a tool for
comparison with the migrants' conditions in the town. Such
points should be taken into consideration when dealing with
the survey results.

(3) LITERATURE REVIEW

To place the conceptual framework of this study within
the field of migration, several relevant discussions of
migration research should be noted. The first is the
fundamental distinction between the determinants and the
consequences of migration. In a broad sense, determinants
focus on the initiation of action whereas consequences focus
on adjustment and societal response to migration. A second
distinction is between internal and international migration.
A third is the analytical distinction between micro- and
macro-level studies. Macro-studies describe broad patterns of
movement for geographic mass and population aggregates,
whereas micro-studies focus on the individual and/or the
family as the unit of analysis in describing and explaining
migration behaviour.

This study is mainly on consequences of internal migration.
However, because of its comprehensive thrust, it includes both
micro- and macro-level investigations. The spatial aspects
are predominantly viewed at the macro-level, while the socio-
economic impacts are discussed mainly at the micro-level.

Intensive research in the field of migration has greatly
improved the old concepts and has innovated new techniques,
methods and mathematical models for the measurement and
explanation of the phenomenon. Nevertheless, much is lacking.
For a satisfactory theoretical model that will predict individual adaptations within the migration process, Du Bois and Sobu wrote in the preface of their volume concerning adaptations within the migration process (1976):

"If we are to understand the species of (nomadic strategies), our science needs substantial input from scholars who represent a variety of the world's cultures" (p. 5).

One contribution of this study is to test the applicability of theoretical models on patterns of migration in the Senegalese society, which has a unique culture developed in an atmosphere that is a mixture of Arabic and African cultures.

Human geographers have always made assumptions about human behaviour. Most of these assumptions have been implicit in geographic analysis rather than being explicitly formulated. Similarly, human geographers have relied on theory in their search for adequate models of description and explanation. However, most of these theoretical formulations are helpful in explaining only a few selected aspects of the migration process. In most cases, this partial explanation is directed towards one aspect of the process. Tendenous geographers have confined themselves to modelling the spatial side of the phenomenon, while the anthropologists have treated the social aspects. Studying the economic factors have dominated geographical research during the sixties (Johnson, 1979), but in a considerable ignition from other aspects. In fact, no single model that is capable of explaining comprehensively the spatial, economic, and social aspects is found.
This study combines various models dealing with different aspects of the migration process to produce an approach which can explain the process in a more comprehensive manner.

(c) Model of rural-urban migration

Although there are a number of frameworks concerned with individual decision-making in migration - dealing directly with Third World settings, they do not appear to break in orientation as the Brown and Moore (1973) model for migration within urban areas (Fig. 1-5).

A basic concept in the Brown and Moore model is that of 'place utility', which refers to an individual's (or household's) overall level of satisfaction or disatisfaction with respect to a given location. If the place utility of the present residential site diverges sufficiently from the individual's immediate needs, that person will consider seeking a new location. Thus, migration has been viewed as a process of adjustment whereby one residence or location is substituted for another in order to satisfy the needs and desires of each migrant better, that is, in order to increase the place utility experienced at the residential site.

The related search for and evaluation of migration opportunities take place within the confines of the migrant's cognitive or mental map (Brown, 1974; Could and White, 1976), that is, the world outline in the migrant's mind, and it will differ considerably from the objective map of the real world. It is on the basis of this mental map, however, that the migrant will assign place utility evaluations to locations.
Phase I
The Decision to seek a new Residential site

- Individual needs, expectations, aspirations
- Environmental offerings
- Decision seek an other location for the household
- Decision Assess stress in old by affected mood and/or
  experiencing Environment
  
Time t + t + t +2

- Environmental offering changes
- Locational stress change

Phase II
The Relocation Decision

- Define aspirations with regard to a new residential site
  
The opportunity set of places that can constitute potential destination
  
- Define search strategy for sending information channels
  
Characteristics of
  - information channels
  
Definition of
  - search sheets
  
Possible migration destinations identified

Possible migration destinations evaluated

Destination characteristics are congruent with aspirations

Decision: where to relocate

Destination characteristics are not congruent with aspirations

Decision: Restructure search procedures

- after Fromm and Hoorn (1976)
Thus, there will be many places about which the migrant will have little or no information. Such places would not be included in that person's mental map and would not, therefore, be considered in the migrational decision. Accordingly, migrational behaviour is likely to be internally rational rather than actually so (Simon, 1957; Volpert, 1968).

The framework of Brown and Moore identifies basic components of the migrant's decision-making process. They have included the individual migrant's needs or aspirations with respect to a residential site, the individual migrant's cognitive map, the characteristics associated with present residential sites and with migration opportunities, generally termed environmental offerings, and channels of communication.

The basic defect of the model is that it assumes absolute rationality of the decision makers. The model also limits itself to individuals who in some sense are not forced to move or stay.

Rangerstrand (1957) has classified points of migration, i.e., cities, towns, and villages, into an urban hierarchy of lower and higher order central places according to size. Rangerstrand has claimed that while the higher order outposts draw their population from intermediate centers, these places are, in turn, receiving migrants from lower order centers.

From a set of data concerning migration flows between a group of nodes within a country, it is possible, by considering the preferences expressed in this network, to define a hierarchy based upon the observed movements of migrants. Regions in the lowest level will send the majority
of their migrants to places in the next higher level, which
in turn, will send to the next highest, and so on. If this
association exists, a perfect hierarchy will be formed
(Fig. 1-6/c).

However, often such a perfect hierarchical arrangement
is not supported by migration data; levels may not be discrete
and certain circular associations may be present. In this
case an overlapping hierarchical arrangement is described
(Fig. 1-6/d).

Stepwise migration, which implies movement from a rural
environment through lower order centres to higher order ones,
is an interesting concept, but it is difficult to test
empirically because of the difficulty of acquiring data
describing individual movements.

Migration can be studied at different spatial scales
and the analysis of flows depends on the level of generalization.
Distance is expressed in economic, demographic, or cultural
terms, but in many cases distance is measured in linear terms.
Location of place of origin with reference to the location
of the destination point, type of transport used, and amount
of money spent during the journey are of a significant
nature. However, the role of distance differs depending on
characteristics of migrants as well as utilities and
opportunities offered by the setting.

Directional bias of migrational streams has been more
recently studied by geographers interested in intraregional
mobility (Wolpert, 1967; Adams, 1969; and others). It is of
relevance to study of spatial patterns of flows that most of the
(a) OVERLAPPING HIERARCHY

(b) OVERLAPPING HIERARCHY

Source: After Hogerstrand (1997).
models used in migration study have been developed (Haynes, 1973).

Even more variables can be taken into consideration when measuring phases of migration, such as: number of years between the moment of departure and place of birth and arrival at the city, the number of stops, and even the age of the migrant at the time of each move. Elsasser (1979), in his study of migrants in Santiago, has moved in this direction by controlling age of migrants at the time of departure and size of town of origin. Again, the disadvantage of such an approach is the impossibility of analyzing a large number of different variables.

A different approach has been outlined by Nansen (1963), who has discussed a social organizational theory of migration. Each society undergoes a social change, which is the difference between social organization of a given society at two different points in time, comprising changes in any or all the three component systems, namely the culture, social and personality systems. Migration affects and is affected by the social organization of the society of origin and destination. Also, the cultural values, norms and roles of migrants change in the process. The migration system includes all three elements - society of origin, society of destination and migrants themselves - in mutual dynamic interdependence.

Goldwin (1963) has developed stages of migration in this sociological context. He has claimed that when one member of a family migrates, there is a very high probability
have been achieved, other priorities, such as becoming married or bringing up children, become important. The search for better living conditions, threats of eviction, consistent expenses on rent, persuade him to sacrifice his locational advantages for more space and, he hopes, ownership and residential stability. Therefore, he chooses to move to the relatively isolated unserviced sites at the periphery of the city. He risks the dangers of squatting in return for the chance of eventually securing legal land rights and supervises the construction of his own house.

Cardona (1971) has demonstrated that over 65 percent of the immigrants living in squatter settlements in Bogota had lived previously in the central city area. The first model proposed by Turner has been exemplified by a migrant trajectory (Province city centre-periphery) and as Morse (1971) has affirmed, it became "widely accepted".

These findings or what is sometimes termed Turner's theory, has not allowed for the changing structure of housing opportunities. It has a comprehensive and a static form and lacks flexibility to suit the dynamic nature of human settlements.

Evidence gathered by Brown (1969, 1972) in Mexico City has made it necessary to re-evaluate the model. She has demonstrated that the core area no longer functions as the primary reception zone for newcomers. She has argued for the inclusion of an intermediate zone after the city centre becomes stable and sedentary for the first migrants of the low income population.
However, Turner's model has become the most popular and has attracted the full attention of many investigators on intra-urban migration.

Some African studies, e.g., Mucubal (1970) research on Moroccan cities, have agreed that newly arrived migrants flock to the periphery zone of cities and develop shanty towns. The study of residential mobility in Sudan is restricted to research made on the urban ecology. Reviewing that, some notable have been made on where do migrants' stay when they first arrive in an urban setting, but very seldom are the investigation directed toward residential mobility.

Nevertheless, much work has been done on urban ecology which helps to interpret the socio-cultural impact of rural-urban migration.

Oliver's (1966) study of Port Sudan is partly ecological, but it also dwells on the geographical factors that have affected the layout of the town and on the reasons for the choice of Port Sudan as the country's main port. Find in conjunction with papers like Mucubal's (1970) on Sudan and James's (1969) on the shanty town's of Port Sudan, it provides a useful profile of residential conditions.

Abdala's (1977) analysis of Khartoum in some way similar, but it lays particular emphasis on the different categories of migrants responsible for the town's rapid growth between 1964/65 and 1973 at the staggering rate of 16 percent per annum. Again, little attention in Abdala's work was given to residential mobility.
Other trends in the residential ecology of Sudanese towns have been noted by El-Obeid (1965, 1971, 1972 and 1973) in his examination of the residential ecology of El-Obeid, such as the impact of changes in urban administrative policies after independence and the influence of cultural and symbolic factors in perpetuating a mixture of ethnic residential segregation despite the association demonstrated by his data between socio-economic differences and residential distribution.

El-Obeid's (1965) work has been based mainly on historical data and informal interviews to trace the cultural trends. It gives a rich discussion on the transformation of Sudanese urban society, while it does not concentrate on the economic condition and residential search behaviour with regard to the individual.

Relevant studies that have been carried out in Port Sudan include an article by Wendy Jones in 1969 entitled "Port Sudan Overpillar". She has concluded that the people living in the squatter settlements of Port Sudan are of two main kinds: on the one hand, nomads and cultivators who have recently arrived from the countryside and not yet been absorbed into town society; and on the other hand, townsmen who have worked and lived in the centre of the town for many years, but have grown tired of the overcrowded and often unhealthy conditions of the central part of the town and have saved enough money to build themselves more spacious houses in the out-skirts.
Such a conclusion may have been quite reasonable at the time of her survey, when the shanty towns in Port Sudan were much simpler and less crowded. Classifying the present residents in shanty settlements into only two categories will ignore other important cases. Most of the newly arrived migrants stay with friends or relatives who live in different parts of the town, and some reside for a long time in such a residence. Moreover, a considerable number of the migrants move to the intermediate zone from the central town and in other cases from the outskirts.

Mohamed (1980) has explained that a considerable proportion of migrants in Port Sudan finds its way to the town centre, where a number of single men share one house. But then she has added that in most cases migrants have difficulty in adjusting themselves to the living conditions of the town centre, because of the high rents. Thus they will be forced to move to the outskirts of the town - not too far from the town centre. But again, that is on only one category of the residential search behaviour practiced in Port Sudan.

The relative applicability of these theories and research findings regarding the first foothold for migrants and the directions of movement in cities will be analysed against a background of shanty intentions that have taken place in Port Sudan from its foundation until the present.
CHAPTER TWO
GROWTH AND VETERINARIAN
OF FORE SUDAN

(1) INCORPORATION

(2) TOWN GROWTH AND VETERINARIAN

(3) ECONOMIC ACTIVITIES

(4) POPULATION
(1) INTRODUCTION

Fort Sudan, located at 10°36'N and 37°20'E, is the main seaport of the Sudan. This role was played by Sankin, located south of Port Sudan, until 1904, when Captain Kennedy of the Public Works Department advised the building of a new and more suitable port. Hence, Sheikh Bargou was suggested because of its good sheltered natural harbour and a constant water supply. With the establishment of the port installation in 1904, a small urban centre was born, which was then named Port Sudan.

The growth of Port Sudan into a large important town extends over two distinct periods, namely the colonial (1904-1955) and post-colonial periods (1956-1989). The former could be classified into two phases closely correlated with the phases of development in the port facilities which was the only economic activity at that time, viz: (1) 1904-30 when the port terminal was small and the town was recently founded, and (2) 1931-55 when General cotton production, which started in 1925 increased and had its reflection in the port facilities and more immigration came to Port Sudan. The post-colonial period, as well, can be classified into three phases, viz: (1) 1956-69 when many light industries were established in the town which had attracted a lot of new immigrants; (2) 1968-75 when large scale industries and commercial companies were in active investment. Migrants during this period were attracted by the new job opportunities created by such establishments and consequently the epoch was characterized by the rapid
growth of squatter settlements; and (3) 1976-86, the period when Port Sudan took its present shape with the large unplanned and uncontrolled residential areas on its edges.

This chapter traces the evolution of Port Sudan in terms of: (1) growth and morphology; (2) economic activities; and (3) population growth. Analysing the first and the second subjects draw from secondary data, such as reports, files, archives, and other documents collected from the harbour offices and other official sources. Analysing the third subject depends mainly on the National Census of Sudan (1955/56 and 1973) as well as the Household Survey 1967/68. Moreover, to a great extent, the study has relied on theses written on various socio-economic characteristics of Port Sudan. These include Lewis, 1962; James, 1969; Ahmed, 1974; Higazi, 1975; and Mahmoud, 1982.

(2) GROWTH AND MORPHOLOGY

Several considerations were in the selection of Port Sudan's site. Sea access to the port was good. There was a 10 kilometer wide gap in the barrier-reef and in the coastal fringing reefs. The entrance into the port harbour was over 195 meters wide. In the centre of the inner harbour the water depth is up to 25 meters. Raised coral beaches, 2.5 to 4.5 meters above the present sea level, provided in the earlier years sufficient area around the harbour for the expansion of the town. The tidal range in the Red Sea is negligible. The maximum diurnal variation is under 2.5 meters and the greatest seasonal range under one meter. The inner harbour enjoys considerable shelter...
from prevailing winds (north-west to north in winter and north-west to west in summer). In these circumstances, many of the difficulties of harbour consideration were avoided.

The main disadvantage of the site, however, is that the growth of the town in such an arid area depends critically upon an assured source of water supply. The local streams (Khor Mag in particular) supplied some rather salty water from shallow wells in their beds, but, until 1927, dependable water was the main source of supply. In that year, a pipeline was installed from Khor Arshad, 30 kilometers to the northeast. This made it possible to tap a water catchment of some 6,000 kilometers in the Red Sea Hills and to use the underground springs in the gravel infilling of the Khor valley. The water is fed by gravity to Port Sudan because of the gently sloping coastal plain.

Moreover, despite the arid climate, the sudden rainstorms falling on the extensive catchments of Khor Mag in the Red Sea Hills could produce disastrous sheet floods which the streams flowed across the gently sloping coastal plain without well defined valleys. The raised coastal line-of-travel upon which Port Sudan has been built provided the necessary protection.

The only previous settlement was an insignificant fishing haven that had taken the coveage of the sheltered waters on the inland side of the place. In 1905, it was decided to establish the quay and the warehouse of the new port. A railway had been constructed in 1905 from Khartoum via Atbara to Aweil.
Between 1906 and 1909, when the Khedive of Egypt formally opened the new docks, Port Sudan's growth was slow. In 1906 an extension from Kullus on the Atbara to the Mahal railway reached Port Sudan, and the line was continued on the western side of the site where the new harbour facilities were being constructed.

The government, in order to encourage building of houses and settlements, declared a long-term bond scheme that lasted for 30 years (1907-37). The desire of both and Gabir, however, had developed as early as 1910, as native living areas. Their residents provided the town with manual labour.

Commercial firms and shipping agencies were the first to be permanently established on the western part of the town centre from 1909 onwards.

There is no way to indicate the municipal boundaries of Port Sudan at that time, but in 1920 an official report stated:

"A line drawn from near Black Beanc on the reef at the harbour entrance passing via the averaging station including the villages of Ruun Kung and Gabir, thence to the southern work shops and from there along the railway line to the bridge and down to the rifle bullets by sea." (4:38).

However, most of these landmarks are difficult to locate at present, as they were either relocated or changed to more extensive ones (Fig. 2-1).

During the next two decades Port Sudan grew slowly. The first large-scale production of cotton from the Gezira in 1925 was coupled with a gradual shift in Sudan's economy
from an almost subsistence one to a partly foreign trade-oriented economy. With more exports and imports, Port Sudan had to expand its port facilities to cope with increasing traffic (Table 2-1).

In the meantime, the water supply problem was solved when the first pipeline from Khor Arba'at reached the town in 1927. This had a special bearing on development and expansion of the port.

Moreover, Port Sudan building regulations were published in Sudan Gazette No. 580 on the 31st of August, 1929. The South Town was then classified as a first class residential area. Land allotment went ahead and more permanent buildings were created, such as schools, commercial public service and other governmental buildings.

Need for building offices and government departments adjacent to the harbour put an end to the short household in 1929, and the houses were expropriated to move to El-Fardukan in the western part of the town. Until then, the dominant building material in residential areas was wood.

The discontinuous building development up to 1940 was in part determined by the employment possibilities, which were mainly connected with the port and the railway occupations. The centre of the present town was occupied before the Second World War by only a few government buildings.

The growth of Port Sudan became very spectacular after 1940. Partly as a consequence of the Second World War,
THE GROWTH OF PORT SUDAN

(a) The town in 1919
(b) The town in 1929
(c) The town in 1940
(d) The town in 1951
(e) The town in 1975
(f) The town in 1999
(g) The town in 1970
(h) The town in 1994

Source: (a)-(f), Sudan Almanac (1957);
(7)-(8), Survey Department (Port Sudan).
when the strategic value of the port was important, and with
the growing demand for the Sudan's cotton, the decade
1940-1950 saw a considerable expansion of the port's
activities.

On the other hand, internal infra-structure and urban
facilities were developing fast. Native lodging areas
expanded and became part of the town due to the rush of
migrants coming to the new port in search of work both from
adjacent Baja country and the Northern provinces. As a
result, the population of Port Sudan increased from 26,300
in 1944 to 47,400 in 1956.

Consequently, building expansion was inevitable.
Extensive fourth class residential areas were developed.
They were mainly timber sheds lacking the most essential
services. Bajaus of Karis, Zigani and Sakhoon were founded
in 1959, 1951, and 1954, respectively. The 1955/56 census
estimated the number of houses in Port Sudan to be 10,002.

In the late 1950s and early 1960s, the wave of people
to Port Sudan was due to opportunities provided by new
industrial establishments. As a result, the spread of
squatter settlements became a dominant phenomenon in the
town. Although most of the squatter settlements are
located outside the municipal boundary, socially and
economically they are considered as a part of the town.

The direction of expansion was guided by land
availability rather than by land suitability, thereby
resulting in the creation of illegal deeds. These spread
route-westward where there is an acute shortage of drinking water and a drainage problem because of low gradient. Of the 80,000 inhabitants of Port Sudan in 1965 over 25 percent were living in illegal shacks.

The 1960s witnessed the emergence of many large scale industries. Together with the receipt of large numbers of migrants seeking work in the town, the municipal authorities found it necessary to upgrade the standard of housing in many of the unplanned settlements, and to improve water supply, drainage, and other services. These included Dusit al-Mur, Salahone, Salale, Mayo and Arab. Moreover, the planning authorities distributed plots of land in new extensions of residential areas, such as Malek and El-Farid.

Migration to Port Sudan during the last decade continued at a rate considerably higher than new job openings. One result was the development on the western and northern outskirts of the original town of low-grade housing areas built of cheap material, such as grass, iron sheets, tins and wood. There are ten such districts, all characterised by a high population density on congested, unhealthy sites with small individual land plots and narrow, unpaved streets. They form a discontinuous ring of substandard housing on the low-lying side of Port Sudan, separated from each other by native building areas liable to flood.

The morphology of Port Sudan has been to a great extent related to its site. The form of the harbour, and the courses of streams that flow into it, have divided the town into three main blocks, and have influenced the orientation of the street plan.
Warehouses, railways, quays, and associated harbour facilities have been restricted to the western side of the promontory. Except at the north end of the promontory, residential and commercial areas and the majority of public buildings have been built on a rectangular or gridiron plan to the west of the main harbours. Individual building blocks were of standard size and, as the town has grown, initially separate built-up areas have been linked together. At an early stage, an area was set aside for industry to the west of the residential region.

It is difficult to distinguish a clearly defined functional zonal pattern of urban growth. Fig. (1-3) shows a broad division of the functional activities of different parts of the town.

In addition to the main central business district, there are minor retail shopping areas including small markets for some of the towns. The commercial trading houses, offices and banks are mainly concentrated in an area immediately west of the harbour. Administrative and public buildings are rather scattered with some concentration interposed within the general area of the main town's commercial and shopping areas. Moreover the main commercial and administrative areas are still interposed with residential buildings.

The industrial area is already too limited for any great expansion. Most of the individual units are small workshop-type. No special area is devoted to handcraft industries, which are in the developed, townships and to
Two industries have been established on the north-west edge of the town, whilst other industries, including those associated with the oil installations, in the south harbour, and the vegetable oil mill, are on the main dock area.

In Sudanese prefer to live in separate, wide, individual plots, the residential area covers a very large part of the town. Residential areas could be classified into two main types: planned quarters, and unplanned ones. The former could be classified into four main classes, decided by the planning authorities and consequently distinguished by the class of the plots and the building materials.

First and second class houses are built of concrete blocks. While the first class houses are of two storeys and with a large space, the second class ones do not necessarily include two storey units and are of smaller size. The third class houses are built of blocks and wood and are of much smaller size, and the fourth class ones are built of wood and are not more than 150 square meters. In unplanned residential areas, the squatter settlements are on the edges of the town.

Generally, the town has the advantage of wide roads, which are 9 to 24 metres wide. Many are either not surfaced, or have only a narrow central strip about 6 metres wide.

(3) ECONOMIC ACTIVITIES

Economic activities in Port Sudan will be discussed under the following topics:

(1) port activities;

(2) commerce;
(3) industry; and
(4) other activities.

(1) Port Activities

A large percentage of Port Sudan's population earn their living directly or indirectly from port activities. Roughly 5,000 persons are employed directly in permanent jobs, and over 12,000 are temporarily employed as deck labourers. This makes approximately 45 percent of the employed people in the town, according to the 1975 census.

Growth and development of the port almost follows the economic development of the country. Work on the port, in accordance with a scheme developed by the British, was started early in 1906. A branch railway line was built from Sudan Station on the Asmara-Sudan line, and the new port was officially opened in 1909. The first production of desert cotton in 1925 marked a period of rapid growth of the national economy and was an reflected in port expansion and growth. The volume of trade in 1925-26 attracted a large number of workers from Sudan and abroad (General Archives, file No. 4652-7).

Because of a number of international events - mentioned earlier in this chapter - the decade 1930-1940 witnessed considerable expansion in port activities. Later on, the period of major railway expansion in the 1950s resulted in a rapid growth phase of port activities. The closure of the Suez Canal in 1967 led to a reduction in export and import trade, but soon the end of the civil war in southern Sudan marked the end of hostilities and consequently set the pace
for more development and clearly increased the volume of foreign trade (Table 2-1).

Meanwhile, immigrant streams are predominately moving into the town. Economic activities are thus expanding in volume and increasing in products. Buildings of various functions are established. Urban facilities and services are developed to cope with such expansion, and thus creating new job opportunities.

Table (2-1)

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<th>No. Registered Tonnage</th>
<th>Year</th>
<th>No. of Ships</th>
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<td>1973</td>
<td>981</td>
<td>3,142,300</td>
</tr>
<tr>
<td>1973</td>
<td>773</td>
<td>2,890,825</td>
<td>1974</td>
<td>1,501</td>
<td>3,211,801</td>
</tr>
<tr>
<td>1979</td>
<td>923</td>
<td>3,499,331</td>
<td>1980</td>
<td>1,614</td>
<td>3,129,300</td>
</tr>
<tr>
<td>1984</td>
<td>413</td>
<td>935,467</td>
<td>1981</td>
<td>3,196,306</td>
<td></td>
</tr>
</tbody>
</table>


Like many Third World ports, Port Sudan is now faced by a number of problems. A major one is the limited space for
future expansion, which could only be overcome by speeding up
loading and unloading operations. Another problem is its
failure to provide adequate warehousing facilities, which
results in considerable damage for certain commodities as
well as traffic congestion in the harbour. The congestion in
the port has created other serious consequences as far as
international reputation is concerned, for it forms an
unattractive port for world shippers.

The construction of the Port Sudan-Khartoum road helped
to reduce the sufferings of the bad warehousing conditions
of the congestion problems in the port. Moreover, it created
job opportunities for a large number of migrants.

(2) Commerce

Port Sudan is one of the main centres, not only to
Khartoum, of commercial companies and shipping agencies. All
the major companies in Khartoum have their branches at Port
Sudan. There are about 53 registered limited and partner
companies in Port Sudan of which 23 work in shipping agencies
while the rest work in general merchandise, storage and
industry (Nigazi, 1979).

Commercial activity in Port Sudan started with the
foundation of the port, but developed rapidly after the
1950s. Boxiadis mentioned that there were about 1725 shops
in 1956, which represents 44 shops for every 1000 persons.
According to the 1975 census results 25.8 percent of the
commercially active population are engaged in wholesales and
trades work, while 34.6 percent are employed as wage workers.
(3) Industry

In terms of industrial establishments and capital investment, Port Sudan represents the second town after the Khartoum conurbation.

In the industrial estate (established 1953), light industrial establishments predominate. They include button manufacture, nail making, wool spinning and carpeting, vehicle repair and body building, bakeries, soap making, the production of oxygen, mineral water bottling and ice manufacture. Four factories of a rather primitive nature are located in the northeast of the town. Other industries of a more modern appearance, such as cotton ginning, oil crushing mills, and grain mills, are established as well. On the petroleum concession there is a tin factory and oil and petrol are canned. An oil refinery came into full production in 1964.

"The Organization and Promotion of Industrial Investment Act, 1957" gave a chance to numerous industries of vital importance to be established in Port Sudan. Large scale industries have been created such as the nitrogenous fertilisers and the spinning and weaving industries and the main refinery of Port Sudan. The Automobile Firms Industry directed by "The International Firms Company Limited" came into production in 1960.

Labour force employed in manufacturing industry represents only 7.96 percent of the economically active population in the town, and 4.6 percent of the total employees of the industrial sector (Kesen, 1960). Never-
Nevertheless, industries return considerable income to investors, but because the number of establishments is limited, their income adds little to the national income and to the total national output.

Limitations for industrial development in Port Sudan are many, the most important of which are the lack of skilled labour and the absence of technical training. Moreover, Port Sudan lacks supplies of fresh water required for industrial needs.

Port Sudan, like other Sudanese towns, reflects the poor conditions of industrialization in the country. It suffers from problems of lack of capital, marketing, power deficiency, and high cost of production. Port Sudan, in the industrial character, is a typical Third World town.

(4) Other Economic Activities

Other economic activities are of minor importance except for the salt-pans. These were established in 1956 on the larger coastal flats south of the dockers. From the 40 salt pans in use, together with those at Mekkan, enough salt is produced to meet the entire needs of the country and to provide almost as much again for export. The 1958 production of salt amounted to 130,000 tons. North and South of Port Sudan, small-scale quarrying of coral limestone occurs. It provides good quality building stones, which helps to explain the generally high quality of many of the town’s buildings.
Agriculture is limited by the lack of irrigation water in any quantity and by the saline and coarse sandy character of much of the soil. The local demand for vegetables and fruits cannot be met by the production from the small suitable areas in Khor Mag or by the irregular supplies from the flood-irrigated parts of the coastal plain entered periodically by Khor Asafi'. Supplies come, in fact, from Kassala and other distant areas.

Port Sudan is the main centre of the Red Sea shell-fishing industry. The natural multiplication of shell-fish is limited, but successful efforts are being made north along the coast to cultivate mother-of-pearl oysters. The competition of imported plastic materials has reduced their importance in button industry.

Fishing employs only about 300 people on a permanent basis (Agedi, 1973). There is no proper fishing harbour, and adequate facilities for handling fish are lacking.

Port Sudan now acts as the capital of the Red Sea Province, which is one part of the Eastern Region of Sudan. The town provides a hospital and educational facilities for a wider surrounding area. The nearest settlements, Sufakin and Sallum, are only villages, and otherwise the extensive area of the Red Sea Coastal Plain is very sparsely populated.

(4) POPULATION

This part relies basically on the Census results of 1953/54, 1973, and the household surveys 1964/65. 'Be sure...
data was used comparing 1955/56-1973 figures, but "de facto" information was employed for 1964/65.

(a) Population growth

No estimates are available before 1926 when Port Sudan's population was estimated at 21,335. Until 1960 population growth was slow but steady with minor fluctuation (Table 2-2). The 1942 estimates (20,553 persons) ranked the town as number six in the country. By the early 1950s, an increasing rate of immigration into the town was reported, and according to the 1959/60 census, the population of the port was 68,676, taking the fifth place after Khartoum, Omdurman, el-Obeid and Wadi Halfa, respectively.

According to the census results of 1959/60, Port Sudan had a crude birth rate of 41.9 per 1000 and a crude death rate of 11.7 per 1000, and hence an annual rate of natural growth of 29.3 per 1000, a further indication of high fertility rates, according to the same source, are the high percentage of females at child-bearing age (59.6 percent) and the high percentage of children under 5 years of age, despite the high rate of infant mortality (4.9 per 1000). Life expectancy is 42.1 percent of the total population.

Consequently, in 1964/65 Port Sudan rose to occupy the fourth position in rank order of Sudanese towns with a population of 78,966, with a crude birth rate calculated at about 39 per 1000 and a crude death rate of 11 per 1000. Infant mortality dropped to 4.9 in 1959/60 to 3.9 per 1000 in 1964/65. The increase in population due to migration
was 53.4 percent between 1964/65 and 1973. Thus the total
pace of increase calculated as 5.6 percent annually, suggests
that the annual growth rate due to migration is about 3 percent

The shift from the sixth rank in 1962 to the fifth rank
in 1965/66 and the fourth in 1969/69 represents rapid
population expansion. That growth, which kept on at an
accelerating pace, is confirmed by the figures of the 1973
census.

Port Sudan population in 1973 reached 132,692. Between
1965/66 and 1973 Port Sudan increased by 181 percent, a
percentage that was only exceeded by the Three Towns. The
proposed population figure for Port Sudan by Dovin's and
Associates for 1960 was 120,000, a figure which had already
been exceeded in the 1973 census.

Annual rates of population growth in the town, as well as
household density, are increasing steadily (Tables 3-5 and
3-4), indicating the important role of natural growth in the
population increase in the town. Estimates now according to
the 1959-73 census rate reach 22,477 persons (Fig. 3-5).
POPULATION GROWTH IN PORT SMITH

Source: The data is the source of Table 3-2.
<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1958</td>
<td>21,555</td>
<td></td>
</tr>
<tr>
<td>1959</td>
<td>22,000</td>
<td></td>
</tr>
<tr>
<td>1960</td>
<td>19,385</td>
<td></td>
</tr>
<tr>
<td>1961</td>
<td>13,839</td>
<td></td>
</tr>
<tr>
<td>1962</td>
<td>12,798</td>
<td></td>
</tr>
<tr>
<td>1963</td>
<td>25,082</td>
<td>Sudan Census</td>
</tr>
<tr>
<td>1964</td>
<td>26,293</td>
<td>1961-1963</td>
</tr>
<tr>
<td>1965</td>
<td>32,319</td>
<td></td>
</tr>
<tr>
<td>1966</td>
<td>33,745</td>
<td></td>
</tr>
<tr>
<td>1967</td>
<td>38,113</td>
<td></td>
</tr>
<tr>
<td>1968</td>
<td>47,800</td>
<td></td>
</tr>
<tr>
<td>1969</td>
<td>47,740</td>
<td></td>
</tr>
<tr>
<td>1970</td>
<td>47,700</td>
<td></td>
</tr>
<tr>
<td>1971</td>
<td>47,700</td>
<td></td>
</tr>
<tr>
<td>1972</td>
<td>57,455</td>
<td>1955/56 Census</td>
</tr>
<tr>
<td>1973</td>
<td>54,604</td>
<td></td>
</tr>
<tr>
<td>1974</td>
<td>29,838</td>
<td>1964-65 Household Survey</td>
</tr>
<tr>
<td>1975</td>
<td>66,159</td>
<td></td>
</tr>
<tr>
<td>1976</td>
<td>78,910</td>
<td>1964/65 Household Survey</td>
</tr>
<tr>
<td>1977</td>
<td>73,029</td>
<td></td>
</tr>
<tr>
<td>1978</td>
<td>108,994</td>
<td>Calculations based upon</td>
</tr>
<tr>
<td>1979</td>
<td>132,926</td>
<td>the annual rate of</td>
</tr>
<tr>
<td>1980</td>
<td>132,826</td>
<td>growth between the</td>
</tr>
<tr>
<td>1981</td>
<td>137,957</td>
<td>1964/65 and the 1972</td>
</tr>
<tr>
<td>1982</td>
<td>171,492</td>
<td>Census.</td>
</tr>
<tr>
<td>1983</td>
<td>199,425</td>
<td>Calculations based upon</td>
</tr>
<tr>
<td>1984</td>
<td>224,677</td>
<td>the annual rate of</td>
</tr>
<tr>
<td></td>
<td></td>
<td>growth between 1964/65</td>
</tr>
<tr>
<td></td>
<td></td>
<td>and the 1979 census.</td>
</tr>
</tbody>
</table>
### Table (2-3)

**Annual Rates of Population Change in Four Series**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ANNUAL RATE</td>
<td>3.2</td>
<td>3.6</td>
<td>3.0</td>
</tr>
</tbody>
</table>

*Calculated by the formula:

\[ R = \left( \frac{P_2 - P_1}{P_1} \right) \times 100 \]

where:
- \( R \) stands for the rate of change,
- \( P_1 \) population size at one point in time,
- \( P_2 \) population size at a later point in time,
- \( t \) is number of years over the period.


### Table (3-4)

**Population and Household Density in Four Series**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>TOTAL POPULATION</th>
<th>TOTAL HOUSEHOLDS</th>
<th>HOUSEHOLD DENSITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1965/66</td>
<td>67,362</td>
<td>10,045</td>
<td>4.7</td>
</tr>
<tr>
<td>1966/67</td>
<td>78,940</td>
<td>13,670</td>
<td>5.7</td>
</tr>
<tr>
<td>1973</td>
<td>127,532</td>
<td>20,217</td>
<td>6.4</td>
</tr>
</tbody>
</table>


### (c) Sex-ratio: Anomalous

It has often been observed that high sex ratios (males to females) in towns are a predominant feature of rapid urbanization in countries of the Third World. At large, it...
has been found that sex ratios have been higher in the larger towns and those which experienced the fastest growth.

In Fort Araba male/female ratio was 151/100 in 1935; decreasing to 130/100 in 1965, and reaching 129/100 in 1973 (Table 2-5). The high male/female ratio is directly a result of the male migrants attracted by the job opportunities in the town. It has been stated earlier in this chapter that the rate of annual growth of population due to migration alone is 3 percent.

Table (2-5)

<table>
<thead>
<tr>
<th>Year</th>
<th>MALE</th>
<th>FEMALE</th>
<th>M/F Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1935</td>
<td>54,096</td>
<td>21,311</td>
<td>151/100</td>
</tr>
<tr>
<td>1965</td>
<td>78,948</td>
<td>34,510</td>
<td>129/100</td>
</tr>
<tr>
<td>1975</td>
<td>98,632</td>
<td>48,241</td>
<td>175/100</td>
</tr>
</tbody>
</table>


The steady decrease in the male/female ratio in the three data sources is probably a result of the settled earlier migrants, who either brought their families or married from outside the town and brought their wives to it, and hence increased the female number in the town. A further indication of that is the increase of the density of household from 4.7 in 1965/66, to 5.0 in 1965/66, and to 6.6 in 1975. However, the high male/female ratio might be an error in registration in a male-dominant society.
POPULATION PYRAMID OF PORT HUAN

Source: The preliminary results of the 1973 census.
Population structure is reflected in the population pyramid of the 1973 census (Fig. 2-3). The low proportion of aged people indicates high mortality rates and short life expectancy. Moreover, it might indicate that old people return to their homestowns or villages after they retire from their work in Port Sudan, or after they achieve what they purposely come for. A high proportion of young adults (15-49 years of age) is an indication that young males migrate around families and of elderly people. Table (2-4) gives an idea about population structure by age for a decade before 1973.

Comparing the 1964/65 survey results with the 1973 Census data, it is noticeable that the mortality rate is apparently decreasing while the fertility rate is increasing. However, the decrease in mortality rate is due to the increasing efficiency of health services. The increase in fertility rate may be attributed to the new socio-economic structure in which the rural migrants to Port Sudan are involved. Rural migrants after settling in town adopt the values (pro-natalist) of settled society. Moreover, their access to health care improved.

(c) Occupational and educational structure

In the 1964/65 survey no clear occupational composition is provided. In the 1973 census, seven occupational groups are identified. In the census, there is a high percentage of uncalled workers and a low percentage of professional and technical occupants; that is a typical feature in the Third World countries.
### Table 2.16

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 15</td>
<td>28,800</td>
<td></td>
<td>36.5</td>
<td>31,511</td>
<td>33.4</td>
<td></td>
</tr>
<tr>
<td>15 - 64</td>
<td>49,240</td>
<td></td>
<td>62.4</td>
<td>76,490</td>
<td>78.1</td>
<td></td>
</tr>
<tr>
<td>65+</td>
<td>900</td>
<td></td>
<td>1.1</td>
<td>2,871</td>
<td>2.9</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>78,940</td>
<td></td>
<td>100</td>
<td>130,872</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

**Source:** 1964/65 Household Survey, and the preliminary results of the 1972 census.

Comparing the educational attainment in the 1953/56 census data with the 1972 one (Table 2.7), a great development is obvious. The population of the town has doubled in number between 1953 and 1972, but the percentage of people with no schooling has decreased from 97.5 per cent to 40.7 per cent. Education is improving widely among the younger age groups. The percentage of children in primary schools rose from 13.6 per cent in 1953 to 34.1 per cent in 1972. Moreover, the percentage of people acquiring high secondary education and over increased from 2.4 per cent in 1953 to 5.2 per cent in 1972.

(a) Migration

Being the main port and the second largest town in the Sudan, Port Sudan has succeeded in attracting a large number of migrants from the surrounding rural area and other regions of the country. Growth was affected by both "pull" and "push" forces.
Table (2-9)

Urban Population 7 Years and Over by Educational Achievements in Some Sudanese 1965/66 & 1973

<table>
<thead>
<tr>
<th>Educational Achievement</th>
<th>1965/66</th>
<th>% from Base 74</th>
<th>Population of 1973</th>
</tr>
</thead>
<tbody>
<tr>
<td>No schooling</td>
<td>23,763</td>
<td>37.5</td>
<td>71,260</td>
</tr>
<tr>
<td>Aisha</td>
<td>4,752</td>
<td>11.5</td>
<td>7,640</td>
</tr>
<tr>
<td>Primary or less</td>
<td>8,009</td>
<td>19.6</td>
<td>33,938</td>
</tr>
<tr>
<td>Junior or less</td>
<td>3,761</td>
<td>9.1</td>
<td>8,685</td>
</tr>
<tr>
<td>High secondary &amp; over</td>
<td>996</td>
<td>2.6</td>
<td>5,888</td>
</tr>
<tr>
<td>Total population</td>
<td>54,576</td>
<td>100</td>
<td>132,662</td>
</tr>
<tr>
<td>Population over 7 yrs.</td>
<td>49,342</td>
<td>106,467</td>
<td></td>
</tr>
</tbody>
</table>


*Aisha = Traditional schooling in Sudan.

Table (2-8) shows the increasing number of migrants over time. The population born outside Port Sudan, recorded at the 1964/65 survey is almost double that of the 1956/56 census.

Table (2-8) states origins of immigrants in Port Sudan by province. It is clear that the Northern province is the most important source of migrants, while Kassala province, which includes the Red Sea province, ranks second.

Although the 1973 Census does not give specific details of migration, it gives places of birth of the urban population in the town (Table 2-8-2). Accordingly, the Red Sea province population includes Port Sudan-born population as well as those born outside Port Sudan in the Red Sea province.
### Table (2-5)

(3) SOURCES OF URBAN GROWTH IN PORT SUDAN 1952/53-61

<table>
<thead>
<tr>
<th>PLACE OF BIRTH</th>
<th>1952/53</th>
<th>Percentage</th>
<th>1961/62</th>
<th>Population</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>NORTHERN</td>
<td>13,380</td>
<td>23.8</td>
<td>18,780</td>
<td>57.5</td>
<td></td>
</tr>
<tr>
<td>KASSALA</td>
<td>7,375</td>
<td>25.6</td>
<td>6,210</td>
<td>23.0</td>
<td></td>
</tr>
<tr>
<td>KEDARIAM</td>
<td>1,062</td>
<td>5.2</td>
<td>1,800</td>
<td>5.4</td>
<td></td>
</tr>
<tr>
<td>BLUE NILE</td>
<td>8,532</td>
<td>21.0</td>
<td>1,000</td>
<td>3.3</td>
<td></td>
</tr>
<tr>
<td>KURDISTAN</td>
<td>271</td>
<td>3.8</td>
<td>1,200</td>
<td>4.1</td>
<td></td>
</tr>
<tr>
<td>DEBEN</td>
<td>712</td>
<td>2.1</td>
<td>910</td>
<td>2.1</td>
<td></td>
</tr>
<tr>
<td>SOUTHERN PROV.</td>
<td>156</td>
<td>0.6</td>
<td>400</td>
<td>1.2</td>
<td></td>
</tr>
<tr>
<td>ARKORO</td>
<td>3,790</td>
<td>11.9</td>
<td>2,070</td>
<td>5.9</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>42,120</td>
<td>100.0</td>
<td>29,030</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Total migrants as % of total population: 42.1% percent

<table>
<thead>
<tr>
<th>Year</th>
<th>1952/53</th>
<th>1961/62</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUMBER OF MIGRANTS</td>
<td>4212</td>
<td>29030</td>
</tr>
<tr>
<td>PERCENTAGE</td>
<td>42.1</td>
<td>100.0</td>
</tr>
</tbody>
</table>


Following the early years of the port foundation, a rich source of job opportunities in Port Sudan was created. Therefore, migration to Port Sudan from other provinces started as early as 1950. The town also witnessed the emigration of large numbers of Red Sea tribesmen in 1963 due to a crop failure in their farming area in the Red Sea Delta.

According to the 1973 census, the Red Sea Province-born population had a high percentage, partly because of the natural increase in Port Sudan's population and partly because of drought.
The table shows the sources of urban population in Port Sudan 1973.

<table>
<thead>
<tr>
<th>PROVINCE</th>
<th>POPULATION</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>RED SEA</td>
<td>83,740</td>
<td>63.6</td>
</tr>
<tr>
<td>KARIMA</td>
<td>3,058</td>
<td>2.3</td>
</tr>
<tr>
<td>NORTHERN</td>
<td>28,972</td>
<td>21.0</td>
</tr>
<tr>
<td>KORDOFAN</td>
<td>3,496</td>
<td>2.6</td>
</tr>
<tr>
<td>BLUE NILE</td>
<td>2,584</td>
<td>1.9</td>
</tr>
<tr>
<td>KURDISTAN</td>
<td>4,899</td>
<td>3.7</td>
</tr>
<tr>
<td>DURAYA</td>
<td>1,411</td>
<td>1.1</td>
</tr>
<tr>
<td>EQUITORIAL</td>
<td>341</td>
<td></td>
</tr>
<tr>
<td>E/KHALA</td>
<td>309</td>
<td>0.9</td>
</tr>
<tr>
<td>E/NETAL</td>
<td>260</td>
<td></td>
</tr>
<tr>
<td>PROVINCE NOT MENTIONED</td>
<td>158</td>
<td>1.2</td>
</tr>
<tr>
<td>OTHER COUNTRIES</td>
<td>2,862</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>132,452</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Total migrants as % of total population: 37.5 percent


Conditions in the Red Sea Hills during the 1960s that forced more Nubians to migrate to Port Sudan.

Almost one quarter of the migrants in Port Sudan came from the Northern province mostly because of the stagnant conditions of traditional agriculture in their region. Moreover, the environmental hazards overshadowing the vast region of arid and semi-arid characteristics in Western Sudan have caused more people to arrive in Port Sudan during the last two decades.
Large number of Southern refugees were recently introduced to Port Sudan due to stable conditions in the Southern region after the 1971 political agreement between Northern and Southern Sudan.

During the late 1960s and 1970s Eritrean refugees entered the country through the eastern border, due to unstable conditions in Ethiopia. They have spread widely in the towns of eastern Sudan, and a large number was observed in Port Sudan.
CHAPTER THREE

SMALL-URBAN MIGRATION TO PORT SUDAN

(1) INTRODUCTION

(2) SPATIAL MODELS AND THE MIGRATION PATTERN

(3) ECONOMIC ASPECTS OF MIGRATION

(4) SOCIO-CULTURAL ASPECTS OF MIGRATION
(1) **Introduction**

Population mobility within the northern and central Sudan is quite diverse, reflecting the complexity of the society and its uneven stage of transformation (Abu-Sin, 1974). Hence, mobility patterns range from neocolonialism of the most primitive form of mobility to the most innovative form of movement, represented by rural-urban mobility, while each type has its own perception and practice for the individual migrants.

Historically, mobility in the Sudan is a function of its position, subjecting it to waves of human movement for a long time and resulting in diversity of ethnic structures and modes of living. In its modern form, mobility reflects the existing duality of the economy, represented by the emergence of a highly localized modern sector superimposed on a large traditional one (El-Naggar, 1975; Abu-Sin, 1974).

This duality in the economy, coupled with the deterioration of environmental conditions, has created a migration pattern that is selective and involving reluctant migrants who respond more to "push" forces than to "pull" ones.

Under such conditions, the migration pattern is unlikely to be regular. It is evident that the migration pattern in the Sudan is increasing the tendency towards regional inequality, as the largest towns and almost all the development projects are in the central zone of the country.

In this chapter, discussion about migration pattern to Port Sudan is focused on its spatial, economic, social, and cultural aspects. These aspects react together forming one
pattern. But for the purpose of the study, it was found
adaptable to treat each aspect separately.

Sources of in-migrants in Port Sudan, nature of stop-over
migration and time spent in each staging point will be discussed
under the topic 'spatial models and migration pattern in Port
Sudan'.

The topic 'economic aspects of migration' discusses the
changes of jobs during stop-over migration and in Port Sudan.
Moreover, findings of different researchers in Third World
countries regarding economic factors of migration are discussed.

Finally, under the topic 'social-cultural phases of
migration', Brown and Jossua/model of the individual decision
making and Caldwell's model of the sociological stages of
migration are tested in the case of migration to Port Sudan.

1. SPATIAL MODELS AND THE MIGRATION PATTERN

(a) Sources and dates of arrival of migrants in Port
Sudan:

Survey results (Table 2-1) shows, in agreement with the
three demographic sources of data in Sudan, that the northern
region was the most important source of migrants in Port Sudan
until 1955. From 1955 up to 1975, the eastern region ranked
first. The western region, probably because of such factors
resulting from the period of drought (1963-1974), appeared
as a major source of migrants from 1966, and became the most
important source from 1976 until 1982. While the importance
of the northern region, as a source of migrants, decreased a
little after 1955, it stayed predominantly in the second order
until 1962 (see Chapter 2). However, unlike the 1973 census, our sample does not show migrants from the southern region in the period 1966-68.

Another conclusion that could be drawn from the chronological arrangement of arrival of migrants is that the arrival of migrants in Port Sudan followed strictly the town's economic growth (see Chapter 2). The periods 1931/33, 1936/38, 1966/75 and 1976/82 witnessed the arrival of almost equal numbers of migrants in the town.

(1) Nature of Stepwise Migration

In Sudan, a large country of one million square miles, linear distances play an important role in determining the pattern, direction, and magnitude of migration.

Many researchers (Leeds, 1969; Hayes and William, 1971) have argued that stepwise movement is frequent in Third World settings. Surprisingly, unlike these findings and disappointing the hypothesis, which is stated in this study, that the longer the distance to the final destination the more numerous the steps taken to it, the bulk of the migrants in our sample moved directly from place of birth to Port Sudan (67.1 percent). This indicates a very low trend of stepwise movement. This phenomenon occurs partly because Port Sudan used to have an incomparable source of job opportunities in the early years of its foundation and partly because cultural values play a more important role than spatial - as will be discussed later in this chapter.
<table>
<thead>
<tr>
<th>TIME PERIOD</th>
<th>NORTHERN</th>
<th>EASTERN</th>
<th>CENTRAL</th>
<th>WESTERN</th>
<th>SOUTHERN</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1906-1930</td>
<td>66.7</td>
<td>0.0</td>
<td>33.3</td>
<td>0.0</td>
<td>0.0</td>
<td>100.0</td>
</tr>
<tr>
<td>1931-1959</td>
<td>79.3</td>
<td>20.0</td>
<td>19.7</td>
<td>9.7</td>
<td>2.4</td>
<td>120.0</td>
</tr>
<tr>
<td>1960-1985</td>
<td>8.0</td>
<td>35.8</td>
<td>40.4</td>
<td>12.0</td>
<td>2.6</td>
<td>100.0</td>
</tr>
<tr>
<td>1986-1975</td>
<td>12.0</td>
<td>37.2</td>
<td>14.6</td>
<td>21.0</td>
<td>0.0</td>
<td>100.0</td>
</tr>
<tr>
<td>1976-1982</td>
<td>10.0</td>
<td>28.6</td>
<td>15.4</td>
<td>37.2</td>
<td>0.0</td>
<td>100.0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>51.7</td>
<td>32.3</td>
<td>15.8</td>
<td>10.2</td>
<td>2.2</td>
<td>100.0</td>
</tr>
</tbody>
</table>

* In each box the first figure is the frequency, while the second one is the percentage.

SOURCE: Survey Results.
Regarding the stepwise movement in the sample, the central region including Khartoum seems to play an intermediate point to migrants from marginal areas in the far west, south, or even north. Migrants who chose Khartoum as a stopping point are represented by 12.4 percent of the total sample. Such migrants are attracted by job opportunities in the comparatively richer district, that rather dissatisfaction or disappointment prompt them to move somewhere else, which is our case in Port Sudan.

A survey carried out by Johnson has shown, in the case of migration to Khartoum conurbation, that stepwise migration took a regular pattern from villages to towns in the migrants home province, towards a point in the centre, and finally to Khartoum conurbation. However, Khartoum is different from Port Sudan in many respects. Other than the spatial consideration — its location at the centre of the country — it represents the head of the Sudanese towns hierarchy i.e., the richest, the largest, and the most populated. In our sample, for many of them, a time pass through Khartoum the migration spatial stages take the form: "origin - another town or an agricultural estate - Khartoum - Port Sudan", while for others, the form is: "origin - Khartoum - Port Sudan".

(c) Time scale in stepwise movement

Irregularity in the pattern of stepwise migration includes the time scale. A stop period may vary from few months to more years. The high figures of standard deviations on table 3.8 are a good indicator of the irregularity of this step in stepwise migration to Port Sudan. Again, both economic factors, e.g.
job market, and cultural factors, e.g. ethnicity, to influence such result.

Table (7.2)

<table>
<thead>
<tr>
<th>Category</th>
<th>1st Step</th>
<th>2nd Step</th>
<th>3rd Step</th>
<th>4th Step</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean (in years)</td>
<td>4.906</td>
<td>12.93</td>
<td>12.43</td>
<td>11.62</td>
</tr>
<tr>
<td>Standard Dev.</td>
<td>3.112</td>
<td>4.101</td>
<td>6.131</td>
<td>2.109</td>
</tr>
</tbody>
</table>

**Survey Results**

(a) Urban Hierarchy

To test Hagerstrand's model of hierarchical arrangement of higher and lowerorden centres in the case of migration to Port Sudan, it is important to classify Sudanese towns into a hierarchy.

For the purpose of the study, the hierarchy should present together the social and economic order of towns. Thus, Ariff's classification (1979) of Sudanese urban settlements, according to the population size of the 1973 census, is regarded as suitable to be adopted in this section. Ariff has classified the settlements into five categories, the first order urban centres were the cities and towns with population more than 100,000; namely Khartoum, Omdurman, Khartoum North, Port Sudan, and Wad Medani. The second order urban centres with population between 100,000 and 50,000 were Atbara, Kasala, Sareia, Noki, el-Djabal, el-Tushir, Nyala, Wuad, and Jawa. The third order ones had populations between 50,000 and 30,000 namely New Rahad, Karima,
el-Geneina, Malaik, and Sinnar. In the fourth order come the small towns of Sudan that have a population between 20,000 and 5,000, and in the fifth order come the villages with less than 5000 people. (Fig. 3-1).

Regarding stepwise migration to Port Sudan, survey results indicate that while 5 percent of the total low-income population in Port Sudan were Port Sudan born, 52.4 percent of them were migrants who came directly from their place of birth to Port Sudan. Thus, only 34.9 percent of the total sample came through stages or stepping points. Of the total only 3.6 and 4.3 percent made two steps and three steps, respectively, before arriving at Port Sudan (Table 3-5).

Table 3-4 shows that 75.3 percent of the total sample were born in villages with a population less than 5,000 people, and that 24.8 percent were born in centres of a population more than that. Partly this explains the large percentage of migrants coming directly from place of birth to Port Sudan, because the 24.8 percent of the urban born migrants need not go through many higher order urban centres to reach Port Sudan.

Questioning the rural migrants in the sample, it was found that most of them migrated to or visited the nearest town or the nearest large village and sometimes the nearest agricultural station.

The most important migrant-attracting centre that appeared on the first step destination point was Khartoum (Table 3-5). 12.4 percent of the sample chose it as the first step. In the hierarchical arrangement of Sudanese towns, however, Port Sudan is, in various respects, a lower order than Khartoum. Accordingly,
CLASSIFICATION OF SUDANSE TOWNS BY POPULATION

Source: After Arbl (1979).
the hierarchial nature of movement is of less value in explaining its size.

Table (2-3)

<table>
<thead>
<tr>
<th>IMMIGRATION TO FORT SIBUH</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FORT SIBUHBorn</td>
<td>8</td>
<td>5.0</td>
</tr>
<tr>
<td>SIBUH TO FORT SIBUH</td>
<td>100</td>
<td>52.1</td>
</tr>
<tr>
<td>THROUGH ONE STEP</td>
<td>26</td>
<td>22.4</td>
</tr>
<tr>
<td>THROUGH TWO STEPS</td>
<td>9</td>
<td>4.6</td>
</tr>
<tr>
<td>THROUGH THREE STEPS</td>
<td>7</td>
<td>3.9</td>
</tr>
<tr>
<td>THROUGH FOUR STEPS</td>
<td>1</td>
<td>0.6</td>
</tr>
<tr>
<td>TOTAL</td>
<td>161</td>
<td>100</td>
</tr>
</tbody>
</table>

SOURCE: Survey Results

Table (2-4)

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>MARRI</th>
<th>MARRI</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUMBER</td>
<td>161</td>
<td>161</td>
</tr>
<tr>
<td>PERCENTAGE</td>
<td>75.2</td>
<td>75.2</td>
</tr>
</tbody>
</table>

SOURCE: Survey Results

NOTE: "Small places here are of populations less than 5,000 according to 1970 census.

Moreover, most of the towns that appeared on a first and second destination points for the migrants are the second order towns. This, Athens, Kansas, Goshen, New Haven, Beverly and Hyacin. They represent 71 percent of the total sample. Agricultural advance
appeared too as first step destination points. The Cenner, Bahari, and Kenana schemes receive 3 percent of the total migrants to Port Sudan. Another group includes the people who crossed the border to rich Arab countries in search of higher income and who then returned to Sudan for one reason or another. This category, however, supports the contention that going abroad is a stage before arriving in Port Sudan. Many people emigrate to Saudi Arabia or Gulf countries for the purpose of making money. Those who do not find a permanent job are forced to return to Sudan by sea and eventually settle in Port Sudan. However, this category represents a small proportion of the total (2.5 percent).

As it appears from this discussion, Nagersland’s model is inapplicable in the case of migration from different parts of the country to Port Sudan. Reasons for this are many. First, Port Sudan was founded as a base of a small village and developed steadily and at a fast rate. Second, its location on the remote northeastern part border leaves few opportunities for intervening lower order centres to develop as attractions for migrants. Third, the cultural values play an important role - as shall be discussed later, that adab acts attract migrants, and in many cases irrespective of distance or urban order.

On the regional scale, considering migration to Port Sudan, from the Red Sea Province only, Nagersland’s model appears to be typical. Migrants move from their original villages to work like Tokar, Sinqret, and so on, and then to Port Sudan. Notably because Port Sudan represents the capital and the largest town in the region, i.e., it is the top of the hierarchy.
Table 1

A POPULOUS POINTS FOR MIGRANTS ON THEIR WAY TO
PORT MAW

<table>
<thead>
<tr>
<th></th>
<th>FIRST STEP</th>
<th>SECOND STEP</th>
<th>THIRD STEP</th>
<th>FOURTH STEP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Entrants</td>
<td>Entrants</td>
<td>Entrants</td>
<td>Entrants</td>
</tr>
<tr>
<td>PORT MAW</td>
<td>108</td>
<td>57.1</td>
<td>144</td>
<td>89.4</td>
</tr>
<tr>
<td>KHARGOON</td>
<td>20</td>
<td>12.6</td>
<td>2</td>
<td>1.2</td>
</tr>
<tr>
<td>JABARA</td>
<td>3</td>
<td>1.9</td>
<td>3</td>
<td>1.9</td>
</tr>
<tr>
<td>ADDASA</td>
<td>3</td>
<td>1.9</td>
<td>1</td>
<td>0.6</td>
</tr>
<tr>
<td>MIRABA</td>
<td>4</td>
<td>2.5</td>
<td>1</td>
<td>0.6</td>
</tr>
<tr>
<td>DERIBA SORME</td>
<td>2</td>
<td>1.2</td>
<td>1</td>
<td>0.6</td>
</tr>
<tr>
<td>NUR HIGH</td>
<td>3</td>
<td>1.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KORATA SORME</td>
<td>1</td>
<td>0.6</td>
<td>2</td>
<td>2.2</td>
</tr>
<tr>
<td>KORATA SORME</td>
<td>2</td>
<td>1.2</td>
<td>1</td>
<td>0.6</td>
</tr>
<tr>
<td>KORATA</td>
<td>2</td>
<td>1.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KUNNUR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHBER</td>
<td>4</td>
<td>2.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NUGA</td>
<td>2</td>
<td>1.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SHOWA</td>
<td>1</td>
<td>0.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SURE</td>
<td>1</td>
<td>0.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>JUBRA</td>
<td>1</td>
<td>0.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GUMARA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*NOTE: The figure includes Port Said born respondents (8 respondents).

SOURCE: Survey results.

Following such discussion, a logical and practical question will tend to arise, that is: does Port Said play a role of a staging point to other places?

In early times when modern transport was not widely used, pilgrims to Mecca from West Africa and western Sudan used to sail
to Sudan and similar parts, some of them, however, settled in Sudan and later came to Port Sudan. But this category was a small one. Pilgrims to Mecca today travel either by ship from Port Sudan or by air from Khartoum or Port Sudan. But in both cases it does not involve staying for a long time in either Khartoum or Port Sudan.

During the last two decades, out-migration to rich petroleum countries became widespread and included the unskilled labourers. Some migrants after settling in Port Sudan for a considerable time would think of a better alternative, which in this case is moving abroad. However, our sample included only one respondent with such an experience.

Counter streams of migration seem to exist. Table (7-13) records that 41.6 percent of the migrants are either not satisfied with their living in Port Sudan or intend to go back home after they collect some money. But it is impossible to check such a phenomenon except by questioning the rural people in villages.

(3) ECONOMIC ASPECTS OF MIGRATION

Many methodological problems arise when discussing economic aspects of the migration pattern to Port Sudan.

The irregularity of the stepwise nature in the migration pattern and the presumably change of the jobs in each step, will make classification of economic conditions during the movement process more complex.

Another difficulty arises in the classification of the urban jobs. According to the currently accepted classification
of employment conditions by the I.L.O. of the skilled and unskilled labour market, more than 80 percent of the rural migrants in Fort James could be classified as unskilled workers. A reliable classification by income is even more difficult because of the great variety of employers and the ever-changing nature of amounts and values of wages earned by inflation in the economy.

The difficulty of classifying urban jobs in Fort James may be illustrated through studies of "dualism" and "plurality". In any early study of two Indonesian towns, Coates (1963) was led to describe their urban economies in terms of two sectors, which he called the "formal economy" and the "informal economy", which he saw as independent of each other. This is followed by the introduction of a number of "dual economy" or "dual society" formulations, of which the most frequently used in the 1970s were those between the "formal" and "informal" or "organised" and "unorganised", and between "modern" and "traditional". The "organised", "formal", or "modern" sort of job, though different in details, have similar characteristics such as fixed periods of working hours, specified wages, and require definite kinds of qualifications, while the "unorganised", "informal", or "traditional" ones have no definite norms (Ackerley, 1975).

In Fort James, most of the low-income migrants hold jobs that have unfixed working hours, unspecified wages, and no particular qualifications. Thus, most of the jobs are of "informal" nature. A few of these migrants hold "formal" jobs in the public service.
An alternative classification is attempted in this study. Unfortunately, the classification does not consider whether a job is of a "formal" or "informal" nature. In the classification, jobs of respondents are classified according to sources of employment, each requires similar qualifications and similar previous experience. Yet no regular pattern is found regarding the incomes of the employees of the different categories (Table 3-6).

Table (3-6)

<table>
<thead>
<tr>
<th>TYPES OF OCCUPATIONS</th>
<th>18-40</th>
<th>41-60</th>
<th>60+</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMPLOYED</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>INSIGNIA JOBS</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>LUMBER MILL AREA</td>
<td>0</td>
<td>1</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>PORT ACTIVITIES</td>
<td>0</td>
<td>0</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>ENGINEERS</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>CIVIL WAYS</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>MARKET JOBS</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>ELECTRICIANS</td>
<td>0</td>
<td>2</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>ELD. WORKS</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>STUDENT</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>AGRICULTURAL</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>GOVT. WORKER</td>
<td>0</td>
<td>1</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>TOTAL</td>
<td>5</td>
<td>4</td>
<td>16</td>
<td>24</td>
</tr>
</tbody>
</table>

Source: Survey results
For example, in the "port activities" category, 11 respondents earn 100 L.E., 7 earn 200 L.E., and 4 earn 300 L.E. per month, while one respondent could not estimate his income.

For the benefit of a comprehensive discussion of such a complex topic, an attempt is made to arrange the different aspects of the economic conditions of the migrants with regard to:

1. Objectives of migration,
2. Initial jobs of the migrants,
3. First occupations in Port Said,
4. Occupational change in temporary migration, and
5. Occupational change in Port Said.

1. Objectives of migration

Survey results showed that the chief motive for migration is the desire to earn money in the town, so that it can be put to a variety of uses. It seems reasonable to suppose that some of these uses, beyond those of basic living expenses, must be investigated at the planning stage. Indeed, they form an integral part of the decision to migrate.

Similarly, most studies of rural-urban migration in Third World countries concern the lack of job opportunities at home and the search for higher paying jobs in the cities as the main reasons for migration.

In Latin America, Elwood (1964) has indicated that 63 percent of migrants to Santiago moved for economic reasons, while Browning and Peacock (1972) have reported that 70 percent did so in Monterrey.

In Africa, Caldwell (1969) has claimed that 64 percent of migration in Sierra Leone is for economic reasons.
many others have structured rural-urban migration in Senegal on economic bases.

Thus, it could be assumed that the majority of migrants to Port Sudan plan to save some of their urban earnings. The experience of those already in towns shows that this is possible, even in apparently poverty-stricken squatter areas, and for many this is the chief purpose of migration. Whenever migrants get urban earnings, some of it is likely to find its way back to the home villages as money realized or as goods, often in the form of presents.

When the questions “Have you brought your family?” and, “If not why?” were asked, it clearly emerged that migration to the town plays an important role in traditional society. A migrant hopes to get the money to meet the necessary bride-wealth payments to make a desirable marriage and establish a family. This is particularly true for young single men from north and central Senegal. Moreover, many traditional norms of rural society seem to take part in savings consumption, such as sending remittances, irregularly giving money or goods to relatives for consumption or schooling, or to fellow villagers for ceremonies associated with births, marriages, deaths, and other festivities. But in many cases, such expenditure was not listed as specifically planned or currently taking place.
a firm base in the village to which they might return permanently.

There were significant differences in attitudes according to the migrant's region. Migrants from northern Sudan were particularly interested in setting up a farm after returning home, while those from western and eastern Sudan were planning to buy more sheep and cattle at home. Those of central Sudan and many others discussed the possibility of using money earned in the town as capital for commercial purposes in their home areas.

Very few migrants had made arrangements for jobs before arriving in the city. This is difficult in economics with high unemployment. Thus very few migrants in the entire labour force have the same job as they had in their home village. Similar findings have been reported by Cornelius (1971) in India and S. Caldwell (1969) in Sierra Leone, and Abu Sia (1972) in Sudan.

Table (3-7) reflects the dramatic change in the nature of work carried out at home and the first job in Port Sudan. As mentioned earlier, three quarters of the migrants were village born, while only a quarter was urban born.

Unlike findings of many researchers in Third World countries (Caldwell, 1969; Brender, 1973; and Abu Sia, 1972), education seems to have a minor role to play in the case of low income migrants in Port Sudan.
This could be explained by the fact that educated people in this society, though limited in number for historical and developmental reasons, have had higher aspirations and more complex needs. An educated person will either seek in public service, commerce, or a skilled labour with better earning, in all cases he would not, at least, be living in the squatter settlements of the town. Moreover, the mobility of a public service employee is decided by the government and therefore is involuntarily made.

In early years of the town development, migration was a response to pull factors, and consequently educated people had better chances of acquiring a better paid job of formal type. However, since the late 1960s, job opportunities in the town became limited while push factors in rural districts grew severe. Therefore, uneducated and unskilled migrants invaded the town in search for living and eventually flocked to where they could acquire cheap room to live in.

In recent years, however, numbers who have high and junior secondary schooling, because of difficulty in acquiring satisfactory formal jobs, joined some kinds of informal life.

Migration then, especially for the low income migrants, is no longer, if it was, a result of educational selectivity.
(2) Village jobs of migrants (Table 3-7)

More than half of the migrants were originally cultivators and nomads. Upon arrival in town, 26.9 percent of them occupied "market jobs", 15 percent worked in the "port activities", and the rest were distributed over other job categories. Notably, most of these jobs are "informal" and need no special skills.

Most of the skilled workers are of urban origin. One third of this category worked in the industrial sector. This reflects their previous experience, which, in no way was connected with farming. Characteristically, these people were mechanics, tailors, and so on.

The categories of migrants formerly working as laborers (14.9 percent), students (24.6 percent), and government workers (4.1 percent) represent the only categories in which there is great similarity between their occupations at home and their later jobs in town. But even in these categories, as evident from the table, changing jobs takes place immediately after arrival in the destination town.

(3) First occupations in Port Sudan

Job opportunity in Port Sudan had a dynamic nature. Since its foundation until the mid 1950s, Port Sudan provided an assured source of jobs. "Port activity", and "market job" sectors absorbed almost all of the newly arrived migrants to the town up to 1955, while the other sectors provide work for 55.8 percent of the new arrivals in the town up to 1955. During the next ten years, the rate of employment in "port activities" decreased markedly, mainly because of the closure
of the Suez Canal and, consequently, a reduction in the port usage. In that period, the most important source of employment was the "industrial" sphere of work, which was mainly concerned with port servicing (Table 3-3).

"Casework" and "market jobs" for a person without capital means a low-paid job. The market provides enormous opportunities for work of an "informal" nature absorbing the rigorous plight of unskilled new migrants.

It could be concluded that after 1969 migration was a result of push factors on the countryside. The increasing level of unemployment and job instability of the last few decades, the increasing number of new arrivals occupying "informal" types of jobs, in the "casework" and "market" categories and the slowly decreasing number of occupants of "formal" jobs in the "port activities" or in the civil service confirms that fact. This is even more clearly shown in the data after 1975.

These points illustrate the theory of town development. Port Sudan started as a port. But as the town developed, commerce, transport, services and other sectors developed as well. The rapid increase of people working in the construction industry — referred to as the "building works" — in recent years confirm this notion. It is a sector that was connected with development and expansion of the town facilities.

(1) Socioeconomic change in urban socio-economic conditions

Comparing table (3-7) with table (3-9), it is found that moving to Port Sudan through two stages was experienced by 26.3 percent of respondents, while changing the job held at the first
<table>
<thead>
<tr>
<th>YEAR</th>
<th>JAN</th>
<th>FEB</th>
<th>MAR</th>
<th>APR</th>
<th>MAY</th>
<th>JUN</th>
<th>JUL</th>
<th>AUG</th>
<th>SEP</th>
<th>OCT</th>
<th>NOV</th>
<th>DEC</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1954</td>
<td>66.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>33.3</td>
<td></td>
<td></td>
<td>42.4</td>
<td></td>
<td></td>
<td></td>
<td>220.3</td>
</tr>
<tr>
<td>1955</td>
<td>11.1</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<td>21.3</td>
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<td></td>
<td></td>
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<td>45.4</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1957</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td>30.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1959</td>
<td></td>
<td></td>
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<td>30.3</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.1</td>
</tr>
</tbody>
</table>

**SOURCE:** Survey results.
Step to a second one at the second step was experienced by 27.5 percent. At the third step, 6.3 percent moved to other towns, and 7.3 percent changed their jobs.

Changing jobs through migration is mainly caused by the temporary nature of some jobs. In a very few cases it is a result of moving to another place, mainly because each job-type requires previous experience of a relevant nature. When a migrant moves from one town to another, he necessarily changes the employer, but he very seldom changes the job category. Categories of "market jobs" and "unemployment" are characterized by a high rate of instability. The first includes a variety of jobs of an indefinite nature, while the second is because the place change is not accompanied by success in securing work.

A conclusion could be drawn that there is a great gap between the employment market of the villages and that of the towns regarding the nature, variety and income associated with employment.

3) Occupational change in Port Vodice

Changing the type of job in Port Vodice is practiced more frequently than in the case of stepwise migration.

It is found that 17.4 percent of the total sample changed their first occupation to a second one, that 11.3 percent changed their jobs twice, and 9.9 percent changed them three times or more. It is more probable that a migrant continues with the first job which he held when he first moved into town, and gets more experienced and skilled in it rather than takes other jobs.
<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>FIRST STEP</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
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<tr>
<td></td>
<td>FREQUENCY</td>
<td>PERCENTAGE</td>
<td>FREQUENCY</td>
<td>PERCENTAGE</td>
<td>FREQUENCY</td>
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<td>WARRIED CHILDREN</td>
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<td>1</td>
<td>0.6</td>
<td>2</td>
</tr>
<tr>
<td>UNEMPLOYED</td>
<td>4</td>
<td>2.5</td>
<td>5</td>
<td>3.2</td>
<td>5</td>
</tr>
<tr>
<td>POLITICALLY MORE</td>
<td>2</td>
<td>1.7</td>
<td>2</td>
<td>1.2</td>
<td>2</td>
</tr>
<tr>
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<td>24</td>
<td>14.9</td>
<td>22</td>
<td>12.7</td>
<td>23</td>
</tr>
<tr>
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<td>12.8</td>
<td>19</td>
<td>11.6</td>
<td>21</td>
</tr>
<tr>
<td>CONSUMERS</td>
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<td>6.8</td>
<td>14</td>
<td>5.6</td>
<td>14</td>
</tr>
<tr>
<td>RELIEF</td>
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<td>5.2</td>
<td>8</td>
<td>5.0</td>
<td>8</td>
</tr>
<tr>
<td>Insets Joins</td>
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<td>10.8</td>
<td>22</td>
<td>13.4</td>
<td>19</td>
</tr>
<tr>
<td>CONGRESS</td>
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<td>17</td>
<td>10.6</td>
<td>19</td>
</tr>
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<td>17</td>
<td>10.6</td>
<td>19</td>
</tr>
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<td>12</td>
<td>7.0</td>
<td>12</td>
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<td>1.2</td>
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<td>7.0</td>
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<td>9.2</td>
<td>17</td>
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<td>18</td>
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<td>3</td>
<td>1.9</td>
<td>3</td>
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<td>131</td>
<td>100.0</td>
<td>161</td>
</tr>
</tbody>
</table>

Note: The table shows the distribution of people in the first, second, and third steps. The last step shows the distribution of people who were involved in political action.
As a first occupation in town, 6.8 per cent hold short-term jobs ('unstable jobs' category). This percentage decreased when migrants were able to find stable jobs (Table 3-10).

"Wastebasket jobs", "port activities", industrial chores", and "commerce" categories are varieties of indefinite job types. Occupants of these categories are mostly unskilled and may work as labourer's assistants, while some are nevertheless skilled carpenters, bricklayers, tailors, and so on. It is impossible to determine how many of them could be classified as skilled workers.

The skilled-unskilled classification is to some extent arbitrary in underdeveloped economies because of many reasons; first, poor people frequently shift from one activity to another. Second, incomes are not distributed fairly according to the quality and productivity of the jobs. Third, there is always an in-between range of semi-skilled jobs. Fourth, there are no standardized definitions.

Another difficulty arises in measuring individual income. It is difficult for the respondents to estimate their monthly income because it may be different each month. Sometimes they work full-time, and at others a few hours per day. Moreover, the economic unit for income and expenditure in the household members, and respondents might have difficulties in giving information about individual incomes and only a compound income can be considered. One third of the sample cannot give even estimated figures for their income (Table 3-11).

With these limitations in mind, Table 3-11 presents the monthly income of household units. The table suggests that
<table>
<thead>
<tr>
<th>CATEGORY/LABEL</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
<th>FREQUENCY</th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>STUDY OCCUPATION</td>
<td>SECOND OCCUPATION</td>
<td>THIRD OCCUPATION</td>
<td>FOURTH OCCUPATION</td>
<td>STUDY OCCUPATION</td>
<td>SECOND OCCUPATION</td>
<td>THIRD OCCUPATION</td>
<td>FOURTH OCCUPATION</td>
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<td>1.9</td>
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<td>3.2</td>
<td>7</td>
<td>4.3</td>
</tr>
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<td>2.5</td>
<td>2</td>
<td>1.2</td>
<td>1</td>
<td>0.6</td>
</tr>
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<td>24</td>
<td>14.9</td>
<td>22</td>
<td>13.7</td>
<td>24</td>
<td>14.9</td>
</tr>
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<td>FURTHER ACTIVITIES</td>
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<td>15.3</td>
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<td>18</td>
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<td>8.1</td>
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<td>3.7</td>
<td>6</td>
<td>5.6</td>
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<td>MANAGER JOBS</td>
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<td>12.5</td>
<td>29</td>
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<td>18</td>
<td>11.2</td>
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<td>12.5</td>
<td>23</td>
<td>14.9</td>
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<td>ROAD CONSTRUCTION</td>
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<td>1</td>
<td>0.6</td>
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<tr>
<td>BUILDING WORKS</td>
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<td>10</td>
<td>6.2</td>
<td>9</td>
<td>5.4</td>
<td>10</td>
<td>6.2</td>
</tr>
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<td>1.2</td>
<td>2</td>
<td>1.2</td>
<td>2</td>
<td>1.2</td>
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<td>1</td>
<td>0.6</td>
<td>1</td>
<td>0.6</td>
</tr>
<tr>
<td>COYEE WORKER</td>
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<td>7.5</td>
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<td>12.5</td>
<td>20</td>
<td>12.5</td>
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<tr>
<td></td>
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<td>100.0</td>
<td>161</td>
<td>100.0</td>
<td>161</td>
<td>100.0</td>
</tr>
</tbody>
</table>

NOTE: If an occupation was changed less than four times, the last one replaces the following entries.

SOURCE: Survey results.
<table>
<thead>
<tr>
<th>OCCUPATIONAL CLASS</th>
<th>3-10</th>
<th>1-30</th>
<th>31-50</th>
<th>51-100</th>
<th>101-200</th>
<th>201+</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1ST OCCUPATION</td>
<td>27</td>
<td>22</td>
<td>20</td>
<td>27</td>
<td>28</td>
<td>52</td>
<td>160</td>
</tr>
<tr>
<td></td>
<td>23.9</td>
<td>15.7</td>
<td>4.2</td>
<td>16.8</td>
<td>13.7</td>
<td>19.9</td>
<td>100.0</td>
</tr>
<tr>
<td>2ND OCCUPATION</td>
<td>18</td>
<td>13</td>
<td>5</td>
<td>53</td>
<td>29.9</td>
<td>53</td>
<td>160</td>
</tr>
<tr>
<td></td>
<td>10.6</td>
<td>8.1</td>
<td>3.1</td>
<td>27.3</td>
<td>27.4</td>
<td>27.4</td>
<td>100.0</td>
</tr>
<tr>
<td>3RD OCCUPATION</td>
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<td>3</td>
<td>39</td>
<td>30.6</td>
<td>27.5</td>
<td>32</td>
<td>160</td>
</tr>
<tr>
<td></td>
<td>0.6</td>
<td>1.9</td>
<td>7.4</td>
<td>27.7</td>
<td>10.9</td>
<td>10.9</td>
<td>100.0</td>
</tr>
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<td>PRESENT OCCUPATION</td>
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<td>4</td>
<td>4.1</td>
<td>1.6</td>
<td>3.4</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Note:** ***Respondents who could not estimate their income.***

**Source:** Survey Results.
their income have been greatly improved through the four stages of changing the employment.

Almost half of the people at the time of the interview had income ranging from 100 to 200 Sudanese pounds monthly, an income that was gained only by 12.7 percent at the first occupation in town. It is clear that the percentage of people with income less than 50 Sudanese pounds per month is decreasing uniformly through the phases of changing employment, while that of people with incomes higher than 50 Sudanese pounds is increasing. Although the overall increase of income is mainly due to inflation, it suggests that migrants have succeeded in acquiring stable and improving conditions of jobs.

Comparing these findings with those of researchers in Third World countries, it is clear that economic conditions of migrants in Post Sudan are similar to those of migrants in other Third World towns in many ways. First, the lack of job opportunities at home and the search for higher paying jobs in town are the main reasons for migration. Second, most of the migrants, being unskilled laborers, occupy informal jobs. Third, very few migrants had made arrangements for jobs before arriving in the town, and a considerable part of their saved money is consumed in their home villages. Fourth, the nature of job opportunity in the town is everchanging due to continuous expansion and rapid growth.

(4) SEMI-CULTURAL, ANXIETY OF MIGRATION

Brown and Moore (1970) have produced a model concerning the individual's decision making regarding different stresses and factors that influence the search behaviors for a new
residential site (see Chapter 1). Applying the model in Port Sudan, it supports the hypothesis that ethnicity and family ties strongly underlie the voluntary associations formed after migration, especially among new arrivals in Port Sudan.

In this case, 97.1 percent of migrants stayed with relatives when they first arrived in Port Sudan, while 24.1 percent were housed with friends who are, in many cases, fellow villagers of the same tribe as the migrant (Table 3-12).

### Table 3-12

<table>
<thead>
<tr>
<th>Accommodation Type</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stayed with Relative</td>
<td>92</td>
<td>97.1</td>
</tr>
<tr>
<td>Stayed with Friend</td>
<td>26</td>
<td>26.1</td>
</tr>
<tr>
<td>Lived in Shelter</td>
<td>19</td>
<td>19.2</td>
</tr>
<tr>
<td>Other Accommodation</td>
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<td>19.5</td>
</tr>
<tr>
<td>Born Sudan Born</td>
<td>8</td>
<td>8.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>162</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

**Source:** Survey results.

*Accommodation such as public parks, mosques, streets, not etc.*

Thus, almost 95 percent of the migrants stayed with relatives and fellow villagers. If to those figures are added those joining their nuclear families, mostly wives going to husbands and children going to parents, the proportion of migrants staying with relatives will exceed 97 percent (Table 3-13).
Table 3-13

FAMILIES HIRENED TO PORT SUDAN

<table>
<thead>
<tr>
<th>SITUATION OF FAMILY</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>BORROWED FAMILY</td>
<td>61</td>
<td>57.1</td>
</tr>
<tr>
<td>FAMILY IN VILLAGE</td>
<td>26</td>
<td>24.3</td>
</tr>
<tr>
<td>NOT MIGRANT</td>
<td>92</td>
<td>84.4</td>
</tr>
<tr>
<td>SON IN PORT SUDAN</td>
<td>8</td>
<td>7.5</td>
</tr>
<tr>
<td>ALL OTHRED IN PORT SUDAN</td>
<td>13</td>
<td>1.1</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>161</td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

SOURCE: Survey results.

Very seldom is migration an individual effort among respondents. Only 10.6 percent of migrants rented a residence at the first foothold in town.

In addition, very few migrants had made arrangements for home before arriving in the town. Short-term unemployment is only experienced by 1.9 percent of the new arrivals. Within weeks most of them have found at least some temporary or part-time jobs (Table 3-3).

Those having relatives or friends at the intended point of destination will mean a lot to a rural person exposed to poor local environmental conditions. Not only are they the main source of information about the town life, but relatives also provide the support a migrant needs in order to overcome the initial hardship of coming to the city. Kinship ties constitute a strong stimulus for the migrant.

In Latin America, in Cornelius' (1969) sample, 73 percent of migrants had families living in the city at the time of their
arrival. Brown and Feindt (1971) have reported that Kinship networks are effective in taking care of the basic needs of the migrants after arrival in urban centres. Fink and Conscience (1970) found that in Los Colinas, 49 percent of migrant dwellers stayed with relatives and 21 percent with friends. Similar findings have been reported in African studies (Oliver, 1964), in Uganda (Goldwell, 1969), and in South Africa (Oliver, 1966).

However, the initial motivation for migrating was economic since they try their best to find a job as soon as they arrive. From this point of view, and considering in particular that a considerable number of migrants were unskilled workers and had to find occupations absolutely different from those they had before, the migrants were successful in satisfying the main purpose of their migration even if they had to change jobs many times before finding a final, stable, satisfactory one. Furthermore, adjustment to town life takes time, and there are new rules of behaviour to be learned. In the circumstances, there is much to be said for staying with someone who initially will not expect too much and who can be used as a model for behaviour or even as a teacher.

According to survey results, migrants can be classified into two types: (1) voluntary, and (2) non-voluntary. The voluntary migrants are the decision makers who seek first or soon work and later, after being established in town’s life, bring their wives, children, and elderly people. Hence, the non-voluntary migrants are those who do not decide on their migration, such as wives and children brought by the hands of
his households, elderly persons brought by sons or close relatives, and government employees or soldiers posted by the government.

Urban-urban migration patterns and marital conditions affect each other. However, the interrelationship is complex. Table 3-16 indicates that there is an inverse relationship between family size and migration: larger families are less likely to migrate than smaller ones. The table demonstrates this relationship. The percentages of migrants supporting a small number of dependents are the highest, while those supporting families of more than ten members are represented by only 4 percent of the total sample. This is mainly because potential migrants are young, single, or newly married. The decision to migrate or not is usually taken in the age range 15-30 years. Reasons for that are many. They are partly related to extended family conditions. The elderly people and the older sons, more than 30 years of age, are more likely to acquire family responsibilities in the village and they are more likely to find occupational openings there. This occurs in cultivation and animal husbandry especially when father or uncle dies.

Poor potential migrants are hindered from moving to the town by the possession of wives and children. As 30 percent of the sample are un-married men, 40 percent have families with less than 4 members. Accommodation for the children in the town is often insufficient, food and other necessities must be paid for in cash, and tenants cannot be put into the fields to grow food. Children may not even be of much value in carrying water or fuel, as is the position in the village. Conversely,
the pressure to send them to school, thus incurring expenses which are usually much stronger than in the village. The rural migrant in the town is likely to marry later, restricting himself usually to a single wife, and having fewer children at a comparable age to a non-migrant in the village. But this may be mainly the result of prevailing circumstances. He may easily reverse this position after his permanent return to the village—almost half of the migrants are either intending to go back home (41.5 percent) or undecided whether to go back home or to stay in town permanently (59 percent) (Table 3-23).

A principle role played by the family in the individual's responsibilities towards his extended family in addition to his
...are obligations of two kinds: (1) obligations towards his wife and children; and (2) obligations to his extended family at home.

### Table (7.13)

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTENDED TO GO BACK HOME</td>
<td>69</td>
<td>41.6</td>
</tr>
<tr>
<td>INTENDED TO SETTLE IN PORK RIVER</td>
<td>80</td>
<td>49.7</td>
</tr>
<tr>
<td>PORT SUDAN BORN</td>
<td>7</td>
<td>4.4</td>
</tr>
<tr>
<td>UNDETERMINED</td>
<td>7</td>
<td>4.3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>161</td>
<td>100.0</td>
</tr>
</tbody>
</table>

* *Note:* One number is a Port Sudan born, who intend to return to his father's home town.

**Source:** Survey results.

In most cases wives and children are fully dependent on the migrant's income for their living expenses, while the extended family members are partly dependent on remittances he may send to the village (Table 7.13). The extent of obligations to the extended family is decided by a variety of factors. Obligations are strong at first, when the migrant is single. Then they are weakened after marriages, and when the number of dependents decreases, as members get married, brothers seek work elsewhere, and some older people die or are brought to towns.

Remittances sent to relatives at home differ enormously in amount, regularity, and to whom they are sent. Of the
in South Sudan 44.1 percent sent regular remittances either monthly or every two or three months, and 25.7 percent sent irregular remittances. Thus, about 70 percent of the sample sent some remittances.

Generally, remittances range between 5 and 75 Sudanese pounds, but 35.0 percent of these remittances range between 15 and 25 Sudanese pounds. Usually when the quantity is large and regularly sent, it means that it is for the children’s education or business, otherwise it is for the eigenter’s family (Table 3-12).

Nevertheless the amount and frequency of remittances are not that simple to explain. They are determined by a wide range of social, cultural, religious, and economic factors. Moreover, these criteria, though similar in most of the Sudanese rural areas, differ enormously from one tribe to another.

Table 3-16

<table>
<thead>
<tr>
<th>CATEGORY LABEL</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regularly Send</td>
<td>71</td>
<td>44.1</td>
</tr>
<tr>
<td>Do not Send</td>
<td>49</td>
<td>30.4</td>
</tr>
<tr>
<td>Irregularly Send</td>
<td>41</td>
<td>25.5</td>
</tr>
<tr>
<td>Total</td>
<td>161</td>
<td>100.0</td>
</tr>
</tbody>
</table>

SOURCE: Survey results.

It has already been mentioned that rural migrants in the town usually go first to join a relative or fellow villager.
Of the total sample, 46.6 percent have received guests from their home town searching for work in the town (Table 3-18(a)). Thus, there is no doubt that such movements are often of the chain migration type, whereby once migration from a certain family or village begins it tends to gain momentum. It is evident from Table 3-18(b) that 41 percent of the guests received are either close relatives or friends from the same village or the same tribe.

Table 3-19

<table>
<thead>
<tr>
<th>CATEGORY Label</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIS FAMILY</td>
<td>43</td>
<td>26.7</td>
</tr>
<tr>
<td>HIS PARENTS FAMILY</td>
<td>69</td>
<td>42.9</td>
</tr>
<tr>
<td>DON'T ASK</td>
<td>49</td>
<td>30.4</td>
</tr>
<tr>
<td>TOTAL</td>
<td>161</td>
<td>100.0</td>
</tr>
</tbody>
</table>

SOURCE: Survey results.

As is made clear in Fig. (3-2) the most important role played by the family in the migration process is the encouragement of successive members to go to the town. Sometimes wives follow husbands and children follow parents, but then they are ready to receive a new potential migrant as a guest.

"Push" factors of migration vary from one village to another. Nevertheless, the degree of strength of family ties amongst the people of某一地区-某一村庄...
determines the rate of migration flow from that tribe or village. Thus, some families and some villages are more strongly represented in the town than others.

In Port Sudan many settlements are inhabited mainly by one tribe, or two related tribes, e.g., Dula Arab is inhabited by Dula, Hadel by Dena and Hala, Amla by Amla and Shugat, and so on. Migrants find their first foothold, while looking for a job, in a residence that is cheap or preferably rent-free. It is better still if they can get residence with someone who is sympathetic to their need for a job and whose knowledge of the job market can help to secure employment. In a village migrant's perception there is little to worry about, if there is a close relative or fellow villager, who is settled in town's life. That is the main reason for a concentration of village natives in a residential quarter to the extent that some of the settlements are named after the tribe.

Kinship ties, closer in some tribes than in others, are clearly evident in Table J-19, where migrants who stayed initially with relatives received a large number of guest relatives. 43.5 percent of migrants stayed with relatives when they first arrived in town. They, in turn, received 71.5 percent of their guests who are relatives, 38.5 percent who are friends, and 39.3 percent who are a combination of relatives and friends. Almost half of those who have not received guests have either rented a house or been received in a hostel or a camp when they first arrived in Port Sudan, or were Port Sudanese born.
---a guest may be a short-term visitor, a seasonal worker, or a migrant decided to stay in town.

- the migrant finds a job and becomes relatively well...
- the migrant becomes more settled
- the migrant becomes much involved and experienced in the urban life
As even clearer picture emerges when a comparison is made between the remittances sent to relatives in the villages by migrants after being well established in town life with where they stayed after they first disembarked in the urban setting. Table 3-10 shows this relation: 54.3 percent of remittances sent are from those who first stayed with relatives in town, 17.1 percent are from those who stayed with friends, while only 20.6 percent of remittances are sent by those who stayed in a dwelling other than that of relatives or friends when they first arrived in Fort Sault.

It could be concluded from the above discussion that the decision of a migrant to join the urban environment depends on a variety of factors. First, the migrant will be pressed by push factors at home, expressed by the need to meet living expenses, social obligations, as well as the individual aspirations to establish a family, which consequently involve spending much money. Second, relatives of a migrant in the town will help him to confirm his decision to migrate. Third, the values, norms, and customs of the tribe and the regulations of the extended family as the primary unit of production and division of labour make it a matter of pride to migrate in order to fulfill family economic responsibilities. These aspects are shared by most traditional societies.

However, reviewing the Third World literature with regard to the subject, slight differences emerge when compared with sub-urban cultural values. In the Latin American literature, a migrant usually stays with a very close relative or a village fellow, but in very rare cases with an
Table 1(a) HOUSES BY PROVINCE IN PUNE SAVAN

<table>
<thead>
<tr>
<th>CATEGORY LABEL</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>75</td>
<td>46.6</td>
</tr>
<tr>
<td>NO</td>
<td>34</td>
<td>21.5</td>
</tr>
<tr>
<td>NO ANSWER</td>
<td>32</td>
<td>19.9</td>
</tr>
<tr>
<td>TOTAL</td>
<td>161</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 1(b) TYPES OF RELATIONSHIPS WITH THE HEADERS REPIIVED

<table>
<thead>
<tr>
<th>CATEGORY LABEL</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>RELATIVE</td>
<td>55</td>
<td>32.9</td>
</tr>
<tr>
<td>HUSBANDS</td>
<td>13</td>
<td>8.1</td>
</tr>
<tr>
<td>BOTH</td>
<td>9</td>
<td>5.6</td>
</tr>
<tr>
<td>NO WIVES</td>
<td>51</td>
<td>31.7</td>
</tr>
<tr>
<td>NO HUSBANDS</td>
<td>35</td>
<td>21.7</td>
</tr>
<tr>
<td>TOTAL</td>
<td>161</td>
<td>100.0</td>
</tr>
</tbody>
</table>

SOURCE: Survey results.

old urban dweller who have been assimilated in the urban life and consequently with weakened relations with the village.

The same would be the case in the African case. It is striking in the case of Port Sudan that this phenomenon is strong. A migrant might stay with someone with whom he may have had comparatively weak relations.

One explanation to such a phenomenon is that it is encouraged by the religious values of Islam, which seem to be more adhered to in rural societies in Sudan. Moreover,
A closer examination of the data reveals that individuals who were more frequently visited by their relatives and friends had a higher rate of successful visits. The table below illustrates this relationship:

<table>
<thead>
<tr>
<th>GROUPS ENCOUNTERED</th>
<th>RELATIVE</th>
<th>FRIEND</th>
<th>BOTH</th>
<th>NO ANSWER</th>
<th>NOT RECORDED</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>RELATIVE</td>
<td>40.6</td>
<td>52.1</td>
<td>3.4</td>
<td>1.8</td>
<td>25.7</td>
<td>39.2</td>
</tr>
<tr>
<td>FRIEND</td>
<td>34.4</td>
<td>34.4</td>
<td>11.5</td>
<td>14.9</td>
<td>27.2</td>
<td>26.1</td>
</tr>
<tr>
<td>SIBLING</td>
<td>54.5</td>
<td>33.3</td>
<td>11.2</td>
<td>14.9</td>
<td>27.2</td>
<td>11.2</td>
</tr>
<tr>
<td>CHILD</td>
<td>33.3</td>
<td>54.5</td>
<td>12.5</td>
<td>7.5</td>
<td>27.2</td>
<td>17.6</td>
</tr>
<tr>
<td>FOSTER SIBLING</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Note: Each row represents a different group encountered. The percentages indicate the proportion of successful visits for each group.

*Survey conducted*
<table>
<thead>
<tr>
<th>STATUS WITH</th>
<th>51%</th>
<th>10%</th>
<th>25%</th>
<th>50%</th>
<th>75%</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>RELATIVE</td>
<td>7.9</td>
<td>21.1</td>
<td>23.7</td>
<td>12.2</td>
<td>2.6</td>
<td>10.5</td>
</tr>
<tr>
<td></td>
<td>60.5</td>
<td>61.5</td>
<td>69.0</td>
<td>42.5</td>
<td>37.2</td>
<td>44.4</td>
</tr>
<tr>
<td></td>
<td>4.3</td>
<td>1.4</td>
<td>1.6</td>
<td>1.0</td>
<td>0.6</td>
<td>0.7</td>
</tr>
<tr>
<td></td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>WIFE</td>
<td>16.5</td>
<td>8.3</td>
<td>25.0</td>
<td>16.4</td>
<td>8.3</td>
<td>16.7</td>
</tr>
<tr>
<td></td>
<td>13.4</td>
<td>8.3</td>
<td>27.3</td>
<td>22.2</td>
<td>22.2</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>2.9</td>
<td>1.4</td>
<td>4.2</td>
<td>2.9</td>
<td>2.9</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>SPOUSE</td>
<td>22.1</td>
<td>12.1</td>
<td>22.1</td>
<td>11.1</td>
<td>11.1</td>
<td>12.9</td>
</tr>
<tr>
<td></td>
<td>7.0</td>
<td>4.3</td>
<td>15.0</td>
<td>21.1</td>
<td>21.1</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>1.4</td>
<td>1.4</td>
<td>3.3</td>
<td>1.4</td>
<td>1.4</td>
<td>1.4</td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>OTHER</td>
<td>29.4</td>
<td>11.1</td>
<td>11.1</td>
<td>0.0</td>
<td>22.2</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>15.4</td>
<td>6.5</td>
<td>16.2</td>
<td>22.2</td>
<td>0.0</td>
<td>22.2</td>
</tr>
<tr>
<td></td>
<td>7.8</td>
<td>3.0</td>
<td>2.8</td>
<td>2.9</td>
<td>2.9</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
</tr>
<tr>
<td>COLLECT</td>
<td>12.6</td>
<td>17.1</td>
<td>15.7</td>
<td>2.9</td>
<td>12.5</td>
<td>8.5</td>
</tr>
<tr>
<td></td>
<td>12.1</td>
<td>12.1</td>
<td>12.1</td>
<td>12.1</td>
<td>12.1</td>
<td>12.1</td>
</tr>
</tbody>
</table>

NOTES: In each box:

(a) The first number: absolute frequency
(b) The second number: individual percentage
(c) The third number: line (vertical) percentage
(d) The fourth number: the total percentage

SOURCES: Survey data...
A considerable percentage of the migrants in Fort Sudan were nomads or of nomadic origin. Since nomadic societies are, to a great extent, built upon the extended family and tribal kinships, it appears that this has considerable influence in strengthening group identity and community or kinship-based assistance.

Migrants from urban places do not necessarily stay with relatives or friends, and if they do so, the nature of the relationship is slightly different from that of the rural case. In many cases, the relationship with the individual with whom they stay when they first arrive in the town may have had an economic function rather than a cultural one.

Migration of members of the family other than the head, includes wife, children, and perhaps mother and some brother. Very rare are the cases when the females, who were innovatively taken the decision to come to Fort Sudan. However, there are exceptions for this rule. Some female refugees, being pushed by war conditions in their home and having a culture that is very different from the Sudanese one, are observed in the town working as house servants and other similar jobs. Also, Sudanese widowers, divorced wives, and generally women, who are, economically, not supported by a male, are compelled to occupy some informal jobs. However, these exceptions represent only a very small category. The category is not represented in our sample, but could be observed in the town.

Another category of working women are the educated ones, who occupy formal jobs in the offices of the public service or some private world. Again, in most cases, these women take
work permits from their parents, husbands, or the oldest males in the household before approaching the job. Moreover, each educated category, usually, inherits legal and more stable jobs, and not the monetary settlements.
CHAPTER FOUR
UNDER-DEVELOPMENT

(1) INTRODUCTION
(2) PATTERNS OF RESIDENTIAL DEGRADATION
(3) DISCUSSION
The sample studied covered three residential settlements within the town. Every settlement represents a certain zone in the town, which in turn reflects the economic, social, and cultural advantages and disadvantages that the zone provides (see Chapter 1).

The formation of zones in the residential areas in Port Sudan is a result of a variety of economic and social factors that acted through the different phases of the town's growth. However, these zones have no definite boundaries and distinct limits. The classification of the residential areas into classes is made by the planning authorities on the basis of criteria such as plot size and building material of the houses.

In the light of theories of urban morphology, this section attempts to describe the zones in the town. Further discussion regarding the influence of the town's growth and the migrants' residential search behaviour on the morphology of the town is attempted in the final section of this chapter.

The morphology of the town has been greatly influenced by its physical site. The expansion of the town is decided by the foot of the Red Sea Hills forming the western border, village and knolls crossing the town from west to east, where they end in the sea, and the coast of the Red Sea drawing the eastern line for the town.

Economic and social factors, as well, have an important role to play. Such factors include the function of the town as the main port of the country, the comparatively short period
An application of Royi's theory (1979).
See Fig. 1-4.
of growth of Fort Sudan from the small village of Koura Sheikh Dargut into a large town, as well as the cultural values of the Sudanese population.

 Hoyt's (1939) theory of residential urban growth seems to have some similarity to the case of Fort Sudan. Being...indicators such as land value and house rents in 68 small and medium cities in the U.S.A., Hoyt suggests that land value which influences the residential function in a town, decreases along axis of transport from the town center to its edges, and consequently forming sectors of residential areas that have similar functions and with a diminishing land value from the core town to the outskirts.

 Hoyt's theory is relevant to Fort Sudan case in some respects (Fig. 4-1). The town was developed on the basis of physical features, such as the Khao and the coast, while the transport network has developed afterwards to serve the residential areas. One example of each sector is the growth of first and second class residential areas along the coast starting with the hotels and cultural clubs on the southern part of the core town, the government built houses, Dein Shari, and Dein Transit on the southern edge of the town. Another example is the development of third and fourth class residential areas, as well as illegal dwellings, on the southeastern side of Khao Heg, starting with a wide plain used as a park for lorries and trucks in the southeastern part of the town core, as well as Dein Ganja, Dein Ganja, and Dar Elsalem on the southwestern edge of the town.
Sectional Zone in Port Said

Source: An application of Burgess' Concentric Theory (1923).
Nevertheless, the evolution of the town has happened with continuous expansion from the centre. Empty plains were filled gradually. The Concentric Zone Theory of Burgess (1925) with regard to residential areas (Fig. 4-2) is expressed by the central, intermediate, and periphery zones created by the expansion of the town and the continuous replanning of residential areas by the authorities. Hence, the theory predicts the diminishing land values from the centre to the periphery and the distribution of urban services with the priority given to central parts. Thus, Burgess Theory has some relevancy to the case of Port Sudan.

Being concerned with the residential areas in Port Sudan, each of the zones provides similar facilities, and includes a variety of classes of residences. For example, Jieh Sidi la, which is a fourth class residential area, is located in the central zone together with Jieh Shalat, which is a third class area. Jieh Argam, which is a second class zone, and Jieh Sidiya Mool which is a third class residential area.

The zone of the central town is located adjacent to the urban services. It contains the shopping centre, the government offices, the hospital, the high secondary schools (elementary and junior secondary schools are distributed all over residential areas in the town), the cultural clubs, and the cinemas.

The intermediate zone is much farther from the centre. Although it is provided with many primary and junior secondary schools, dispensaries, electricity, and most of its homes have plumbing and sanitation, still it lacks much of the urban services.
The periphery zone includes some of the third and fourth class residential areas. However, it is mostly composed of illegal deines with no urban services and inadequate transport.

Each dein, wherever it is located, represents an independent unit in many aspects. Each dein is classified as representing one class of residence. In many cases, inhabitants of deines are of similar origins, and in some the population is mostly of one origin, e.g., dein Falleta, and dein Arab. In other cases, inhabitants of a dein belong to one economic organization and have similar jobs, e.g., dein Salim Noja is inhabited mostly by railway workers, and dein Falleta in which the inhabitants are mostly policemen. Moreover, a dein represents a unit that has a social organization. It has a chief man or a specific committee that discusses general affairs of the dein. Usually a dein has a mosque, a club, and other similar cultural centers where old adults meet in the mosque, young adults in the club and women visit each other in houses. In addition, many deines have had separate shopping centers and provide for the needs of daily local consumption.

This last point appears very similar to the multi-centered theory of urban morphology developed by Ullman (1954). The theory suggests that several play the role of centers around which development takes place. However, in the case of Port Said deines, an essential difference exists, for the shopping centers in most cases develop later after the establishment of the dein to serve the residents.
Table (4-1)

MIGRANT TEMPEST AT THE FIRST FOOTFORD

<table>
<thead>
<tr>
<th>CATEGORY LABEL</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>RELATIVE OR FRIEND</td>
<td>25</td>
<td>38.5</td>
</tr>
<tr>
<td>OTHER</td>
<td>10</td>
<td>15.4</td>
</tr>
<tr>
<td>TOTAL</td>
<td>62</td>
<td>100.0</td>
</tr>
</tbody>
</table>

SOURCE: Survey results.

(2) PATTERNS OF RESIDENTIAL MOBILITY

(a) The First Footholds

In Port Sudan, the fact that 73.2 percent of the newly arrived migrants stayed with relatives or friends who were already established in the town, calls for a definition of first footholds for new arrivals in Port Sudan. First footholds, according to where migrants spend their first days in town, will explain where already established migrants reside rather than the proper first residential footholds of the new migrants. According to this concept, only 11.2 percent of new migrants rent residences as such as they arrive in town, while 11.6 percent spend their first days in a restaurant, a shop, a mosque, a public place, or the like (Table 3-12). The time spent in accordance with this pattern ranges from a few weeks to several years depending on the strength of the relationship with a relative or a friend and the type of job held.
Refinement for the data was made by excluding those who stayed for a period less than one month. In other words, Table 4-1 shows the first residential household tenure for the newly arrived migrants a month after their arrival. According to this, the number of those who stayed with a friend or relative is reduced to 45.3 percent. Renting accommodation was represented by 38.3 percent, while a considerable portion of the migrants made arrangements to obtain houses in the town. This group amounts to 7.5 percent of the total sample. This indicates that more than half of the migrants are quite successful in arranging their own accommodations in the urban atmosphere after only one month from their arrival by either renting or possessing a house. It is worth mentioning that those who stayed in their place of work, temporary government accommodation or even staying out in parks, are reduced from 13.6 percent to 8.7 percent within a month time.

Chronological arrangement of the first household for the migrants in Fort Sudan (Table 4-2) is made in accordance with the periods of the town's growth, viz: 1960-30, 1931-95, 1966-97, 1998-2002.

(1) The period 1934-39

Fort Sudan was recently founded and the job opportunities available were mainly connected with the port (Table 3-10). Workers and most of the low-income population in the town lived in make-shift wooden shacks in the area that latter were to be the town centre.
Table 4-2
RESIDENTIAL DISTRIBUTION OF HABITANTS, THROUGHOUT DIFFERENT PERIODS, IN THE FIRST PHASE

<table>
<thead>
<tr>
<th>YEARS</th>
<th>CENTRE</th>
<th>INTERMEDIATE</th>
<th>PERIPHERY</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1904-1930</td>
<td>75.0</td>
<td>0.0</td>
<td>25.0</td>
<td>100.0</td>
</tr>
<tr>
<td>1931-1950</td>
<td>77.5</td>
<td>12.5</td>
<td>10.0</td>
<td>100.0</td>
</tr>
<tr>
<td>1956-1965</td>
<td>35.7</td>
<td>16.1</td>
<td>48.2</td>
<td>100.0</td>
</tr>
<tr>
<td>1966-1975</td>
<td>37.5</td>
<td>10.0</td>
<td>52.5</td>
<td>100.0</td>
</tr>
<tr>
<td>1976-1982</td>
<td>40.0</td>
<td>14.3</td>
<td>45.7</td>
<td>100.0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>38.5</td>
<td>26.7</td>
<td>34.8</td>
<td>100.0</td>
</tr>
</tbody>
</table>

SOURCE: Survey results.

(2) The period 1931-50

The town seems to have no dense-based residential areas located in different parts of the town. It appears that immigrants could reside in any zone of the town, whilst the centre of the town still received 42.3% of newly arrived immigrants. In 1938 the "Town Planning Committee" issued an ordinance allowing the people to build temporary houses on the precondition that the government could recover the land within a thirty-year time span starting from 1950. Both zones were developed during this period, and it is still composed of small houses.

The peripheral zone consisted of the villages of Hainan and Dein Zion. People residing in them were mainly workers who
continued their old jobs at that remote area while seeking
contacts and occupying temporary jobs in the urban centre
(Miglioli, 1979).

(3) The period 1956-65

The pattern of the previous period seems to persist with
a slight modification, that the intermediate zone received more
migrants than it did before. The percentage increased from
30 percent to 38.1 percent. The intermediate zone was
structure from a larger squatter settlements, which stopped
expansion because of land limitations.

Squatter settlements in the periphery zone were no longer
the isolated villages prior to 1952. The town was expanding
due to the rapid economic growth. Housing built by
rural migrants from tin, wood, earth, and brick were
constructed. The number of houses was rapidly increasing. The
periphery zone received 26.2 percent of the newly arrived
migrants to the town. Migrants settling in the core area were
reduced from 42.5 percent in the period 1951-55 to 35.4 percent
in the period 1956-65.

(4) The period 1966-77

Repealed squatter settlements on the periphery zone were
expanding fast. Migrants residing in these as a first foothold
were 37.5 percent of the total number of new migrants. Those
who took their first foothold in the intermediate zone were
reduced from 38.1 percent to 25 percent. The core area
received more than one third of the newly arrived migrants.
Most of them lived at their place of work located in the centre.
of the town. In many cases the initial location was a hotel or a work camp.

(5) The period 1975-82

The same pattern continued to prevail in the final seven years from 1975-1982, but in a much more distinct fashion. Migrants residing in the intermediate zones were sharply reduced, i.e. to only 14.3 percent of the total sample.

First foothold was almost restricted to the central and periphery zones of the town, with 40 percent and 45.7 percent, respectively. But it should be remembered here that this includes two categories. The first one includes dein Cuna and dein Suskin which were built as early as 1940 but which remain unplanned. The second category includes those who live in no regular houses.

Analyzing these results, the pattern of first foothold choice for newly arrived migrants appears to be characterized differently according to three main factors, which are:

(a) the date of arrival in Port Sudan;
(b) the type of job occupied by the migrant; and
(c) the tribe that the migrant belongs to.

In a great extent, the type of job occupied by a migrant is related to the date of his arrival in Port Sudan which in turn is directly related to the town's growth and development.

Before the expansion of the town during the twenties, thirties and early forties, migrants characteristically proceeded to the central town. At that time, the town was comparatively small and composed of what is classified as the central part of
this study. Fortunate, unlike most of other towns in third world countries, has been artificially initiated for its harbor facilities. The establishment of the "Town Planning Committee" in 1929 marked an important phase in directing the growth of residential areas in the town.

With the expansion of the town, residential areas expanded enormously on the edges. To clear classification of residential areas appeared in early period. It was not until the late fifteen that many of the residential areas were replanned and classified into the contemporary classes. Therefore, first footholds for migrants during this period were almost evenly distributed in the three zones of the town.

Murray's concentric zone theory is relevant in Fortunate case (Fig. 4-2) for that the town develops in circular or, at least, semi-circular around the core town which is composed of the central business district. But unlike the pattern in the theory, the zones in any zone do not necessarily split into one class.

However, with the continuous expansion of residential areas in the following decades, the periphery zone emerged as having the lowest land value; the intermediate zone emerged as including the legal planned zones of highest land value, while the central town greatly developed and expanded at the expense of the buildings bearing and consequently represented the rest of the highest land value in the town. In spite of this, Jenkins and davis zone remained fourth class, although located in the central town.
This dynamic pattern of choosing a residence as a first foothold for the migrant was not reflected as such on the writings of other researchers of the urban ecology of Port Sudan. James (1969), Alghamel (1974), and Mahmoud (1980) agreed that migrants reside in the central town residences as first footholds where they remain till get established in stable jobs and consequently acquire land tenure to build a better designed house. Such conclusions agree partly with the pattern prevailing in the early years of Port Sudan foundation and partly with the prevailing later on.

Studies in the Third World countries report findings which are not typical in the case of Port Sudan, but rather applicable at particular periods of the town development. Fathi (1962), for example, suggests that before moving to a fringe settlement, migrants have experienced social mobility in the central city. Revese and Thinn (1970) suggest that before moving from the central city the migrants have accumulated some capital. Vaclav (1971) has summarized findings from several Latin American studies by saying that rural migrants, after arrival at the urban destination, proceed to the inner-city slums, which serve as staging residences for the invasion of peripheral ones.

(b) The change to second residential footholds

As mentioned earlier, upon arrival, 73.2 percent of the total sample stay either with friends or relatives. One month later, 65.3 percent of the total sample still stayed with either friends or relatives, 32.5 percent were renters, while 7.5 percent were owners.
This suggests that migrants do not stay for long in the first residential footholds. Moreover, it has been argued that migrants usually do not have previous plans and, in many cases, they will not be acquainted with the urban environment and have no satisfactory information about residential areas that will suit them except after a considerable period of time. However, survey results suggested that the periods of time spent in the first residential footholds vary greatly. It ranges from a few weeks to many years.

The horizontal range of residential mobility could be classified into different scales. Moves from one house to another in the same dean are usually connected with specifications in that particular house. It could be social, economic, or religious, but usually in the small scale moves are activated by facilities, tenure, or location of a particular house.

Moving from one dean to another in the same zone is frequently practiced. Again, this is restricted to economic, social, or religious advantages that the whole dean gives. Nevertheless, in this form of movement, specification regarding the individual houses are included. This type of movement could be classified as a medium scale movement.

However, moving from a house in one zone to another house in another zone is the main concern of this study. It is considered as a large scale horizontal movement. As mentioned earlier, such zone provides in common similar advantages while each has in common similar disadvantages.

Examining the overall residential movement of migrants within Port Sudan, the central-periphery theory of Turner for
the system of residential movement from the first foothold to the second one is only represented by 7.1 percent of the total sample. Those who moved to the intermediate zone from the town center make up 5.3 percent (Table 4-3). A migrant, after being employed and having saved some money, will proceed to establish himself in the town's life, and subsequently bring his family. He will then look forward to owning a house in illegal deeds. Local and cheap materials are used, and the person himself takes part in the building work. As a result, with the movement of migrants to the second residential foothold, the number of town newcomers had doubled.

However, the mobility pattern in Port Sudan is not that simple. Out of the total sample, an opposite direction movement (periphery-centre) is practiced by 4.6 percent, which (intermediate-centre) is practiced by 6.7 percent, and (periphery-intermediate) by 8.7 percent.

The first category (centre-periphery movement) is exactly typical to the findings of other researchers in Port Sudan residential conditions, for example, Mohamed, 1980; and Rizawi, 1977. But James (1965) concluded that "the people living in the squatter settlements-periphery zone are of two main kinds. On the one hand, peasants and cultivators who have recently arrived from the country, and have not yet found proper jobs and houses in the town, and who are not yet incorporated in the society; and on the other hand, townsmen who have worked and lived in the centre of the town for many years, but have grown tired of the over-crowded and often unhealthy conditions in the central part of the town and have saved enough money to
### Table (4–5)

<table>
<thead>
<tr>
<th>FROM</th>
<th>CENTRE</th>
<th>INTERMEDIATE</th>
<th>PROVINCE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>CENTRE</td>
<td>-</td>
<td>9</td>
<td>11</td>
<td>20</td>
</tr>
<tr>
<td>INTERMEDIATE</td>
<td>14</td>
<td>-</td>
<td>8</td>
<td>22</td>
</tr>
<tr>
<td>PROVINCE</td>
<td>8</td>
<td>14</td>
<td>-</td>
<td>22</td>
</tr>
<tr>
<td>TOTAL</td>
<td>22</td>
<td>23</td>
<td>20</td>
<td>64</td>
</tr>
</tbody>
</table>

Source: Survey results.

### Table (6–7)

<table>
<thead>
<tr>
<th>DECADE</th>
<th>CENTRE</th>
<th>INTERMEDIATE</th>
<th>PROVINCE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1964–1970</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>1971–1975</td>
<td>9</td>
<td>0</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>1976–1980</td>
<td>11</td>
<td>13</td>
<td>1</td>
<td>25</td>
</tr>
<tr>
<td>1981–1985</td>
<td>18</td>
<td>14</td>
<td>22</td>
<td>54</td>
</tr>
<tr>
<td>1986–1990</td>
<td>25</td>
<td>3</td>
<td>31</td>
<td>62</td>
</tr>
<tr>
<td>TOTAL</td>
<td>64</td>
<td>43</td>
<td>23</td>
<td>101</td>
</tr>
</tbody>
</table>

Source: Survey results.
build themselves more spacious houses in the outskirt... (p. 189).

However, in disagreement with Jones, the periphery is more unhealthy. It seems that people would like to have houses of their own. As the town centre is of higher land value and as the intermediate zone includes most of the lower classes in the town, the people moving from periphery to centre or from intermediate to centre are actually moving from areas of generally lower land value to areas of higher land value.

They are, according to survey results, mainly single migrants who share the rent of a house in the central town. Because the rent would be too expensive for low income migrants, a large number of these would share one house. This is illustrated by Table 4-5 which shows that renters in the second residential area exceeded all other forms of house tenure.

<table>
<thead>
<tr>
<th>Category Label</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rent</td>
<td>1</td>
<td>8.6</td>
</tr>
<tr>
<td>Own</td>
<td>94</td>
<td>55.4</td>
</tr>
<tr>
<td>Relative or Friend</td>
<td>36</td>
<td>22.4</td>
</tr>
<tr>
<td>Others</td>
<td>30</td>
<td>12.4</td>
</tr>
<tr>
<td>Total</td>
<td>161</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Survey results.

It is worth remembering that, although there are third and fourth class residential areas in the core town, they are...
higher in rent and better in facilitation than the same classes in other zones.

Nevertheless, the total percentage of those who moved from the first foothold to second ones is only represented by 38.6 percent of the total sample. If the 5 percent of the Port Sudan born population is excluded, it will appear that more than half of the migrants do not change the zone of their first residential foothold.

Comparing house tenure at the first foothold with that of the second one, Table 4-5 shows an enormous increase in renting, from 38.5 percent to 58.4 percent, and an increase of home owners from only 7.5 percent to 27.4 percent. Furthermore, Table 4-6 illustrates that most of the peripheral area inhabitants are home owners, while most of the core town and intermediate zone inhabitants are renters.

From a chronological perspective, only after the 1950s had the three zones of the town taken their present form. During the 1930s and 1940s the peripheral zone as a residential area was not yet developed, i.e., today’s intermediate zone had once been peripheral. Also, at that time core town alone received the bulk of the unsettled migrants and later it gradually continued to lose that function. In the period 1940-1952, it received 45 percent of the migrants, reduced to 25 percent in the period 1956-1965 and to 5.2 percent during the period 1966-1975. This is mainly because of the limited space in the core town and that many migrants settle in the expanding residential extensions. However, after the year 1970, the core town received a larger percentage of migrants.
because the previous renters in the core area have acquired land plots and built their houses in the residential outskirts, which are the present intermediate and periphery zones (Table 4-7). The intermediate zone received large numbers of unsettled migrants during the 1960s and early 1970s. Therefore, it was no longer available for them. Probably, this reflects the fact that it was being planned in an official organized manner.

The survey results suggest, quite similar to the findings of other researchers in Sudan (James, 1969; Heierstedt, 1974; Al-Sisi, 1975; Negm, 1979; Elhadi and Salem, 1990), that the periphery zone has been rapidly and regularly expanding from the 1950s until the present. Port Sudan received 16.7 percent of unsettled migrants in the period 1953-1963, 33.3 percent in the period 1965-1975, and finally 45.5 percent in the period 1975-1982 simply because the population was steadily increasing while the residential areas were limited.

(c) The change to the third residential foothold:

Only 15.6 percent of the total sample moved to a third residential foothold. Of those, one third moved from the intermediate to the periphery zone, increasing the percentage of house owners from 22.4 percent in the second residence stage to 31.7 percent in the third residential foothold (Table 4-6).

Those who move to the intermediate zone (4.1 percent) do so either because of rising rents in the core area or because of the wish to have a better stable life-style than in the periphery zone.
Table (1-6)

<table>
<thead>
<tr>
<th>COUNTY VS</th>
<th>CITIES</th>
<th>INTERMEDIATE</th>
<th>RURAL</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>CITIES</td>
<td>-</td>
<td>5</td>
<td>1</td>
<td>6.7</td>
</tr>
<tr>
<td>INTERMEDIATE</td>
<td>5</td>
<td>-</td>
<td>10</td>
<td>15.3</td>
</tr>
<tr>
<td>RURAL</td>
<td>1</td>
<td>8</td>
<td>-</td>
<td>9.6</td>
</tr>
<tr>
<td>TOTAL</td>
<td>6</td>
<td>13</td>
<td>11</td>
<td>30.6</td>
</tr>
</tbody>
</table>

Source: Survey results.

Table (1-7)

<table>
<thead>
<tr>
<th>CLASS YEAR</th>
<th>CITIES</th>
<th>INTERMEDIATE</th>
<th>RURAL</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960-1969</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>2.6</td>
</tr>
<tr>
<td>1970-1975</td>
<td>15</td>
<td>7</td>
<td>2</td>
<td>24.2</td>
</tr>
<tr>
<td>1976-1981</td>
<td>11</td>
<td>14</td>
<td>1</td>
<td>26.1</td>
</tr>
<tr>
<td>1982-1987</td>
<td>26</td>
<td>13</td>
<td>21</td>
<td>38.9</td>
</tr>
<tr>
<td>1988-1993</td>
<td>26</td>
<td>6</td>
<td>32</td>
<td>60</td>
</tr>
<tr>
<td>TOTAL</td>
<td>64</td>
<td>36</td>
<td>55</td>
<td>155.0</td>
</tr>
</tbody>
</table>

Source: Survey results.
Staying with relatives or friends during this stage is restricted only to students or young people staying with fathers, uncles, or very close relatives.

People with home tenure other than renting, owning, or staying with relatives or friends, on this third stage, were represented by only 3 out of the 161 cases. These were accommodated in government residences.

**Table (6.8)**

**HOUSE TENURE AS THE THIRD FASE**

<table>
<thead>
<tr>
<th>CATEGORY LABEL</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Own</td>
<td>51</td>
<td>31.7</td>
</tr>
<tr>
<td>Relative or friend</td>
<td>29</td>
<td>18.1</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>2.7</td>
</tr>
<tr>
<td>Total</td>
<td>161</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Source:** Survey results.

**Table (6.9)**

**MOTIVATION FOR THIRD FASE TO LEAVE OUT (Until Date)**

<table>
<thead>
<tr>
<th>FROM</th>
<th>CENTER</th>
<th>INTERMEDIATE</th>
<th>PERIPHERY</th>
<th>NEW TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>CENTER</td>
<td>-</td>
<td>3</td>
<td>0</td>
<td>1.9</td>
</tr>
<tr>
<td>INTERMEDIATE</td>
<td>3</td>
<td>-</td>
<td>0</td>
<td>1.3</td>
</tr>
<tr>
<td>PERIPHERY</td>
<td>10.5</td>
<td>2</td>
<td>-</td>
<td>1.0</td>
</tr>
<tr>
<td>COLUMN TOTAL</td>
<td>14.5</td>
<td>5.5</td>
<td>2.0</td>
<td>4.3</td>
</tr>
</tbody>
</table>

**Source:** Survey results.
Visiting the chronological manner of the migrants residential distribution in the three zones at the third foothold, it appears that the central zone represented the main residential area until 1955. However, the intermediate zone was a strong competitor from 1955 until 1975. From 1965 until 1982, the periphery zone, because of its rapidly expanding claims, ranked first, while the central zone ranked second. Migrant inhabiting the expensive houses in the central zone are usually groups of young single men (5 to 10 in number), who co-equate by sharing the rent of a house (usually of 2 or 3 rooms) near their place of work. The low-income migrants with families could not pay the expensive rents in the central town.

(d) The change to other residences until the present one

Only 7 out of the 161 respondents shifted through three or more residences to reside in their present one. Of these, only 2 moved through more than three residences. Together with other evidences of the small number of movers from first residential foothold to second ones, and from second to third ones, this indicates residential stability in Port Sudan. This was a conclusion that has been reached by Jones (1969) in her study; "The Shanty Towns in Port Sudan".

The steady increase in the percentages of renters and owners throughout the different footholds, seems to continue to reach high figures in the final pattern of house tenure (at the time of the interview). More than half of the sample have their residences, a third own them, while a tenth still lodge with relatives (Table 4.1D). This confirms the notion that rural migrants gradually become more settled and move.
from residences of friends or relatives to rent, build, or buy houses of their own.

There is no doubt that the present pattern of house tenure reflects the final result of a series of movements. Nevertheless, since there are migrants who have recently arrived and have not yet practiced mobility to obtain a satisfactory residence, and since new migrants will continue to arrive in the town, the mobility pattern is likely to continue. No final form could be said to exist in such a dynamic pattern connected with people's movements within a large town. Hence, the present house tenure is only a stage in the process of the town's growth and expansion.

Table (4.10)

Present House Tenure (1982)

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Own</td>
<td>59</td>
<td>55.3</td>
</tr>
<tr>
<td>Rent</td>
<td>32</td>
<td>30.3</td>
</tr>
<tr>
<td>Live With Friend</td>
<td>12</td>
<td>11.7</td>
</tr>
<tr>
<td>Others</td>
<td>2</td>
<td>1.8</td>
</tr>
<tr>
<td>Total</td>
<td>106</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*Source: Survey results.*

(3) Discussion

Analyzing the local residential mobility within Port au Choix, only 38.3 percent changed the first residential foothold, 19.5 percent changed the second one, and 4.2 percent shifted to a third one or more. Certainly, such a pattern indicates residential stability in the town.
The fact that 97.6 percent of the migrants are of rural origin seems to have an important role to play in residential stability. Rural migrants have their distinct values, habits, and attitudes in their villages. Moreover, they were accustomed to a political, economic, and social organization of a rural nature. Such migrants, when they first arrive in town, sharply contrast with the urban society.

Frequently, rural patterns and institutions persist as an urban migrant finds it easier to accommodate with either than to assimilate to the urban way of life. In that way a migrant prefers to live in an atmosphere of his relatives and fellow villagers rather than strange people from other tribes. However, after the first days of accommodation, for those who stayed with relatives or friends when they first arrived, a migrant would try to find a residence in the town mostly inhabited by his tribesmen. Thereafter, a migrant seems to reach a stage of stability. In many cases, the houses to which a migrant moved will be quite near to that in which he was accommodated.

The chronological manner in which residential rural behaviour took place, if read in connection with the pattern of the town's growth and expansion, would explain a number of indicators of the influence of the latter on the former.

In the first years of the town's growth, the central part of the town represented the whole urban centre. The present dea of town and dea centre were only distant villages. People were given temporary dwellings, and with the passage of time, by the authority, houses were built of wood. As the town expanded, the intermediate zone was developed, which, in turn,
continued to expand. However, the growth was not quite uniform. There were gaps within the built-up area which were gradually filled later. After the 1950s and during the 1960s continuous upgrading of the central town and replanning of the adjacent parts around the centre took place. The replanned deeds in the intermediate zone came to take their present form, and gradually were supplied with urban services.

Reviewing the regulations of the planning authorities, it is found that land plots in the replanned deeds were distributed to people who used to inhabit them prior to their replanning. Priorities were given to heads of households who either owned one house in the particular deed under replanning or none in the others or had been renting in that deed for many years.

Hence, replanning of a deed means a planned legal deed for inhabitants who were previously renters or owners in an illegal deed. Therefore, income migrants in an illegal deed need not move to another deed. Otherwise, they would lose the opportunity of possessing a house. Moreover, it is more rational for them not to buy a residence in a legal deed since their legal rights, despite possessing an illegal residence, are likely to be recognized.

In the last decade, illegal deeds on the outskirts of the town have expanded enormously; the land value of the legal deeds in the intermediate zone has increased, while the town core has been steadily upgraded. It has witnessed a number of improvements and has consequently become with the highest land value. However, illegal deeds are similar in many respects.
The location of some is more accessible to transport facilities, while the location of others is more accessible to other forms of services such as water supply, schools, and dispensaries. Added to that, building a residence in an illegal doina requires an amount of money that may not be feasible for the very needy and deprived segments. Thus, renting a house in illegal doina (e.g., Dar Esalem) has become common.

Despite the fact that the rules followed by the planning authorities for distributing the house plots in the replanned doinas were designed to prevent renters and absentee landlords, many houses in replanned doinas (e.g., Salbeens) are rented. The most probable explanation is that some people, under the pressure of poverty, are either compelled to sell their plots of land or even build residence for landlord and manage for another residence, or rent part of their houses and inhabit the other part. The intermediate zone has more expensive rents because of its better accessibility to urban services.

The central zone, then, is of the highest land value, although it includes doina Suhakin and doina Qams, which are unplanned, they share much of the urban services such as electricity, plumbing, and accessibility to the market and its amenities. The best built residences are mostly located within this zone. Such houses are inhabited by the elite of the society. However, the relationship between the low-income migrants and the capital-intensive sector, whether it be in wages and living rooms for servants, in employment or construction of prestige projects, or in forms of welfare, enables the absorption of greater population of low-income
migrants in such areas. Migrants living in the market, which is their place of work, in hotels, and work-camps in the central town are classified in this zone.

These characteristics, during the last decade, influenced the residential search behaviour, depending on the economic and social conditions of the individuals, and decided the directions of movement.

The pattern of the town's growth and development seems to cause the residential stability and seems to take the following sequence:

1. The town started as a port, and subsequently shopping and residential areas;
2. With further development, the central zone was enlarged and the intermediate zone emerged as a result;
3. Expansion of the intermediate zone introduced the periphery zone;
4. Priorities of replanning and allocating of urban services in given to the core town and adjacent areas outward;
5. Replanning the areas adjacent to the central parts and introducing urban services gradually covered the strains in the intermediate zone and
6. Continuous expansion of the residential areas steadily enlarged the illegal slums at the out-skirts of the town.

The above sequence seems to be regularly taking place to the extent that the future plans of the low-income migrants in the illegal slums are to wait for the government decision to replan their slums and thereafter to apply for a plot of land
yet consequently to be provided with other forms of urban services.

This sequence resulted in little assimilation of the rural migrants to the urban way of life. Land value, because of location and accessibility to urban services, is highest in the central town and diminishes outwards. The consequence is that urbanization as a way of life has a high level in the central town and diminishes outwards gradually to become very slow in the illegal areas.

Mayer (1961) claimed that the results of his research amongst Rural migrants in East London in South Africa indicated that some migrants would never become completely urban no matter how long they lived in the town. Furthermore, Neice (1971) noticed that many urban centres in non-Western countries were characterized by features of rural environments, such as high fertility, and the persistence of the extended family, a phenomenon that he termed "ruralness of cities".

These findings are similar to those of low-income migrants in Fort Sudan. The danger is, of course, that "ruralness" has equal deterministic forces as "urbanism". It is simply claimed that when a town has a high number of rural migrants, it has a high number of features which are characteristically rural.
CHAPTER FIVE

January 2000

402243:18:0001

402243:18:0012
The main purpose of this study is to trace the characteristics of the pattern of migration from place of birth to Port Sudan, and to investigate the setting, in a chronological order from the foundation of the town until 1982. Moreover, the study attempts to trace the similarities and the dissimilarities of the pattern compared to other Third World towns.

Port Sudan was founded early in this century as the modern new port of the Sudan to replace the old port of Suakin. Since the port had to serve as the main economic focus of the country, rail and road transportation networks were gradually constructed.

Hence it attracted migrants from different parts of the country searching for jobs. The town has grown within eighty years from a small village to a town of 54,076 persons at the 1960/61 Census, and 78,920 according to the 1964/65 Household Survey, and in the 1973 Census it amounted to 132,052. However, a considerable percentage of this growth is due to natural growth.

Like the great majority of rural migrants in many Third World traditional societies, most of the migrants in Port Sudan are of rural origin and more than a third of them are from the adjacent rural neighbourhood. In addition, most of them leave their villages at an early age.

The massive growth of Port Sudan starting by the port in the early years of foundation, followed by the emergence and development of other functions, such as commerce, administration, and services, has its clear impact on job opportunities, structured...
migrants to Port Sudan, and residential search behaviour within the town.

The impact of town development on job opportunities is evident in the early years of Port Sudan's foundation. The government provided incentives for migrants to work in the port. A little later in the 1950s, new jobs were created for the continuous stream of unskilled migrants. Nevertheless, in the process of the town's growth, innovations and improvements are noticeable with regard to the port facilities, industry, transport, and service delivery. This, consequently, meant the need for more skilled workers.

In most cases, the skilled workers are chosen from the workers in the particular institution offering the job, e.g., crane drivers in the port, to replace many jobs of casual labour. and unloading is chosen from lorry or truck drivers, and trained within the port. Accordingly, the jobs are promotions to stable workers in the particular source offering a job rather than to new migrants. Still, a considerable number of new migrants are fairly skilled workers, in particular those who secure jobs that they experienced in other places they visited in the process of moving to Port Sudan. This category, if not lucky enough to find a steady and formal type of job, will find a good chance to practice his job informally.

Evidence to support the hypothesis that "the longer the distance from a migrant's origin to Port Sudan, the more numerous the steps he undertakes to reach it" is lacking. Unlike findings of other researchers in different parts of the world, settings, otherwise amount is limited, and takes no regular
form. Three quarters of the migrants came directly to Port Sudan, motivated by the information from friends and relatives that the town had good chances of work. Only one quarter of the migrants experienced stepwise migration, and with no distinct pattern. The town's rapid development had such influence on this result, for it provided a stimulus and a rich source of employment, compared with other towns in the country. Another factor that influenced such results is the remote location of Port Sudan with regard to the rest of the country.

Strong evidence was found to support the hypothesis that 'distinty underlies the formation of voluntary associations, especially among new arrivals in a strange setting'. Here that half of the migrants stayed with relatives or friends when they first arrived in town. 42.5 percent of those, after being settled in town, received relative guests, who are, in turn, newly arrived migrants. Having a relative or a friend in town is a strong pull factor for a person to migrate. Perhaps, this caused many migrants to come directly to Port Sudan.

Residential search behavior is also influenced by the town's rapid growth and morphology. Prior to 1950, the land value in the center of the town was low, and consequently residential opportunities were available for low-income migrants. During the period 1950-55, the center and the peripheral zones received nearly equal numbers at a time when the town had a clear classification of residential quality. Later, however, the intermediate zone witnessed the replanning of residential areas, while the illegal docks continued to expand on the peripheral zone of the town.
While there is no sufficient proof to support the hypothesis that the functional priority "distance from one residential area to another" governs decision making in residential search behavior, there is much evidence to support the hypothesis that the other two functional priorities: (1) "tenure"; and (2) "family conditions, i.e., origin, kinship ties, social status, and number of dependents" govern such decision making. Kinship contributes to easing the transition from a rural background to the urban environment, but, at the same time, slows the urbanization process.

As most of our respondents are migrants for mainly economic reasons, they are remarkably successful in acquiring jobs, mostly of unskilled, informal nature, within a short span of time. Although many of them have to change their jobs several times until they find a satisfactory long-term one, more than half of the migrants are satisfied with their stay in the town and are looking forward to a stable life in the town. However, some of the migrants went to go back home after they collect enough money to establish better living conditions in their villages.

During the last decade, the town witnessed the arrival of large numbers of rural migrants. The impact of such a phenomenon on the urban ecology of the town is reflected in underdevelopment, overcrowding, and inadequate housing conditions. Furthermore, not a single reason is obvious at present to suggest the stop of such a continuous stream of migration. Thus, these conditions are likely to become more severe in the future. As a result, the urban ecology in the
town suffers from a number of problems. These problems fall
within the following three main contexts:

(1) the economic context;
(2) the socio-cultural context; and
(3) the housing context.

(1) The Economic Context:

The low-income population works mainly as wage labourers,
usually performing the manual tasks. The labour market in Port
Sudan has two distinct phases, which roughly coincide with the
colonial and post-colonial periods. In the first phase, the
immigrants came to find themselves in a position that took
advantage of the job openings in the newly founded port and of
the post-war changes in the economy. The second phase witnessed
improvements in industry, transport, and service delivery
networks, and consequently increased the need for skilled
labourers. Nevertheless, this phase has also been accompanied
by an increase in the number of jobs of an informal nature that
can absorb enormous numbers of unskilled labourers. The majority
of low-income migrants in Port Sudan occupy "informal" type of
jobs.

However, this represents the core of the problem. In
other words, job opportunities in the town of the informal type
are difficult to control because of their informality nature, and
eventually they create endless series of planning problems.
Several similar statements on the employment situations in other
towns were received, but these were based on very general data
and contain little analysis (I.D.O. Report, 1976: pp. 365-374 and
pp. 375-380; Omera, 1977: Mubataa and Armao, 1977; Kameravyo,
1977; Beson, 1978). Such statements offer interpretations in terms of distinction between the "formal" and "informal" economy and between "organized" and "unorganized" labour. There are, of course, certain employment categories which are difficult to place within either of the two sectors. Nevertheless, they are part and parcel of the dual economy.

Under such economic conditions, it could be speculated that the problem of poverty and underemployment in Port Sudan can hardly be solved without the improvement of the traditional sector in the rural districts all over the country and especially in the west and east-coast zones of Sudan. The government should also consider the orientation of the regional policy towards regulating and controlling mass urbanward migration. The government should also expand development schemes to provinces in an attempt to decentralize badly needed services in order to retard the flow of people to big cities and towns.

Another immensely important recommendation is that attention and research must be directed to methodological problems in dealing with the 'informal' employment market.

Indeed, most of the Western theories and models regarding the occupational structure are of marginal application to underdeveloped countries. There is lack of information about the unique complexity of the occupational structure found in many places, as in the case of the low-income migrants in Port Sudan.

(a) The socio-cultural Context

It has been found that Kedwall's model, which states that migrants attract migrants from the same origin, is quite applicable in the case of Port Sudan. Kinship and family
Social role in the decision making of a migrant. In addition, the link with the village society is strong, while the social integration between the "new" is prevented by the settled people.

The two sectors of the dual economy in Port Sudan (sectors I and II) have their great influence in attracting migrants and preparing for the existence of what may be called the "urban" culture. More precisely, the tradition sector of the town's economy has the ability to absorb increasing numbers of unskilled rural labourers (underemployment conditions), while it allows for the maintenance of the values and norms of the village within the society of new migrants in the urban setting.

Indicators for this are many. First, the institutional basis of the enterprise in the traditional economy in the town is still the family. Even though members of the family may operate independently in the market-place, the rest of the household ensures the entrance of his family members into this system. Second, the system of flow of goods and services within characteristics such an economy allows for the introduction of new labour. Third, the relationship of this economic sector with the peasant or the rural economy through remittances is profoundly important. The population movement and the flow of goods and services between the two sectors in essence, thus allowing greater flexibility in many aspects. Finally such a system has something of a self-inflationary quality: the more people who enter the system, the greater the market. For example, the number of people who will prepared food or tea
increases as the population in the town increases.

The persistence of this economic sector in the town could have dangerous consequences as far as development is concerned. Village values may generate strong resistance to innovation and new modes of living which, in turn, has its dangerous implications in an urban environment. Moreover, traditional communities have high fertility rates, which means only one generation can result in doubling the number of people in such an overpopulated centre.

The change of the cultural values and norms that the rural migrants maintain in order to configure to the urban society, takes a very long time. Otherwise, the sudden breakdown of these values could lead to serious social problems resulting from a conflict between two sets of values within one community.

However, it was not possible to trace and discuss such cultural details in the migrants society from the survey results. Much evidence, however, suggests that migrants maintain good relations with their home villages expressed by resistances not to close relatives at villages, wives and children brought from villages, the receipt of relatives and friends from villages, and the intentions of some of these already in town to go back to a village after collecting some money or being retired from work.

(3) The Housing Context

The subhuman conditions of the low-income migrants in Port Said is seen in the overcrowding and inadequate housing in illegal slums. Such situation requires urgent solutions.
However, this issue has been much debated and various suggestions have been advanced.

Researchers, with a planning orientation, in the Sudan have tended to adopt widely different perspectives. Some have laid direct emphasis on particular localities perceived as "problem areas" that call for immediate "solutions". Others have concentrated on explaining the reasons for the existence of such areas or the nature of social life within them. The perception of some local areas as requiring administrative action in the form of replanning or resettlement goes back to the earlier years of British rule. It may be noted that in 1910 Nelson referred to Khartoum as a "rabbit warren", and his view was certainly shared by some other colonial administrators. For example, Jackson would have regarded it as "desirable, had it been practicable, to pull down every house in the town" (Jackson, 1959, p. 87). It was, however, not until the immediate post-war period that illegal house clearance and low-cost housing became a matter of regular discussion among British administrators (Kendall, 1953; Asher, 1954; and Saini, 1959).

Many social surveys have been conducted to assess the nature and extent of the housing problem in the worst residential areas of the Sudan (Oliver, 1966; Lonsdale, 1966; James, 1966; Mahood, 1966; Askin, 1975; Varghese, 1975). The central assumption of these studies has been that housing problems are essentially administrative and technical. The cost of "solutions" is a primary concern, but there has been no debate about the broader economic issues involved.
The low-income unstable types of jobs that most of the migrants held make it difficult for them to purchase or even rent a legal house in residential quarters that are better in facilities. Moreover, it is of no use to move to another squatter settlement having the same disadvantages. Therefore, these areas in Port Sudan are characterized by residential instability. People remain in their squatter-settlements unchanged until replanning is enforced by the government. Thus, the main factors that have resulted in poor housing conditions in the illegal deems in Port Sudan are economic. The solution does not lie simply in the replanning of these "deems", neither does it lie in the improvement of the employment outlook in the town.

It seems that planners and policy makers in Port Sudan have good reason to worry about the town's future. What can be achieved to solve the problems of under-employment, overcrowding, and inadequate housing in the low-income housing system in the town? If planners and policy makers were able to provide adequate housing or better chances of work for the two together, the continuous stream of migrants would become more diverse, while if they stopped efforts to control the problem, it would get worse as the stream of migrants continues to flow into the town.


Port Sudan Harbour, Annual Reports of the 1921/1922 and the 1926/1927, Unpublished reports.

Sudan Central Archives, Khartoum, File No. 370, Unpublished archives.