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AN EXAMINATION OF THE ROLE OF LOCAL MARKETS AND THEIR CONTRIBUTION
TO THE DEVELOPMENT PROCESS IN SELECTED PARTS OF SUDAN

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Doctor of Philosophy in the
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TEXT OF ABSTRACT

Sudan is a developing country with one of the lowest per capita incomes in the world, but with great potential. This thesis examines the role of local markets in Sudan and attempts to make some assessment of their contribution to social and economic development. Two contrasting areas were selected for fieldwork: first, a part of the Gezira, which is a reasonably developed area. Commercial farming is led by cotton production mainly for export, under the famous Gezira Scheme, which has been operating since 1925. Second, the Nuba Mountains which is a less developed and more remote area. Cotton was introduced here at the same time as in the Gezira but under traditional wet-season farming.

For the purpose of the study three questionnaires were designed for interviewing the participants in the daily activity of the markets. These participants were permanent traders, semi-permanent traders and market visitors. A survey was made of the functions performed, and the range of goods offered by the market centres. In each case close examination allowed a categorization of the characteristics of the markets according to periodicity and permanency, hierarchies, and commodities exchanged. The degree of dependence of both traders and market visitors on the markets for livelihood is also examined.

The thesis has also attempted the analysis of the multiple role of the markets in the socio-economic life of the people. Particular emphasis is made on the spread of knowledge, information, and demonstration effects, covering the period since the last World War. Clear differences are apparent between the two areas and comparisons are also made of their social and economic contribution to development. The thesis concludes by examining a number of lessons that are apparent, and suggestions for further development of local marketing, and for the spread of innovation and general modernization.

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INTRODUCTION

The Present Situation of the Sudanese Economy

Sudan is one of the developing countries with a very low per capita income but with a great potential for future development. At present, 80% of the country's population depends mainly on agriculture with not less than 70% dependent on traditional agriculture for livelihood, most living on just above subsistence level. Agriculture accounts for about 40% of the Gross Domestic Product, for 95% of exports and for over 50% of government revenues, with 60% of the earnings being from the export of cotton. The public sector dominates the economy, providing more than half the country's investment and employment and nearly 80% of its exports.

The current development plans are designed to increase the local production of sugar, wheat and textiles, which together account for 30% of the value of the country's goods imports. It is hoped that Sudan will be an exporter of these items in the coming few years. Following the heavy public sector investment in the development of agriculture and agro-industries (in the past decade 1970-1979), the World Bank predicts that the country can achieve rapid economic growth and a steady improvement in the following decade of 1980-1990 for economic conditions. This will take place only if the government can achieve self-sufficiency in essential consumer goods, improve export performance, and reduce capital goods imports which are now needed for the developmental projects taking place in the country. Meanwhile, the country should also sustain its creditworthiness in foreign borrowing at the present high level. Funds need to be efficiently allocated and well organized and planned to achieve all the targets aimed at. At present the saving ratio is 8.4% and the investment ratio is 10.5% to the GDP. Table 0.1 below shows the World Bank Economic Aggregates in million Sudanese pounds at 1974/75 prices.

	1974/75	1979/80	Average annual growth rate
GDP at market prices	1,611	2,100	5.5
Imports	279	360	5.5
Exports	150	210	7.2
Government consumption	216	280	5.6
Private consumption	1,259	1,560	4.5
Investments	256	410	9.1
Domestic savings	136	200	13.2

Source: CBI, Market-Study, The Sudan, 1975, pp.13-16.

The economic situation of the Sudan today bears a great resemblance to Rostow's "Economies attempting take-off, where the apparent savings and investment rates, including limited capital imports, have risen over 5% of net national product".⁽¹⁾ Rostow doubted the success of the take-off period in most of the countries which passed through that stage in the early 1950s, as up to the early 1970s no signs of the take-off were shown. Sudan shows most of the symptoms of this stage. The problem of Sudan now is that it lacks efficient central planning bodies. As a result most of the planned and currently undertaken projects are behind schedule, and the necessary basic infrastructure to support the proposed expansions is unlikely to be completed in time. Nevertheless, great hope for the Sudan to pass the problems of this 'stage' and push its way to the 'take-off' rests in the substantial foreign capital it is now attracting. This makes Sudan different from other countries within the attempted take-off stage as they are characterized by "limited capital imports". The supervision of the World Bank for the allocation and coordination of foreign loans is hoped to ensure

1 Rostow, W. W., "The Take-off into Self-sustained Growth", in Mountjoy, A. B. ed., Developing the Underdeveloped Countries, 1975, p.100.

that progress is taking place and in the right direction. At the same time economic development is occurring: increased investment in transport, communications and industry to support a strong foundation for agricultural development is taking place. Most of this heavy expenditure is concentrated in Khartoum, Gezira, Kassala and White Nile provinces, where 90% of the modern sector of the economy is concentrated (Fig. 1.2). The "take-off stage" is now envisaged and the necessary economic growth is foreseen. Unfortunately, it was not until recently (the six-year plan 1977/78-1982/83), that efforts were made to reduce the interregional and rural-urban disparities. Although this comes as one of the aims of the plan, few details are given about how this is to be done. Suggested are the improvement of transport and marketing institutions. The share of the core area, roughly the above-mentioned four provinces is always the lion's share if compared with the periphery, which is the rest of the country. This introductory elaboration on the present situation of the Sudanese economy is to clarify the fact that there are great imbalances in the geographical and regional distribution of development in the Sudan. Both social and economic inequity between regions is apparent and the gap between the core and the periphery with regard to modern and traditional ways of life is wide and obvious. The traditional sector, although the mainstay for the livelihood of nearly 70% of the population, is neglected and very little effort for its transformation and modernization is made. This fact has initiated the present study of local markets and their contribution to the socio-economic development process.

Methodology

Local markets in the Sudan play an important part in the transition of the traditional rural Sudanese from a subsistence to a market economy. The aims of this study are the assessment for their role as the outlets of the remote producers in the domestic and export economy, their role as innovation and information diffusion centres and their importance in some cases as nuclei for urban settlements. For the purpose, two areas were chosen, part of the famous Gezira

area and the remote and less developed Nuba Mountains district. This is for the purpose of comparing and contrasting the characteristics, periodicity and permanency, and the importance of the markets in two areas at different stages in the socio-economic transformation.

In this study, markets mean places where exchange takes place, whether they are formed of open spaces or a group of shops or the two together. The local open space or building in which a market is held is known as the market-place. The settlements or locations in which markets are found are described as market centres. Together with their commercial importance, market centres also provide other central services such as educational, health, administrative and religious services. The method and procedure followed for the study of the markets in the two areas of study was done through investigations carried out by visiting 46 markets, seventeen in the Gezira (in six weeks) and twenty nine in the Nuba Mountains (in a period of three months). Time spent in each market ranged from a few hours to a whole market day, depending on the availability of transport to and from the market. Markets visited were chosen so as to cover as many variations as possible between different parts of the same area. Ten markets were visited from Northern Nuba Mountains and nineteen in the Southern Nuba Mountains. In the Gezira area, five markets were visited from Eastern Gezira, eight in Northern Gezira and four in Southern Gezira (see Figs. 5.1 and 5.2).

Information was collected by interviewing people in the markets through a set of three different questionnaires. One was for permanent traders and shopkeepers occupying permanent shops and open every day. Another was for semi-permanent traders occupying semi-permanent buildings or occupying no buildings at all, and the third was for market visitors. The table 0.2 shows the details of the questionnaire coverage in each area.

Questionnaire and market coverage in the Gezira and Nuba Mountains

Groups of respondents	Gezira		Nuba Mountains	
	No. of quest.	%	No. of quest.	%
Permanent traders	60	34.7	113	65.3
Semi-permanent traders	182	47.3	203	52.7
Market visitors	171	46.0	203	54.0
Total questionnaire coverage	413	44.3	519	55.7
Markets visited	17	37.0	29	63

All central functions, services and goods provided by the market centres were listed. Investigations about the areas served by markets and the dates of establishment of some of the central functions were also made. This information was collected to help to discover whether hierarchies exist within the market centres, the relationship between markets of different order and the relationship between these markets and their hinterlands.

The questionnaires for traders and market visitors were designed to help to reveal the importance of the local markets in the life of the people and in the socio-economic development of their areas. The questionnaires are set out in Appendices 1, 2 and 3.

Interviews regarding changes in living conditions, in market sizes and in goods exchanged in the past and in the present were held with old people whenever time permitted. Some information was also collected from government offices, especially People's Rural Councils. Some archiveal material was examined in the central Archives Department at Khartoum and the Districts' Head Offices for each area. Some of the archives of The British Museum, Department of Manuscripts, that touch the matter were also made use of.

Problems and Difficulties

Travelling conditions and unavailability of transport, particularly in the Nuba Mountains was a great difficulty. Although at all times two trained field assistants helped in conducting the questionnaires, the coverage in some of the markets was poorer than usual as not all people approached were ready to cooperate for the time spent being interviewed caused great distraction from selling and buying. In the Nuba Mountains in some of the remote areas there was a great language barrier, that necessitated extra payment and search for a local person to translate. Although the aims of the study were explained to every person interviewed, misunderstanding sometimes caused the interviews to be mistaken for tax estimation and governmental purposes. This rendered the collection of data about turnover or income earned from marketing extremely difficult. The most exact description for the difficulty in conducting field work in market places was summarized by Polly Hill about fifteen years before the fieldwork for this study was undertaken, "...an African market is one of the most uncomfortable and inconvenient places in the world in which to conduct respectable fieldwork...it is not so much the heat, the glare, the bustle, the over-crowding, the noise, the shouting (and consequent hoarseness), or even the sneezing caused by open bags of pepper and maize (for all of this is compensated for by the very courteous behaviour of Africans in market) - the difficulties are rather the extreme fluidity and complexity of the undocumented situation and the need to trouble informants at their moment of maximum anxiety, when they are concluding transactions".⁽¹⁾

The lack of population data for the market centres was a drawback for the study. Population data for settlements of less than 5000 inhabitants is very difficult to obtain from the 1973 census figures. For such places estimates were made from independent reports and from the estimates for the rationed consumer goods distribution, made

1 Polly Hill, "Markets in Africa", The Journal of Modern African Studies", Vol. 4, 1963, pp.441-453, ref. p.443.

by the Peoples' Rural Council officials and Village Council Heads. However, no population data was used for analysis to avoid misleading results. In all cases even when census data is available the markets' settlement population does not give the exact number of people served by the market, as all markets in different orders always serve more population than their immediate population. Therefore, the estimates are always less than the population of the area served by the markets. Complete lack of consistent and dependable data from the government offices in both areas of study, and the lack of previous studies of a similar nature rendered the data collection for this study an extremely difficult task.

The Application of the Data

For the purpose of this study the answers obtained from the 274 market visitors, 285 semi-permanent traders, and 173 permanent traders were coded and the computer was used for the analysis of the aggregates and percentages used in Chapters Five and Eight.

For the identification of ranks of market centres, the central functions present in the two areas were first identified and the total number of functions possessed by each market centre visited was obtained during the fieldwork. A modified centrality index based on Davies' original index was used to determine the ranks of market centres. Markets were also ranked according to the total number of central functions they had at the time of the fieldwork. Market analysis technique was also used to delimit the market service areas which are discussed in Chapter Six.

CHAPTER ONE

The Dual Economy in Sudan

1.1 Introduction

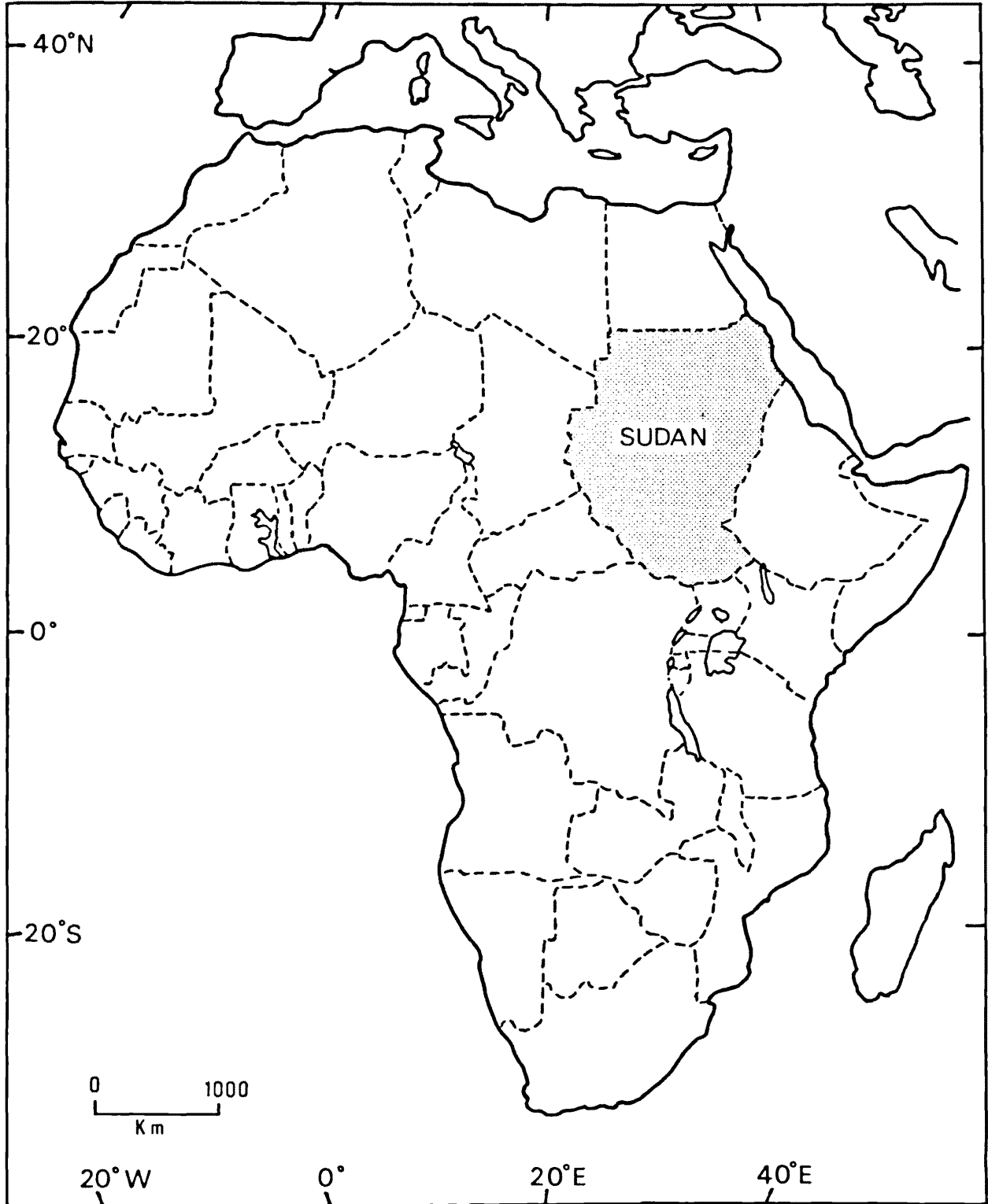
Sudan is the largest country in Africa, with an area of 2,205,805 sq. kilometres (Fig. 1.1) and, according to the 1973 census, with a population of about 14.8 million people. The annual rate of increase is estimated at 2.5 percent; at this rate the population in 1979 must be about 17 million⁽¹⁾.

Early this century after the reconquest of Sudan, the British Governors realized that the mainstay of the country would have to be agricultural because of the lack of mineral resources. The only way to develop the country economically and socially was to encourage cash cropping of crops already cultivated and to introduce new crops that could be commercially produced under irrigation.

For this purpose cotton cultivation was first examined in 1904. The Gezira area between the Blue and the White Niles was chosen for the purpose. This area was to be irrigated from a dam built near Sennar on the Blue Nile. The inhabitants of the area were mainly subsistence farmers, with some nomads moving around it with their animals. Cultivation of the Gezira did not, in fact, start until 1925. The scheme was a multipurpose one: it introduced the cultivation of commercial cotton and groundnuts with the aid of perennial irrigation, and aided the socio-economic development of the area which is now considered to be the most agriculturally developed area in the country. It also provided the country with hard currency as all the long-staple cotton was exported, in particular it provided Britain with cotton lint for its textile industry.

1 The Democratic Republic of The Sudan, Ministry of National Planning, Sudan Second Population Census, 1973, vol. IV, part 2, Socio-Economic Characteristics of Urban Areas, (35 selected towns), Khartoum July 1977 and Sudan, Population Projections for the Six Year Plan, 1977/78-1982/83, The Demographic and Manpower Committee.

FIG.1 (1) LOCATION OF SUDAN IN AFRICA



Cotton was also introduced into the Nuba Mountains in Kordofan province west of the Nile. It is a short staple rain-cultivated variety. Medium-staple cotton was also introduced into the Gash and Baraka deltas in Kassala Province in Eastern Sudan and in the White Nile Pump Schemes at about the same time as it was cultivated in the Gezira area and cotton ginneries were built in the main areas of cotton production.

Another attempt at the introduction of modern commercial farming and manufacturing was the establishment of the Zandi Scheme in the middle of the 1940s, in the South Western part of the country. Cotton was the main cash crop of the scheme. Sugar cane, palm oil and coffee were cultivated on a small scale. The industrial unit of the scheme had produced a good quality-grey cotton cloth, sugar, soap and cooking oil from cotton seeds; for the consumption within the area. The scheme was a successful experiment at the beginning, but by 1955 the cotton produced was too small to keep the scheme in production. First the Azandi demanded far higher prices for their cotton than the scheme could afford to pay. The final blow came as the result of the political problems between the South and the North. (1)

Away from the above mentioned areas all the population was engaged in traditional rain cultivation or nomadism, while the only industry was the making of handicrafts. Trade was small in the subsistence crop rural areas but with a rather larger commercial activity in bigger urban centres; external trade was very restricted. The very limited manufacturing, first developed during the Second World War, virtually stopped after the war because imported goods of better quality had become obtainable and were preferred by the consumers.

1 Reining, C.C. The Zandi Scheme: An Anthropological case study of Economic Development in Africa, 1966, pp.161, 174, 178, 207-217.

Independence came in 1956 and by the 1960s the national governments aimed at expanding the export of crops to help balance the country's trade and to provide agricultural raw materials for industry. It was also intended to develop manufacturing so as to reduce hard currency payments for consumable goods. Hence, the late 1950s and 1960s witnessed the construction of two dams, Khashm el Girba on the Atbara River and Er-Roseiris on the Blue Nile and the establishment of manufacturing plants processing agricultural products: the two sugar factories of El-Guneid and Khashm-el-Girba, and Karima and Wau vegetable and fruit canning factories, the onion dehydration plant, were constructed during this period to help the modernization of the economy. Except for the Kosti meat canning plant, all the factories were owned by the Government. The Government had to take the initiative in attempting to make people believe in commercial farming and manufacturing processing because the private sector was hesitant about investing in such innovations, the success of which had not been proved. Most of the private capital owners and small companies still prefer quick-return business such as trade and real estate or small scale farming.

1.2 The Present Situation of The Traditional Sector of the Economy

The traditional economy in Sudan is a compound of physical and human factors evolving through time.

Almost the whole northern third of the country is a desert where human existence away from the Nile is an impossibility. Here annual rainfall ranges from 0 to 100mm. The very sparsely distributed population are camel owning nomads who move for very long distances from Northern Kordofan and Darfur provinces to the southern tributaries of the White Nile and sometimes to the oases of the Sahara, as far north as the Libyan borders west of the Nile, and between the Nile, the southern borders of Egypt and the Red Sea Hills in the east.

To the south the cattle nomads of Kordofan and Darfur move as far south as Bahr el Arab and as far north as Northern Kordofan and North Darfur Provinces, in a rhythmic cycle for the whole year in accordance with the seasonal ability of the environment to provide their animals with grass and water. This system proved to be ideal to keep the grazing resources in balance. The very limited carrying capacity of the area is very wisely made use of, for it would not bear permanent settlement. (Fig. 1.2)

The Government attempted to perform a policy of settling nomads and to improve their living conditions. The construction of the Babanusa milk factory was mainly for this purpose and was intended to provide the nomads with a constant cash market for their fresh milk. However, they preferred to move with their animals as their home land, where the factory is located does not sustain their animals for more than three months during the six months' rainy season, also the period from June to August is not healthy for the animals because of insects and harmful flies.

According to the 1973 population census nomads formed 10.9% of the total population and Table 1.1 shows that in 1973 more than 81% of the population of Sudan were rural agricultural or nomadic people dependent upon the land for their livelihood.

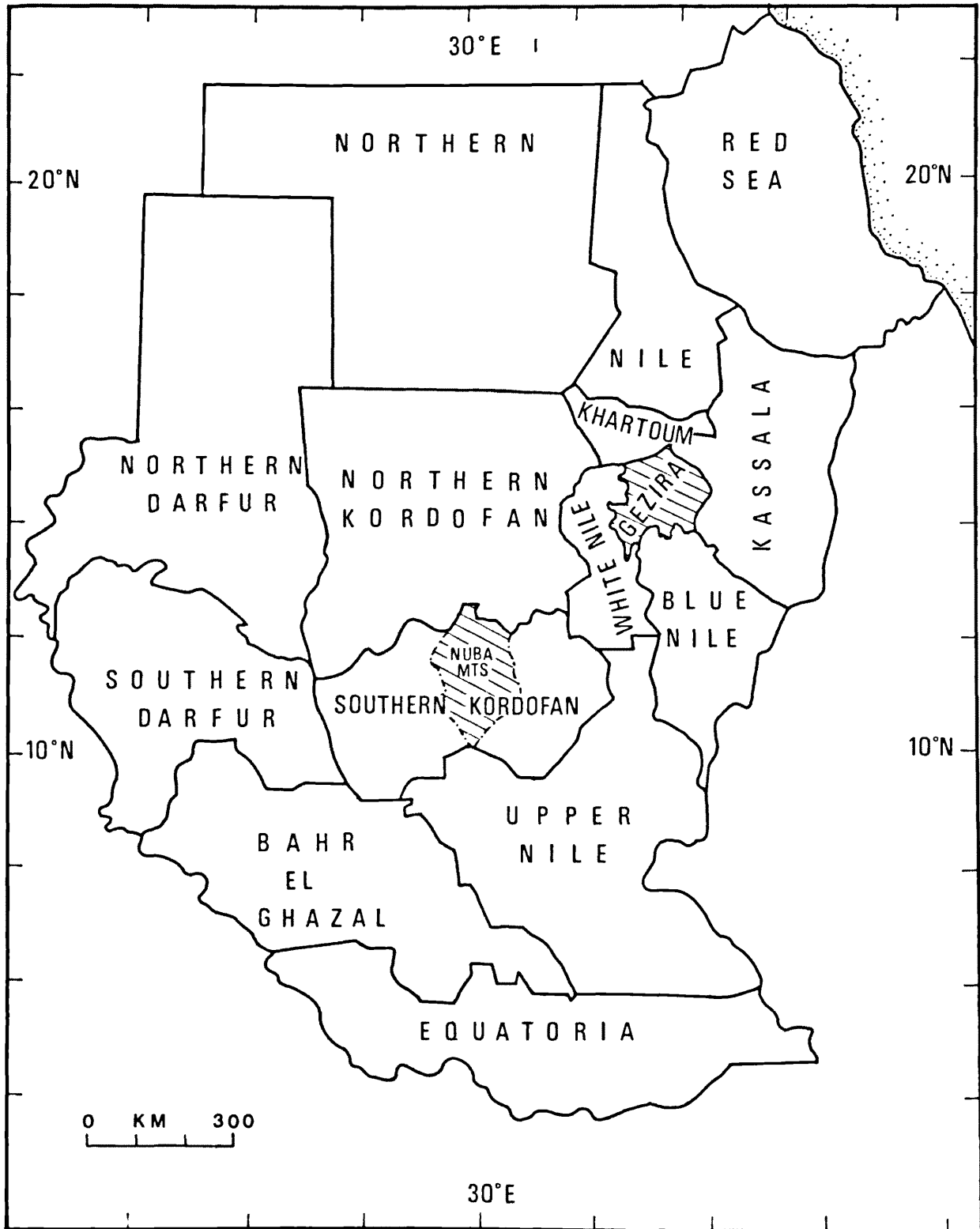
Table 1.1

Population of Sudan (1973) in Million Persons

Population within towns of 5,000		Sedentary rural population		Nomads	
Total (000,000)	%	Total in (000,000)	%	Total in (000,000)	%
2.7	18.1	10.6	71	1.6	10.9

Source: Sudan National Planning Commission,
Economic Survey 1974, Khartoum July,
1975, p.20.

FIG. 1(2) LOCATION OF TWO STUDY AREAS WITHIN THE SUDAN



The majority of the population of the central plains of the Butana (the vast plain between the Blue Nile and the Atbara River), the Nuba Mountains, the southern parts of the Blue Nile province, the three southern provinces, and the vast Goz (stabilized sand dunes) and desert lands of Darfur and Kordofan is engaged in rain cultivation with some nomadism, and gum arabic collection. These constitute by far the main economic activities of the country, Fig. 1.2. and 1.3.

1.3 The Contribution of the Different Sectors to the Country's Economy

In spite of the efforts made in the last 20 years to develop a modern sector in manufacturing, its contribution to the gross domestic product is still small. It accounted for 8.3% in 1973/74 with a value added of £s 50.8 million in 1970/71. Agriculture in 1973/74 accounted for 38.2% of the G.D.P. (1) The contribution of the different sectors within agriculture is shown in Table 1.2.

Table 1.2

Contribution of Different Agricultural Sectors

<u>Crop production</u>	<u>Livestock</u>	<u>Forestry</u>	<u>Fisheries</u>	<u>Total Agriculture</u>
60.2%	27.8%	10.9%	1.1%	100%

Source: Sudan; Economic Planning Commission, Economic Survey 1974, Khartoum, 1975, p. 42.

Though livestock production is completely in the hands of traditional nomads and livestock owners, it showed an increase of 3.8% in cattle numbers, 3.6% for sheep, 3.2% for goats, and 3.1% for camels between the years 1971 and 1974. (2)

1 U.N. Economic Commission for Africa, Sixth year, No. 37, Feb. 1975, p. 6. Ali Mohamed El-Hassan, 'Structure of the Sudan Economy', in An Introduction to the Sudan Economy, Ali Mohd. El-Hassan (edit) Khartoum University Press, 1976, p. 8.

2 Sudan, Economic Survey Op Cit, 1974, p. 56.

The areas of crop production under different types of irrigation also showed great increases between 1966 and 1975.

Table 1.3

Area of Main Crops by Type of Water Supply in (000) Feddans

Type of water supply	1965/66-1969/70 average	1972/73	1973/74	1974/75
Rain-fed	6,729	10,498	11,064	11,563
Irrigated	1,685	1,994	2,210	2,480
Flooded	123	149	144	181
Total	8,537	12,641	13,418	14,224

Source: Sudan, Economic Survey, 1974, p. 45. 1 feddan = 1.038 acres

It is notable that the modern farming lands (irrigated and flooded), though only about one fifth to one fourth the area of the traditional agricultural lands, produce as much, and usually more, crops than the latter (Table 1.4).

Table 1.4

Production of Main Crops by Type of Water Supply

Type of water supply	1965/66-1969/70 (average)	Production in (000) metric tons		
		1972/73	1973/74	1974/75
Rain-fed	1,731	1,948	2,135	2,856
Irrigated	1,657	2,385	2,565	3,165
Flooded	46	54	45	55
Total	3,434	4,387	4,745	6,075

Source: Sudan Economic Survey, 1974, p. 45

Most if not all of the staple food crops (sorghum and millet) are produced in the traditional rain-fed lands. In 1974/75 rain-fed lands accounted for 92% of the area devoted to sorghum and this produced 85% of the total production of the country. The average yield per feddan in rain-fed lands is about half the average production of an irrigated feddan's similar area, i. e. 302kg/feddan in the former and 616kg/feddan in the latter. All the millet, which is the staple food in most of Southern and Northern Darfur and Northern Kordofan provinces, is cultivated on rain-fed lands for subsistence only.

None of the wheat produced in the country is cultivated in rain-fed areas. The Gezira grows 75% of it, the Khashm-el-Girba scheme 18% and the Nile flood areas in Northern and Nile provinces account for the rest. Rice is still limited in production (15,000 tons p. a.), and 50% of this is produced in the Gezira. Aweil Scheme and the flooded areas of Bahr-el-Ghazal in the south produce the other 50%.

Oil seeds are other important cash crops. The production of groundnuts, sesame and castor seeds reached 1.3 million tons in 1974/75. In the same year the area under rain cultivation accounted for 89% of the area devoted to oil-seed production and this produced 61% of the country's total production. Eleven percent of the country's irrigated land was used for the cultivation of oil-seeds and accounted for 38% of the total production. Four-fifths of the groundnut cultivation area is rain-fed, producing 51% of the country's total production. All the sesame cultivation area is rain-fed, with North and Southern Kordofan provinces accounting for 55% of the country's production. The Gezira, the Blue Nile and White Nile Provinces together produce 18%. (Fig. 1.2).

In contrast to the staple food crops and oil-seeds, 85% of the cotton cultivation is carried out under irrigation. This produces 97% of the country's crop. Only 3% of the cotton land is under flush irrigation in the Gash Delta and 12% of the cotton area is by wet season cultivation. This area produces only 2%

of the total production, but almost all of the short staple cotton. This is entirely in the Nuba Mountains area, the country's second cotton producing region and one of the areas studied in this work.

By the fiscal year 1976/77 sugar cane production should have approached 1.6 million tons from the three sugar schemes: Gunied and Khashm-el-Girba (already under production) and North West Sennar which was under construction. With the first production of the new North West Sennar factory local production should have supplied 63% of the country's consumption.⁽¹⁾ Now, in some parts of Sudan, cotton, sugar cane, wheat, rice, some vegetables and part of the sorghum are cultivated mechanically and under the most developed farming techniques.

Gum-Arabic for which Sudan is the leading world exporter and which is the fourth most valuable export after long staple cotton, groundnuts and sesame, is produced traditionally and gum collection is a part-time farming activity all over the savanna areas of Kordofan, Darfur, Kassala and Blue Nile provinces.

Most of the important exports except long staple cotton are produced traditionally (see Table 1.5).

1 Sudan: Ministry of Finance and National Economy, Economic Survey 1976/77, Khartoum, p. 36.

Table 1.5

The Composition of Exports as percentage of the Total Domestic Export Value

Commodity	1973/74	1974/75	1975/76	1976/77
Cotton	54.1	37.1	54.6	48.1
Gum Arabic	4.4	9.8	5.6	5.8
Sesame	6.0	12.8	6.0	10.4
Groundnuts	8.4	19.1	21.0	17.4
Cotton Seeds	0.2	0.2	-	-
Dura	2.9	2.6	0.9	2.2
Hides and skins	3.9	2.0	1.8	2.0
Castor Seeds	0.3	0.1	0.6	0.5
Karkadeh	0.7	0.3	0.2	0.7
Oil-seeds				
Cake and Meal	6.0	1.2	2.9	4.4
Others	13.1	14.8	4.6	8.5
Total	100.0	100.0	100.0	100.0

Source: Bank of Sudan, Economic and Financial Statistics Review, October-December, 1977, Number 4, Vol. XVIII, p.32.

1.4 An Evaluation of the Present Economic Structure of Sudan

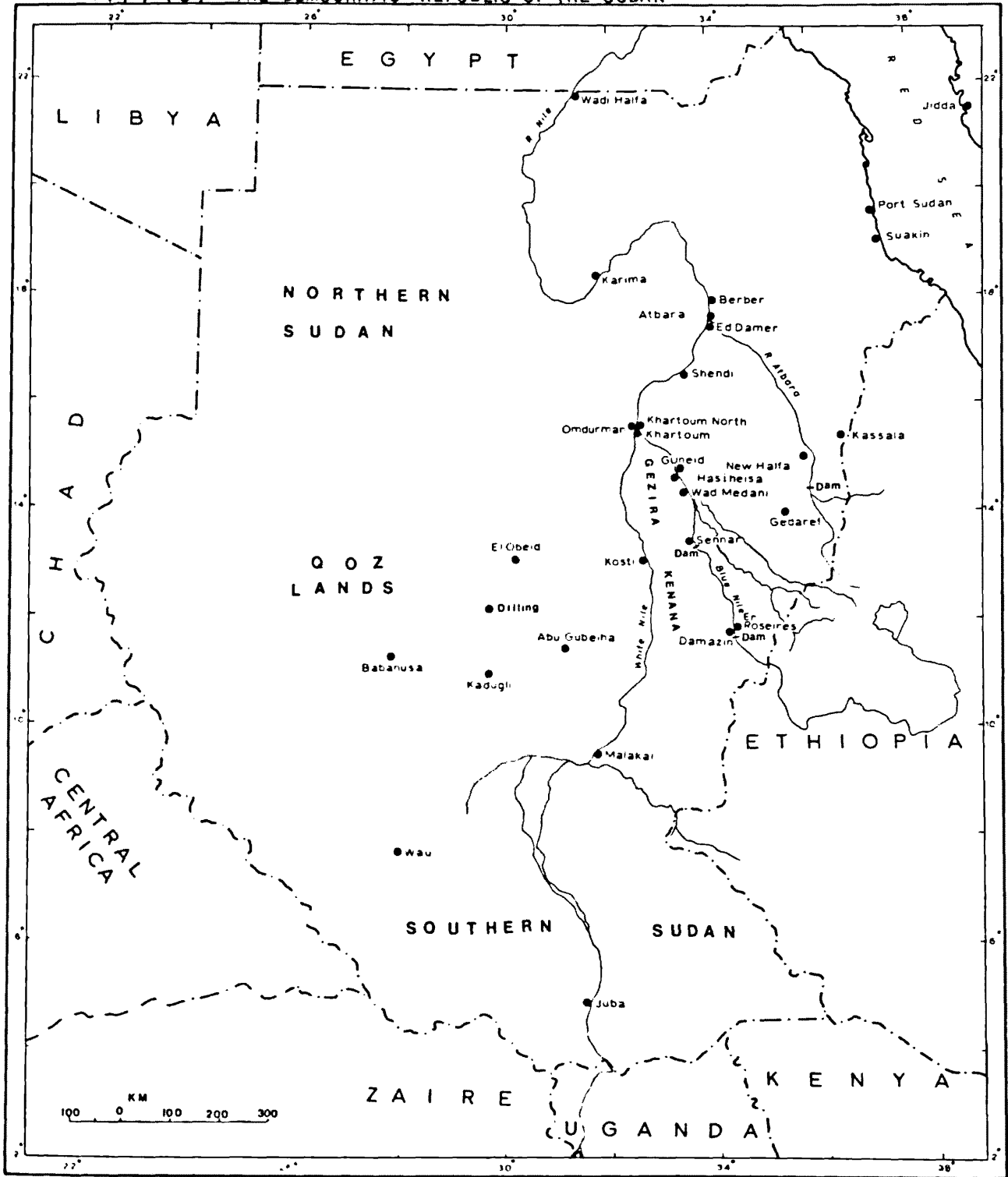
The above detailed account indicates the growing dualistic character of the Sudanese economy. The history of the development of this characteristic goes back to the modern cultivation of cotton in the Gezira more than fifty years ago. All the modern agricultural schemes that followed the Gezira model resulted in the present dynamic 'enclave' in the 'core' area surrounded by a stagnant traditional sector. On the other hand, it is very difficult to say that the economy of the country as a whole is stagnant. The economic development that took place from the mid 1920s until our present time, has been injected by the continuous development of agriculture which is highly dynamic but geographically unbalanced.

Most of this came as a result of the central planning efforts of the different governments, starting immediately after the Gezira Scheme era. Although the overall development of the country was of great concern to the Government at this time, the main emphasis of public investment continued to be in infrastructure and other concerns such as public works, agricultural research, rural water supply and education. At that time overall planning for sectoral development did not exist.

In the years immediately following Independence, constitutional and administrative reform took priority over economic policy and there was little expenditure on productive schemes. Nevertheless this is the period of the Manaqil Extension; rain land mechanization in Kassala and Blue Nile provinces; the Sennar Dam hydroelectric project and the Guneid Sugar Factory.

By the early 1960s a first Ten Year Plan was worked out. Its aims were the economic development of the country which would increase the real per capita income, broadening the structure of Sudanese economy, increase exports and import substitution and create improvements in social services, particularly education. Government units were asked to prepare and submit their proposals along these lines. The major achievement of this plan was the Er Roseiris Dam which is making possible the development of the Kenana area south of the Manaqil extension (Fig. 1.3). Emphasis was still on cotton, for during the period of the plan it accounted for 61 to 65% of the total value of exports. During this time Soviet Russia built large manufacturing plants in Karima, Kassala, Wau and Babanusa for vegetables, fruits and milk processing. The plan did not include provision for works in the private sector which nevertheless was much influenced by it. It also confined all its efforts to the modern sector, paying very little attention to the development of the traditional sector. However, the plan provides a foundation for political thinking in

Fig 1 (3) THE DEMOCRATIC REPUBLIC OF THE SUDAN



favour of development planning.⁽¹⁾ Under the present Government, the first Ministry for Planning was created in 1969 and the Five Year Plan 1970/71-1974/75 was devised. Together with the increase in GDP and agricultural production, the plan aimed at an increase in livestock, in rural water provision, in social services, and in urban and rural power supply. Great emphasis was again placed on agriculture but more attention was paid to industry than before. Inevitably, in the plan industry was mainly localized in the 'core' area. Within the period of this plan the Rahad scheme, the North West Sennar Sugar plantation and refinery and the Kenaf (fibre scheme) at Abu Naama and a number of other projects were started. The first targets were greatly altered to transport and the attainment of self-sufficiency in basic consumption items such as wheat, sugar and textiles by a political action programme announced by the President. This resulted in the extension of the plan for two more years, until 1977, but has led to a great deficit in financial provision. Sugar, wheat and textile production are all concentrated in the present modern farming area.

The current Six Year Plan starting in 1977/78 is the first of three six-year plans aiming at achieving a balanced and progressive growth in the national economy, social equity and raising the actual per capita income by means of promoting both traditional and modern sectors. It does not aim at great horizontal expansion in mechanized farming, but at the intensification of present farming together with the modernization of the traditional sector with particular emphasis on mechanization within the rainlands.⁽²⁾

1 Government of Sudan, Ministry of Finance and Economics, Ten Year Plan of Economic and Social Development 1960/61-70/71, Khartoum, 1962 and Abdel Rahman Abdel Wahab, 'Development Planning in the Sudan: Policy and Organization', in Ali Mohd El-Hassan (ed) op. cit. 1976, p. 223.

2 Sudan; Economic Survey 1976/77, op. cit., p. 9. and Sudan: Ministry of National Planning, Six Year Plan of Economic and Social Development 1977/78-1982/83, Vol. 1, Khartoum, April 1977 (in Arabic).

It is indeed desirable that the Six Year Plan directs more attention to the modernization of the traditional sector of agricultural production. Obviously, more expansion in the modernization of the 'core' while neglecting the rest of the country might lead to serious political problems. It has already been noticed that 90% of the modern farming area of the country is concentrated in the limited area of Kassala, Gezira, White Nile and Khartoum provinces. (Fig. 1.2). Khartoum is close to these rich farm areas and most of the industrialization has taken place in the capital and neighbouring regions. Elsewhere, apart from the scattered development projects, the effect of modernization has barely been felt.

It was recently suggested by ILO that development of traditional agriculture and livestock will not cost as much in public funds as other types of agriculture, possibly as much as 75 to 100 million Sudanese pounds over ten years, but the programmes have to start immediately as it takes a long time for the full effects to materialize. (1)

In the same ILO report it was recommended that, 'in addition to decisions on the spread and extension of irrigation expansion, there are other issues to be settled. ... It is not clear that Sudan would benefit from further mechanization until traditional agriculture in the west and the south is developed to a level where there is more to be gained from remaining there than working as a migrant labourer in irrigated schemes'.

At present, the traditional sector reveals some degree of progress and a sensitivity to market forces, sometimes difficult to be felt in the modern sector. This is shown by the immediate response of the former to economic opportunities. Kordofan has

1 ILO/UNDP employment mission 1975, Growth, Employment and Equity; A Comprehensive Strategy for Sudan. Vol. 1, 1975, III.1, p.29 (confidential).

demonstrated how access to export markets for groundnuts can result in more than two million feddans being cultivated. The problem is to find ways of promoting such responses in these areas which have been left behind in the gradual march to modernization and to see how the people who live in them can best be provided with services supporting economic development.

"The appropriate institutions and staffing for the development of traditional agriculture pose difficulties. It must be recognized that training, research and the focus of attention must be different from the approaches of traditional Ministries of Agriculture in most countries. Moreover, traditional agriculture will only be modernized when rural people have access to markets via feeder roads and when the rural people generally both men and women have access to education and health facilities. All this suggests that there might be, also in Sudan, a role for a new Ministry or a Development Authority concerned with the whole range of development activities in traditional agriculture, with appropriate cells in the provinces, districts and rural councils".⁽¹⁾

1.5 Conclusion

Starting from this point the 'appropriate cells' could be the already existing market settlements. The local market settlements in these remote areas acted as service centres from the early period of the 19th century when cash exchange for surplus crop production was first known. The commercial role of the local markets developed with time and those local markets supply the crops for export as well as livestock.

Their role in social development is based on the fact that the more the local people produce and sell for cash in these nearby markets the more the income they gain and the better are

1 Ibid., III.I, p.14/15.

their living conditions. The demonstration effect brought by those markets is another social effect. Sometimes people come from different villages and towns to sell and buy. The migration of the riverian traders into the Nuba Mountains as peddlars by the end of the 19th century and the beginning of the 20th century contributed to the introduction of trade, the penetration of some development aspects, and helped in the adoption of cash cropping. This long established importance of local markets suggests that they may have an increasing role to play in the modernization of the rural economy and in the life of the people.

To investigate this, two areas were selected to form the study areas: the Nuba Mountains in Southern Kordofan Province and part of the Gezira (Fig. 1.2). In both areas cotton is the main cash crop, but it is cultivated according to traditional methods in the former and under very modern ones in the latter. The former area is one of the remote backward areas while the latter is in the most agriculturally developed area in the country.

CHAPTER TWO

The Aims and Areas of the Study

2.1 The aims of the study

Local markets are important factors contributing to the development process in the rural areas of the Third World. This study aims to examine the role and the degree of importance of these local markets in the development process in Sudan and also to examine the view that local markets work as natural development diffusion centres when other factors for development do not exist. The third aim of the study is to examine ways of strengthening these rural markets to enhance their contribution to the development processes.

For this purpose, two areas in the Sudan were selected for the study. The Gezira area, with its perennial irrigation for cotton production together with groundnuts, wheat and newly introduced rice as cash crops, with sorghum, lobia (dolichos-lablab) and some vegetables for subsistence. The second area is the remote district of the Nuba Mountains, which depends on wet-season traditional cultivation as the main occupation for the majority of the population, who still live in a rather closed society. In this area local markets act as the main factors contributing to the opening up of the area to new ideas, new economies and new ways of life from the outside world.

2.2 The geographical conditions, limits and location of the two areas of study

The Gezira

The Gezira, derived from the Arabic word meaning "island" or "peninsula", is a flat clay plain forming a triangular area between the Blue Nile in the east, and the White Nile in the west. The Sennar-Kosti railway line is considered as its southern limit. The area slopes gently from south to north as well as from east to west.

Rainfall varies between the northern and the southern Gezira. Northern Gezira, as far south as Wad Medani, has annual rainfall averaging just below 25mm with a drought period of about eight months. This part carries little in the way of vegetation beyond a sparse growth of grass, scanty shrubby flora, or scattered acacia trees and bushes. Southern Gezira is included in the acacia short grass-scrub region with an annual rainfall of 750mm. at its most southern limit and with a drought period of four to six months. The rains occur from June to October although sometimes a month earlier or later, with the heaviest falls concentrated in the late part of July to early September. In this area, because rainfall is sufficient in quantity and duration, many grasses and herbs mature. Both grass and tree-cover increase steadily southwards with the increased rainfall, resulting in a rather open woodland type of country. The soil in the whole of the Gezira is of the dark, heavy and cracking clay type with a good capacity for water retention (Fig. 1.2).

Socio-Economic History

Up to 1910 the Gezira was not administered as a single province, but portions were included in provinces of Khartoum, Blue Nile, White Nile and Sennar. From 1910 to 1974 it was part of the Blue Nile province, but now it is considered as a single province. From the end of the fifteenth century until 1821 the Gezira was under the government of the Fung Blue Sultanate of Sennar. Before that it was believed to be part of the Christian Kingdom. Under the Turkish rule (1821-1884), the Gezira as far south as Wad Medani was part of Khartoum province. During the Mahdiya (1884-1898), the Gezira became a source of grain supply for the army and the people crowded at Omdurman, the capital. In 1886 the inhabitants of the Gezira were forced to go to Omdurman to join the army and the area was deserted.

Owing to the difficulty of feeding so many people, the Gezira tribes were allowed to return to their land in 1888 which was a year of great famine. After the reconquest of the Sudan by British forces in 1898, the district experienced more stable political conditions.

Living conditions before the Gezira Scheme

Before the introduction of canalization, farmers grew dura (sorghum) by rain on the gently sloping, flat clay plains. In the north rain was uncertain but towards the south, conditions were better with 400mm or more annually. To make the maximum use of the rain water (especially in areas of low rainfall) small earthen banks were constructed to prevent rapid run-off. Villages were located on high lands useless for cultivation. Water for drinking was drawn manually from deep wells. During the rainy season cultivators often grew their crops far from these permanent villages, so many temporary dwellings were constructed. These were occupied for short periods and supplied with a pond for storing rain water. The production of dura was always uncertain: rain might fail or fall off after a good start, pests or parasitic plants might ruin a good crop and the lack of rotation steadily exhausted the land.

Although rainfall over most of the province is just adequate to provide good grazing for livestock, the breeding of both cattle and sheep for the production of meat and hides has never been a major activity and has never accounted for a large proportion of the general trade of the province, though both markets and easy transport are available.

The people who live in the area are from different tribes because the two Niles had provided natural highways for people proceeding both by boats and land. Since fairly early times, markets sprang up at various places along both rivers, and to these centres came people from the east and west in the course of trade. The Gezira area, as mentioned before, was formerly a main centre of grain production and for the slave trade.

The province lies on the main pilgrim route for those proceeding to Mecca from West Africa or vice versa. Most of these pilgrims earn money for their journey by working in the Gezira and they form an important, though fluctuating addition to its supply of labour.

The development of the Gezira plain as an irrigated project was conceived as early as 1904. It started with land settlement in 1906 and was followed by the extension of the railway line to Sennar during 1909-10. The third step was to test the possibility of irrigation from the Blue Nile. The Sennar Dam construction began in 1913 but was held up by the First World War. The dam was finished in 1924 and irrigation started in 1925.

The Gezira Scheme

The Gezira scheme is the leading cotton producing area in the Sudan. It began with an area of 50,000 feddans⁽¹⁾ and now has expanded to about two million feddans of irrigated land. The scheme now constitutes 12% of the total cultivated land of the country, produces 75% of the country's long staple cotton, 50% of the Sudan's wheat and 15% of its groundnuts production.⁽²⁾ The whole area is irrigated from the Sennar Dam by free flow where the main canal parallels a slight ridge along the eastern edge of the area.

The scheme was first run under a triple partnership consisting of the Sudan Government, the Sudan Plantation Syndicate and the native tenants. The Government provided land, the construction, maintenance and operation of the Sennar Dam and the main canalization network. The Syndicate constructed

1 A feddan is 1.038 acres.

2 Tony Barnett, 1977, The Gezira Scheme An Illusion of Development, London, pp. 6-7.

and maintained the subsidiary canalization and was also responsible for the cleaning and levelling of land and the provision and running of the ginning factories, of buildings, machinery and stores required to enable the scheme to function. They also supervised the letting of the land, the cultivation by the tenants, the collection, marketing, storing of cotton lint and seed and the making of loans to tenants in addition to carrying out agricultural research. Tenants were responsible for growing the crops under the supervision of the Syndicate and for providing the necessary labour.

Villages were planned with widely spaced houses for health reasons. Wells for domestic water supply were dug and latrines were introduced. Each village had a potential 16 feddans allocated for woodland for fuel or building material.

The profit from the scheme was originally allocated to the various partners on the following basis: the Government received 42%, the Syndicate 10% and the tenant 44% plus 4% allocated for social services.

By 1950 a semi-independent body was formed (The Gezira Board) to take over from the Syndicate. Today, the tenants' share is 50%, the Gezira Board's 10% and the Government's 36%. The local government councils and Social Development Department of Sudan Gezira Board take 2% each for the provision of education and health services and pure water together with some other social services.

Tenancies vary between 40 feddans in old Gezira to 10 feddans in some of the extensions. In most cases a quarter is cultivated with cotton, an eighth with lubia, an eighth with dura and the rest left fallow. Groundnuts are now replacing lubia. In the Manaqil extension the standard tenancy is 15 feddans. According to the new intensification policies, less land is left fallow and more land is being made over to crops other than cotton, particularly to increase the production of groundnuts and wheat. ⁽¹⁾ Dura, lubia, wheat and groundnuts belong entirely to the tenant, whereas cotton is a shared crop.

1 Ibid.

Wad Medani town is the headquarters of the area. Barakat, immediately south of it, is the administrative centre for the Gezira scheme.

"The other towns of the Eastern Gezira are mostly the centres of the administrative districts. (El-Kamlin, El-Hasaheisa, Mesallemiya). They were rather smaller than might be expected in a prosperous farming area, the main reasons being the unified system of administration and the rigid cropping policy imposed by the Gezira Board. That means individual farmers have neither large agricultural surpluses to dispose at local markets nor occasion to borrow money from local banks, or to buy seeds, machinery and fertilizers from local merchants". (Fig. 5.2)

According to the above quotation from Barbour⁽¹⁾, the people are provided with almost everything by the Government and the Gezira Board. They are also provided with extension works, social services, a medical service and transport facilities, as well as relatively good education services.

The Nuba Mountains

The Nuba Mountains form a distinct area, occupying the central part of Southern Kordofan province. The area consists of a number of isolated hill-masses made up of a variety of rocks of the basement complex, particularly soda granite, which weather to form dome-shaped hills with rocky tops and steep sides. At the foot of each hill there is usually a pile of boulders, succeeded by a pediment of coarse reddish loam.⁽²⁾ Many of the hills are quite isolated, covering a few square miles only, but there are several considerable hill masses in the north-west and eastern area reaching over 1000 metres in height. These sometimes include

1 Barbour, K.M. 1961, The Republic of the Sudan, London, p.207.

2 Known locally as 'Gardud'.

wide internal valleys elevated well above the surrounding plain. Surrounding the hill masses, together with their internal valleys, are the gently undulating pediplains with soils varying from coarse, gravelly clays to dark grey and black cracking-clays (black cotton soils), and alluvial soils. All these together make up around 45% of the area (Fig. 5.3).

The Nuba Mountains lie within the semi-arid belt of tall grass with acacia woodland. The annual rainfall of between 450 and 850mm falls in summer beginning in May and ending in November, with early showers sometimes occurring in April. Rain cultivation is possible. The rainfall and duration of the rainy season increase from north to south. During the recent drought (1968-72) in the Sahel Zone, precipitation in the area fell 10-20 percent below the 30-year average (1840-70).⁽¹⁾

The dark heavy clay plains are mainly occupied with 'talh' acacia, *Seyal* being the main species. The vegetation is sometimes dense with large trees and short and medium grasses. The granitic outcrops are either completely bare or covered with shallow soil which support some shrubs and grasses. These are grazed by the Nuba goats.

Socio-economic History

The Nuba are a negroid community, speaking several different languages and many different dialects. The great majority are pagan, though some have come under Muslim influence. Previously, in the 1930's and 1940's there were Christian Mission stations situated among the hills. Before this, in the 19th century, the people suffered from heavy raids by

1 Democratic Republic of Sudan and the World Bank, Regional Mission in Eastern Africa, 'South Kordofan Agricul. Develop. Sept. 1976.

slave traders. This made them suspicious of strangers and kept them to the tops of their hills or in least accessible areas for reasons of protection.

The Nuba are keen hunters and reasonably good cultivators for subsistence. Their farms, which are small patches of cultivation on terraced hill sides, surround their villages.

After 1929 the Nuba were required to move down hill for political security and to encourage them to make use of the best lands and water supply. The present villages are situated on the 'gardud' soils around the hill masses or on the edges of the interior valleys, in places where a well or other water supply is within easy reach.

Before the introduction of cotton into the area in 1924-25, water was obtained from natural springs, which generally occur at or near the base of hills, from wells of varying depths, from large pools known as 'fulas' and from natural rock cisterns in the hills. A few of the seasonal streams ('khors') continue to provide water for domestic use in the dry season when water can be found by digging holes in the bed. The clay plains which offer the best land for cultivation suffer from lack of drinking water and thus cannot be cultivated.

After the 1929 military patrol, the British Government decided to establish law and order in the region and to win the natives' confidence. The people were made to move down the hills and surface water reservoirs (hafirs) were excavated, first by hand and later by earth moving machinery to make use of the rain water during the dry season. This opened up new clay plain areas for cultivation. Free medical services were provided and cotton was introduced as a cash crop. After many experiments, short staple American upland cotton proved to be the most suitable variety. Ginning factories were built and all-season roads were also opened to link the different agricultural areas and villages.

Three types of cultivation were known in the Nuba Mountains:

- 1) Immediately around the huts where people live there are the home farms, cultivated by women with maize and vegetables.
- 2) Hill side farms, in which terracing is done to retain water in the soil. Sometimes animals are kept in this plot so they are automatically manured. Here, sorghum, sesame and ladies fingers 'bamia' are cultivated.
- 3) The principal cotton areas are the ones not far from the ginning factories where reservoirs are available to provide drinking water during the cotton picking season. A rotation system is followed and land is sometimes left fallow to rest, when grasses grow during a period of five to eight years. This is then burnt and cultivation starts again.

Beside the Nuba there are the Arabs, mainly nomads, moving within the area during the dry season in search of water and grazing areas. Some of these have settled and turned to cultivation. The Nuba themselves own some goats and cattle but they do not move with them. They are usually kept within one area.

In some parts of the northern and eastern Nuba Mountains arabicised Nuba are to be found. Their presence dates back to the sixteenth century when the Arab Tegale Kingdom was established in the north-eastern part of the region. During this time Islam was adopted in the area and also the wearing of clothes, unknown to the Nuba before. Great intermarriages took place between the settled Arabs and the Nuba.

The nomads who came with their animals for water in the dry season have come to adopt cotton cultivation. They have been less fearful of external influences and better acquainted with the ways of commerce and the world at large. Thus, they were quicker than the Nuba to learn the advantages of growing cotton rather than subsistence crops, though they are not as keen cultivators as the Nuba.

Another group of people living in the area are the riverain merchants who have been interested in buying local grain and selling imported and manufactured goods and very few of the merchants in any of the market centres were Nuba. During the 1920s the development of weekly markets brought Nuba and Arabs together and gave the merchants the opportunity to sell their imported goods. With the growth of the cotton trade, the opening up of new areas and the introduction of the motor transport, the Nuba began to come to markets in lorries with a sack of their produce whenever they could afford the fare, rather than on foot. They bought sugar and tea, clothes and ornaments for women.

Since the 1920s trade here has continued to develop. It was initiated by the introduction of cotton as a cash crop by the British Government, accompanied by the opening up of the new lands for cultivation and the construction of new motorable roads which gave access to the previously closed Nuba Mountains. As a result of all this the riverain merchants found new markets for their goods and since the 1920s the settlement of many of these merchants in the area with their families and relatives has occurred.

At the beginning, the larger markets depended less on the Nuba or nomadic Arabs (Baggara), than on the officials, police and soldiers for their customers, but later on as the purchasing power of the Nuba and Arabs increased, they too became important customers. Added importance came to these centres with the establishment of services, by the government, such as dispensaries and schools and later on veterinary clinics and deep water bore holes.

These markets helped to spread aspirations. The Arabic language, Islam and the use of articles of western manufacture were adopted by the native people.

The Nuba Mountains may be regarded as a good area of potential development. Nearly twenty years ago Barbour noted, "if the means can be found to increase commercial production and trade through the 'Jebels' (1) the emergence of the Nuba from their present backwardness could come with surprising rapidity". (2) However, at present the Nuba Mountains form one of the most backward parts of the country. Recent studies found that the average per capita income is far below the provincial and the national levels. (3) National average per capita income is about £s 50, the provincial is about £s 33 and the Nuba Mountains is only £s 31. More than 75% of the farmers practice traditional farming. Despite the abundance of the cultivable land, the average farm size is less than ten feddans for an average family of ten members.

2.3 The Theoretical Aspects of the Study

An analysis of economic advancement in the Sudan shows a concentration on the riverain area which may be regarded as a 'Core Area'. This core area is represented by the Three Towns complex forming the capital city of the country at the confluence of the Blue and the White Niles. The Three Towns with their suburbs form Khartoum Province. Although it is the smallest in area, it has 7.8% of the total population of the country according to the last census in 1973. The province also contains about 65% of the country's manufacturing industry. (4) Farther south, the Gezira forms the extension of the core region. This is one of the world's largest cotton producing projects.

1 Jebel is the Arabic word for mountain.

2 Barbour, K.M., 1961, o. cit., p.179.

3 The results of the 1973 National Population Census, Cited in "The Democratic Republic of the Sudan and the German Agency for Technical Cooperation, Nuba Mountains Region Development Potential Survey", 1977, pp.20-25.

4 Amna Homoudi .,1976,"Manufacturing Industry in the Sudan, Development Structure and Distribution", M. A., Khartoum University.

Still farther south, within the same fertile plain between the two main branches of the Nile, many pump schemes and new perennial irrigation schemes for cotton, sugar, oil seeds, wheat and sorghum with the associated processing plants are either producing or under production or are planned. In short, this area, extending along the Nile corridor, i. e. between longitudes 30° and 35° east and latitudes 10° and 18° north, served by the Nile and its tributaries as the main source of water, is the core area of the Sudan.⁽¹⁾ It supports the largest urban and industrial centres of the country including the Three Towns Complex. The only important urban centre outside it is Port Sudan, the country's main port, but this will be well connected with the core area after the completion of the metalled road which is now under construction. (Figs. 1.2 and 2.1).

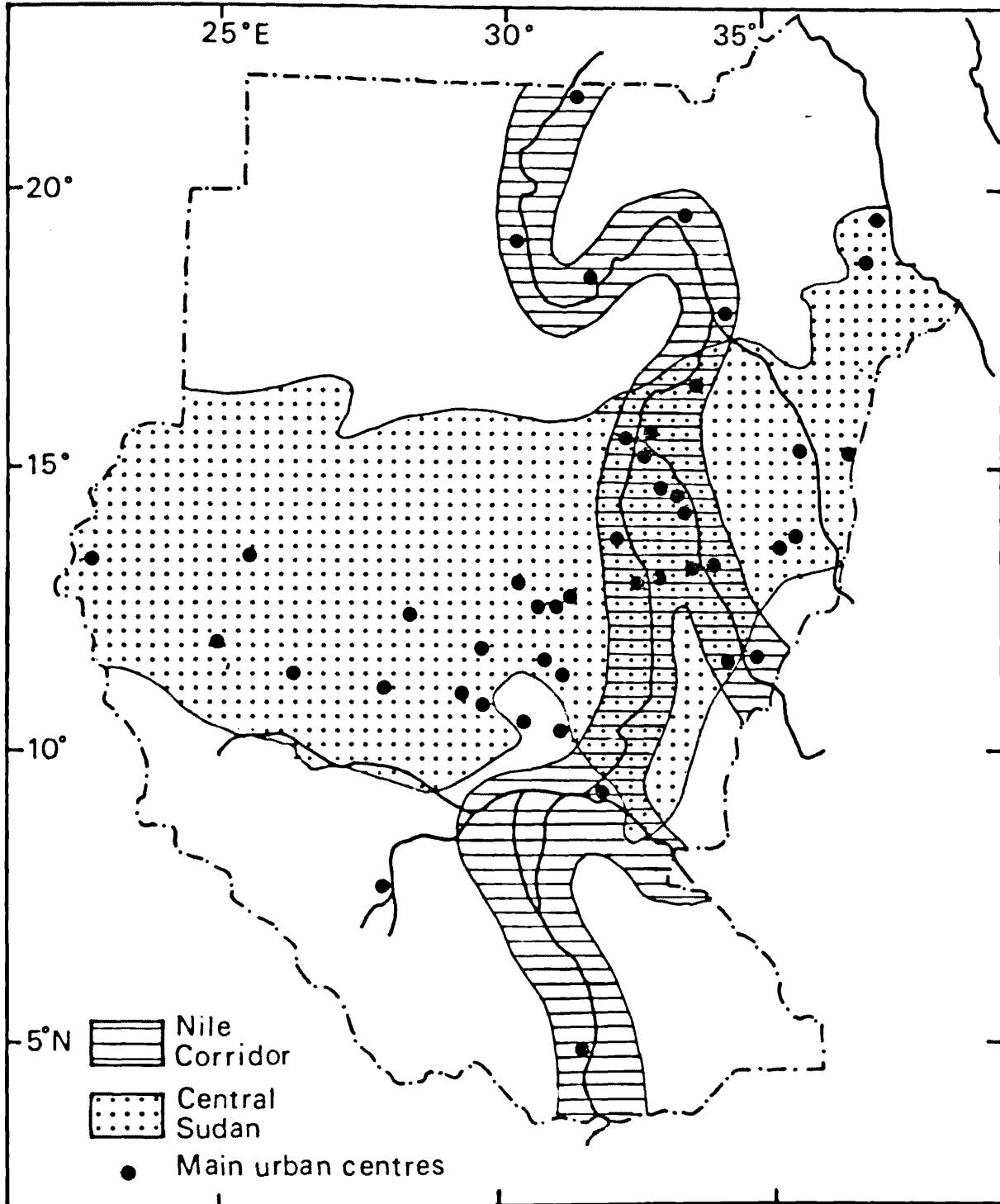
The rest of the country we may regard as representing the periphery, mainly the areas east and west of the Nile Corridor and the whole of the south. Part of this area, namely Central Sudan, has good potential for economic development. This is the area lying between latitudes 10° and 16°, which is not included in the Nile Corridor area mentioned above (Fig. 2.1). This zone extending east and west has an average rainfall of 500mm to 800mm per year, with a duration of about six to eight months annually. The Nuba Mountains area, which is one of the areas of study, lies within this belt, in Southern Kordofan province, west of the Nile.

Another area within the periphery with good potential for economic development is Southern Sudan. The area experiences an annual average rainfall ranging between 800 to 1200mm in its extreme southern part. Development here has been delayed by political instabilities in the past.

The third region forming the periphery is the northern third of the country. Development possibilities here are meagre because the area experiences very little or no

1 El-Bushra, El-Sayed, "Population Growth and Economic Development in the Sudan," Bulletin on Arab Research, and Studies, Vol. 5, June 1974, pp. 3-11.

Fig2(1) LOCATION OF THE CORE AREA AND THE NILE CORRIDOR WITHIN THE SUDAN



rainfall. Unless resources other than agricultural are discovered in these desert regions, there is little probability of economic development (Fig. 2.1).

In discussing the geography of economic development of the Sudan, naturally the degrees of accordance with the development models of Myrdal (1957), Hirschman (1958), and Friedmann (1964) may be examined.⁽¹⁾ Their views about metropolitan regions of development and periphery and backward areas within a country are persuasive and understandable. Imbalance in the development process are represented by the presence of the Nile Corridor as a comparatively developed area in relation to the rest of the country which has been offered virtually nothing.

The Three Towns and the Gezira areas gained their importance from the early days of the British rule, at the turn of this century. In fact, they offer particularly good conditions for the economic activities concentrated there. Together with the fact that "the power of attraction today of a centre has its origin mainly in the historical accident that something was once started there and not in a number of other places where it could equally well or better have been started, and that the start met with success".⁽²⁾ On the other hand, some poorer regions were recognized by Lewis to be poorer only because they have been neglected and if they are helped they will develop rapidly although, it is not always easy to recognize these backward areas which are really capable of rapid growth.⁽³⁾

However, these centres once created, "not only grow so rapidly as to create problems of an entirely new order, but they also act as suction pumps, pulling in the more dynamic

1 Myrdal, G., Economic Theory and Underdeveloped Regions, 1957, London.

2 Ibid., pp.25-26.

3 Lewis, W.R., Development Planning, 1966, London, pp.69-70.

elements from the more static regions", which form the periphery. This is now left to suffer from 'net outflows of people, capital and resources, most of which redound to the advantage of the centre where economic growth will tend to be rapid, sustained and cumulative". (1) This was explained by Myrdal and Hirschman as they recognized that expansion in one locality has "backwash" or "polarization" effects in other localities. They both hold that geographically growth is necessarily unbalanced.

According to Hirschman, development takes place through "master industries" which must be located somewhere. New plants will then gain by being located close to the "master industry". A "growth point" will therefore be established, and entrepreneurs will thus concentrate at these growing points. Often they will overestimate the economies of agglomeration and they will underestimate or simply ignore opportunities elsewhere. Thus, growth in the developing region will be paralleled by retardation elsewhere, as skilled labour is withdrawn and savings are re-invested in the growing area. Competing industries of the centre render ones in the backward region unprofitable. (2) This cumulative causation results in a vicious circle of poverty and inequality between regions and is reinforced by the movement of capital, goods, and services.

Both models advocate that these polarization effects are offset by an increase of the growing core purchases in the periphery, as away from the development centre, where favourable conditions exist, production of raw material for the growing industrial centres is stimulated. The investment

1 Friedmann, J. and Alonso, W. (ed.), Regional Development and Planning: a reader, Cambridge, 1969, p. 3.

2 Hirschman, A.O. The Strategy of Economic Development, New Haven, Conn., 1958.

of capital from the centre in the periphery increases if the two economies are complementary. It is also thought that the developing regions draw the partially employed and unemployed labour from the traditional sectors of the backward regions to work in the former's growing modern sectors. This increases the marginal productivity level of labour and raises per-capita consumption levels. All this is said to "trickle down" from the core to the other parts of the region as the core has to rely on the products of the latter to some important degree for its own expansion. The "spread effect" is expected to cover the whole country since that relationship between core and periphery still continues.

As a condition for the "spread effect" to overcome the "backwash effect", the base of the development should be strong and successful enough. Then the problem becomes a problem of different rates of progress between regions of the same country.

To examine the degree of relevance of Hirschman's and Myrdal's models in the case of development in the Sudan, one does find that expansions in the core regions are causing backwash or polarization effects in the rest of the country. Labour and raw material together with capital are flowing from the latter to the former.

As population migration is always selective, at least with respect of the migration age, the movement favours the rapidly growing communities and disfavours the others. This is exactly the case in Sudan. Young people especially from the western parts of the country including the Nuba Mountains move in great numbers from their home villages to work as paid labourers in the Three Towns and the Gezira area and even more migration is expected to the new and planned modern cultivation and manufacturing schemes along the Nile Corridor. Children, old people and women are left behind to cultivate small plots for their subsistence and to look after the decreasing number of herds.

As a result of their poverty local people have limited capacity for saving and capital formation and this leads to decreasing investment. Even the little capital would tend to move out of the area as people in the Sudan do not want to put large investment in the remote rural areas because returns are weak and insecure.

If left to themselves, these regions could not afford to keep up a good road system, or educational system, nor good medical care and the people would suffer ill health and become less productive. As a result the backward regions remain mainly traditional agricultural regions, while core regions show fast development in the modern sector,

The Nuba Mountains area is among the backward regions which produce groundnuts, short staple cotton by the traditional wet-season cultivation methods. They export them mainly to the core region where they are either processed or used to support the growing population of the core. The Gezira area is self-sufficient in some of these materials. It is also rich enough to afford to buy the rest of the raw materials that it needs, such as groundnuts, cotton seeds and sesame from the Nuba Mountains, Eastern Kordofan and some of the production of the White Nile pump schemes for its oilseed production plants.

However, the spread or trickling down effects suggested by Myrdal and Hirschman are yet scarcely noticeable in the Sudan, probably because the development base is not strong enough to qualify them to overcome the backwash effects. The result is the Core-periphery pattern put forward by Friedmann and described above.

In the Sudan today regions other than the centre are losing much of their human and material resources to the core and fail to attract the basic factors of development, such as industries, mechanized modern agriculture and the capital for further investment. In support of this, Friedmann noticed that automatic progress by 'spread effects' advanced by Myrdal and known as 'trickle down effects' by Hirschman, which are supposed to follow the above-examined stage, was not supported by historical evidence. In reality, the centre becomes more dynamic and innovative and puts off diminishing returns and keeps the periphery in secondary, more static, roles.

As a remedy for this situation both Hirschman and Friedmann believe in government intervention but not Myrdal who believes that government intervention alone is inadequate, being a weak factor for economic development. In his model, Friedmann suggested the need for regional policies within national policies because they create conditions favourable for an increased participation of local people in the planning process.

In the Sudan the government intervened to initiate economic development first when cotton, as a commercial crop, was introduced in both the Gezira and the Nuba Mountains by the British Government, together with the necessary cotton ginneries. That was in and after 1925.

The first national government issued an Industrial Promotion Concession Act in 1957 followed by three others in 1967, 1972 and 1975 so as to encourage the establishment of manufacturing industry in areas out of the Three Towns. The government now owns the largest development schemes and owns and runs the biggest agricultural processing factories in different parts of the country. The fruit and vegetable canning factories at Karima in the north, and Wau in the south, the milk processing factory at Babanusa in the west and the onion dehydration factory at Kassala in the east. These factories contributed little to the development process, being too big and therefore working below capacity.

Government intervention through big modern capital intensive, agricultural or industrial projects, strengthens dualism. This is the economic structure that results from the presence of modern production enclaves, whether agricultural or industrial, surrounded by traditional economic activities. This is the case in the Sudan economy at present. On a national scale in the core region, development of natural resources is progressing using modern western technology and capital from the oil-rich Arab countries. The rest of the country has its traditional means of production following the same methods, probably used for centuries. The scattered factories

mentioned above form small modern enclaves on a very small local scale. The resultant economic structure under this situation shows on the one hand the traditional sector with customary farming, using little capital, simple technology and practiced on a small scale, mainly for subsistence. On the other hand there is a modern sector, consisting of modern farming and manufacturing with more capital investment, and more advanced technology, aimed at large scale production, mainly for cash and exchange.

This is considered by Hirschman and Myrdal, and many others who are concerned with the geography and economics of development, as an important transitional stage through which all developing countries should pass on their way to an integrated economic development. The drawbacks feared from such imbalanced growth are the resultant regional inequalities and the bottlenecks in supply which could retard the whole development process.

It seems that the government planners in the Sudan believe in Myrdal's and Hirschman's models and they are regarding the coming five years as critical to the development of the "take-off", after which automatic smooth development is expected, when the leading modern agro-industrial projects along the Nile come into production.

Further aspects of planned development arise from the pattern of settlements and their function. Friedmann pointed out that economic activities are ordered in space through (a) a settlement arranged in partial hierarchy, according to the functions performed by each centre, and (b) corresponding areas of influence, or urban fields that surround each of the urban centres in the system. This supports the view advanced in this thesis of the role of the local markets as adjuncts within the development process of low-order central places. They could be used as local service centres which might help in reducing the rural urban flows of population and material from the periphery to the core.

For this purpose Hoyle, in terms of practical agricultural development within a broad context of rural development strategy, draws attention to several studies from Africa that have shown the importance of establishing a large number of growth centres as focal points of innovation, rather than a few large and relatively isolated improvement schemes. (1)

In Kenya a plan for rural development designates rural growth centres as foci of trade, social services and communications which served surrounding farm areas and which can significantly alter the pattern of migration and provide more even development of the nation as a whole. (2)

By a study of northern India Johnson (1965) noticed the scarcity of adequate urban centres. He argued that for regional policy to offset polarization "a complete spatial system of urban centres arranged in a hierarchy from agro-urban towns through several intermediate types to the metropolis should be brought into existence". Johnson also supported Losch's market principle theory and the idea that market centres are the only basic building blocks of a much more complex hierarchy of central places capable of knitting the spatial economic structure together in a truly functional sense. Accordingly, if adequately measured and examined, promising 'growth points' can be located to serve as proximate goals of development planning. (3)

1 Hoyle, B. S. "Spatial Analysis and the Less-Developed Countries" in Spatial Aspects of Development, Hoyle (ed.), 1974, p.6.

2 Taylor, D. R. F. "Spatial Aspects of Kenya's Rural Development Strategy", in Hoyle, B. S. (ed.), Spatial Aspects of Development, 1974, p.168.

3 Johnson, E. A. J. Market Towns and Spatial Development in India (New Delhi: National Council of Applied Economic Research, 1965) and Johnson, E. A. J. The organization of space in developing countries, Harvard, 1974, p.228-235.

In 1967-72 following fieldwork in Venezuela, Friedmann treats development as taking place through constant innovative forces arising from or injected into an existing 'traditional' system. (1) Some other studies view the use of the settlement hierarchies for development purposes from top down rather than from the bottom up as it is accepted that innovations travel through social communication fields from higher order to lower order settlements. In fact, rural growth centres are always thought of as central places of some sort or another, although Central Place Theory which was first formulated by Christaller in 1933 and developed by Losch later (1956) is only partially applicable in nature. The theory was put to explain the size number and distribution of towns in the belief that "there is some ordering principle governing the distribution". (2)

In brief, the theory assumes an isotropic surface under conditions of a uniform population distribution and purchasing power, uniform terrain and resource localization and equal transport facilities in all directions. In this ideal situation settlements are regularly spaced, centrally located within hexagonal-shaped trade areas. In their vertical organization, central places are arranged in hierarchies in which higher order places supply all the goods of lower order plus a number of other higher order goods and services, which set them above central places of lower order. Thus, higher order places have larger population and bigger trade areas and a greater volume of business. Higher order places are also more widely spaced. Lower order places, to be provided with higher order goods and services are contained or 'nested' within the trade areas of higher order places according to a definite rule.

The theory is widely criticized mainly for the regularity and uniformity it postulates. However, that there are hierarchies of settlements according to their central functions and importance are obvious. Theoretically growth centres are related to central

1 Brookfield, H. Interdependent Development, 1975, London, p.119.
 2 Hagget, P. and Chorley, R.J. (ed.). Models, in Geography, London, 1967. Methuen.

place theory and at the same time closely allied to the idea of the growth pole which has been defined as "an urban growth centre".⁽¹⁾ Nevertheless, a growth centre is also defined as a central place structure, which will maximise the interdependency of the peripheries of each polarized region with its respective centre, by gathering flows from the periphery and directing them up through the hierarchy, and bringing the benefits of urban life to the smaller centres.

It seems that the local market villages and small towns in the two areas of study perform functions which could be related to the lower order central places as well as the growth and service centres which were described above. For growth points, poles, and centres have now been recognized in both descriptive studies and planning analysis. In the Sudan and in many other parts of the third-world local rural markets play a considerable role as central places. Even periodic markets were identified as periodic central places.⁽²⁾

1 Brookfield, op cit., 1975, p.107.

2 Stine, J.H. "Temporal Aspects of Tertiary Production Elements in Korea" in Pitts, F.R., (ed.) Urban Systems and Economic Development, 1962, pp, 68-78.

CHAPTER THREE

The Origin and Development of Markets in the Gezira and Nuba Mountains Areas

3.1 The Origin of Trade in Sudan

The only source of information for the conditions in the country before the Turkish Period (1821-1881) is the fragmentary written material left by the few European and Arab travellers. The towns known in the 18th century included Sennar, the capital of the Fung Kingdom (1504-1821), Fahl, M^essellemya, Wad Medani, Arbagi, Abu Haraz, Rufaa and Tambul in the Gezira, and Shendi, Damer and Berber northwards along the Nile. Suakin was the main port on the Red Sea. All of these except Suakin, were located along the Nile and commanded the most important caravan routes. A town called Cobbe, to the north west of the present site of El-Fasher, was the capital of the Western Kingdom. There were also other commercial towns along the caravan route between Cobbe and Suakin. Of these El-Obeid was important. Together with the caravan routes that go northwards to Egypt and eastwards to Suakin, there were others to Ethiopia and Khartoumers and Jallaba traders⁽¹⁾ were well known in the Northern Interlacustrine Region of East Africa, about the 1860s.⁽²⁾ (Fig. 3.1).

Caravan routes had also penetrated deeply beyond the region's boundaries southwards to the negro Kingdom of Dar Kulla, and westward into Bornu and Hausaland.⁽³⁾ At the beginning of the 19th century, caravan routes to the west followed the rain-belt, south of the Sahara, and led on from oasis to oasis, to Lake Chard and to Timbuktu.⁽⁴⁾

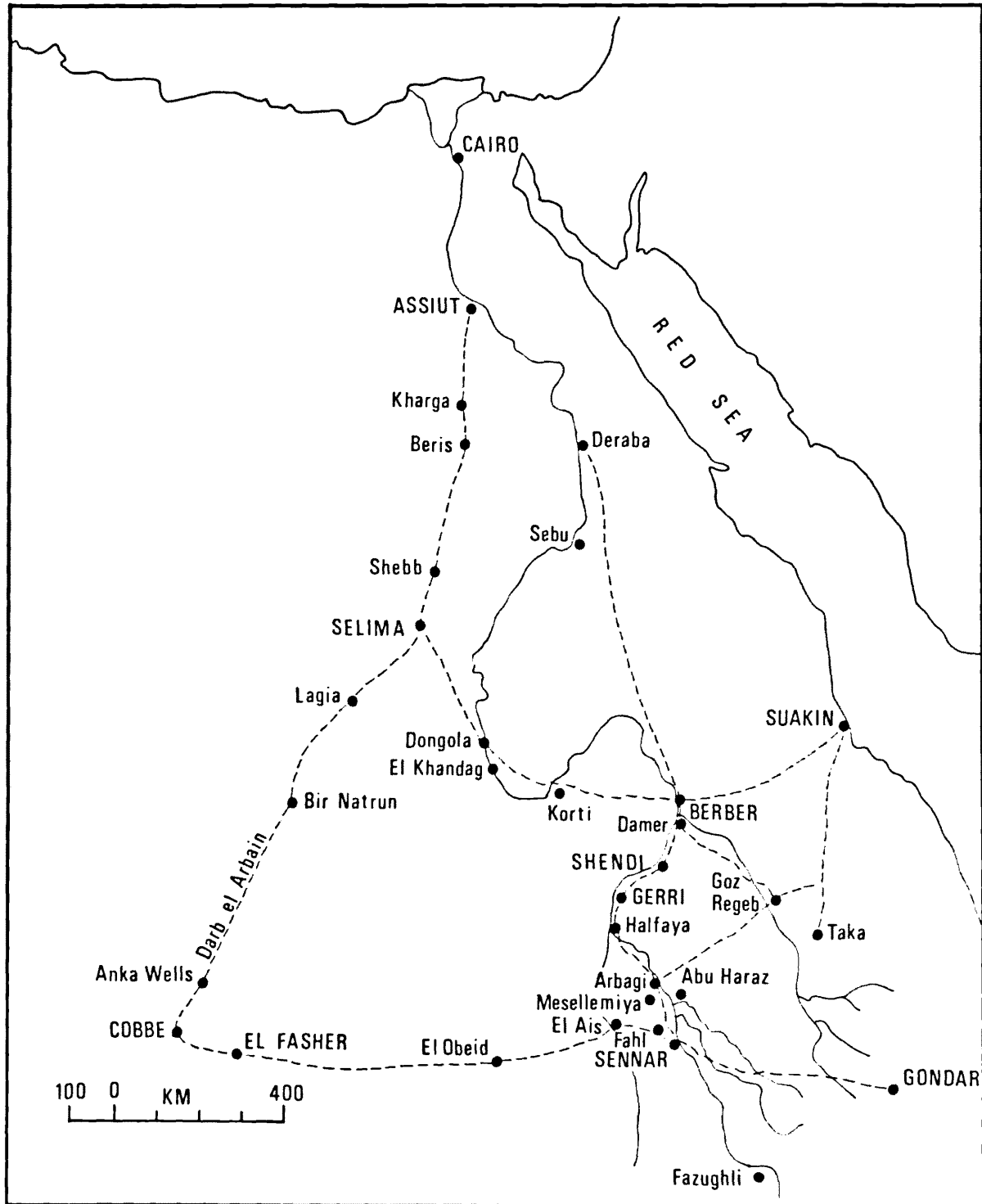
1 Jallaba are the north Sudanese traders.

2 Abir, M. "Southern Ethiopia", in Pre-Colonial Trade: Essays on Trade in Central and Eastern Africa before 1900, ed. R. Gray and D. Birmingham, 1970, p.136 and J. Tosh, "The Northern Interlacustrine Region", *ibid.*, pp.103-118.

3 El-Bushra, El-sayed, "Sudan Towns in the Eighteenth and Early Nineteenth Centuries", Sudan Notes and Records" vol. 52, 1971, pp.63-70.

4 Moorehead, A., The Blue Nile, London, 1962, pp. 158-160.

FIG.3(1) 18th AND 19th CENTURY MARKET CENTRES AND CARAVAN ROUTES IN THE SUDAN



Along the Nile, although Berber, Damer and other towns were known, Shendi with about 6,000 inhabitants, was the largest town in central Sudan at that time. Burckhardt, when he visited the area in 1814 described it as being unattractive, but the main reason for the concentration of so many people lay in Shendi market which was said to be "a fabulous market for so small a place".⁽¹⁾ The market was held every Friday and Saturday. The market place was an open space in the centre of the town where three rows of huts were set up to supply the people with the goods they needed. The goods exchanged consisted of spices and sandalwood from India, antimony and medicines, German swords and razors, sandals and leather goods from Kordofan, writing paper and beads from Genoa and Venice, cloth, pottery and basketware of every kind, soap from Egypt, cloth, salt and Ethiopian gold, Shendi wooden dishes and Dongola horses and camels. Traders carried their goods to their homes after the market days ended as the stalls they occupied could not be locked. The market days continued from early morning until late at night. The main currency in use was the Spanish dollar. Trade was considered to be the very life of the society. Pilgrims from Central Africa came to Shendi on their way to Mecca. Slave traders from the Red Sea visited Shendi with Indian goods which were exchanged for slaves, gold and horses. About five thousand slaves were said to pass through Shendi market every year, drawn from every tribe along the Nile as well as Ethiopians. The slaves were shipped either to Suakin or northwards to Egypt.⁽²⁾

Trade was the second most important function after administration for important towns like Sennar. As far back as 1699, Sennar had an extensive trade with India through Suakin. Expensive silk, silver jewellery and antimony for eye-shadow were worn by women. In the market prices were cheap and the main goods were camels, horses, ivory, gold, tamarind, leatherware and slaves.

1 Burckhardt, J. L., Travels in Nubia, London, 1822.

2 Moorehead, *ibid.*, 1962, p. 158-59.

In 1701 Theodore Kump, the Bavarian Missionary, found that the city was regularly visited by caravans from Nubia, Cairo, Fezzan, Bornue and Ethiopia, while the caravan route to Suakin connected the town with sea routes to Arabia and India. The daily market at Sennar served the town's population. Markets on certain days of the week served the villages around. The town had two market places, one of them occupying a wide space in the city centre. (1)

Suakin, which was once considered as the richest town in the east, had eight thousand people; two-thirds of them lived on the mainland where the principal market was. The main occupation of the population of the town was commerce and ship loading and unloading. Revenues from trade handling are shown in the table below.

Table 3.1

Revenues collected from Suakin 1881-1883

<u>Year</u>	<u>Revenue in £E</u>	<u>Expenditure in £E</u>	<u>Net revenue in £E</u>
1881	28,327	17,210	11,117
1882	30,281	18,326	11,955
1883	32,674	20,815	11,858
Average	30,427	18,784	11,643

Source: The British Museum manuscripts, no. 44629 ff 71, 73, 102, 140, 146. Official Papers related to General Gordon, 1884.

In Darfur numerous towns were mentioned by travellers as being market centres, visited on market days by villagers in the neighbourhood. There were no daily markets as in Sennar and Shendi. In Cobbe, the capital city at the time, the market was held every Monday and Friday. A large volume of trade was carried out in this part of the country. Browne, who visited Darfur between 1793 and 1796, estimated the volume of the merchandise carried by the

1 Moorehead, 1962, *ibid* and El-Bushra 1970, *op cit.*, p. 63-70.

caravan by which he returned to Egypt at the high figure of £E115,000.⁽¹⁾ About 1850-1900 places like Kano and Timbuktu, famous for being trade centres all over West Africa, had trade estimated to be worth £100,000 and £80,000 respectively.⁽²⁾ The above figures put the Sudanese trade at the time on an equal level with West Africa.

In Kordofan the most important commercial centre before the beginning of this century was El-Obeid. No other centre in the province was mentioned as a big market centre. There may have been small local barter centres for very localized dealings further south in the province. Some individual traders and merchants were known to visit the area with beads, spices, hardware, cotton goods, brass and iron-wire and coffee for slaves. Some of these jallaba became established in early urban centres such as El-Obied and increased in number and activity after the Turkish conquest of Kordofan (1821). The first items of trade were gum, hides, ivory, honey, sesame, ostrich feathers and slaves bartered for the above imports.⁽³⁾ During the Mahdiya period (1884-1898), the whole population of the country was in a continuous state of war. Major population movements to join the army at Omdurman had disturbed the whole system of their sedentary life as well as their trading and commercial activity.

Trade in Sudan during the period 1600-1908 was almost exclusively confined to the towns accessible to the caravan routes. The level of importance of towns as commercial centres is closely associated with their location and nodality in relation to caravan routes. From Fig. 3.1, it is apparent that there were no caravan routes penetrating into the country south of El-Obeid and Sennar. The Southerners and the Nuba were ignorant of commerce and market place trade up to the first half of the 19th century.⁽⁴⁾ Urbanisation was also associated with trade as all the important settlements were commercial centres of one kind or another.⁽⁵⁾ All caravan routes led to the neighbouring countries

1 El-Bushra, op cit, 1970, pp.63-70 and Moorehead, op cit, 1962, p.

2 Hopkins, A. G. An Economic History of West Africa, Longman, London, 1973, p. 51.

3 Pallme, I., Travels in Kordofan, 1844, London, p.160,279.

4 Ibid., p.160 and Pritchard, E. The Nuer, 1960, p. 88 and Gray, R. A History of the Southern Sudan 1839-1889, Oxford University Press, p.1-27.

5 El-Bushra, op cit., 1971, p. 65.

eastwards and northwards. There were five main caravan routes, one connected Cobbe to Sennar through El-Obeid further northwards to Suakin on the Red Sea. The second, the longest and most western, connected Cobbe to Assiut in Egypt through the Selima oasis in the western desert. This was known as Darb el Arbain, which means the road of the forty days. A third route joined Suakin with Darb el Arbain at Selima. The fourth and fifth caravan routes connected Suakin with Nubia through Berber and Sennar to Shendi through the Gezira area along the Nile and then to Egypt. From Berber to Egypt caravans either followed the Nile or crossed the Nubian Desert to avoid the long loop of the Nile (See Fig. 3.1).

3.2 Development of trade after 1898

After the Mahdiya period was ended by the Anglo-Egyptian re-conquest, peace was maintained and population numbers steadily increased, partly by natural increase and partly by immigration from neighbouring countries of people who had fled during the Mahdiya period. To assist the development, some villages were established and organized by the government on military lines along the Nile and in Kassala province. The people were given good lands both beside the Nile and away from it, for agriculture and pasture. Until 1904 wheel traffic was almost non-existent. Camels and donkeys were the main public carriers. Along the Nile native boats were the main elements of shipping, later some steamers were introduced by the Government.⁽¹⁾ The Provincial Governors made great efforts to improve caravan routes and roads by increasing the number of wells for the provision of water. Railway lines were built to connect Khartoum with Halfa in the north. The rail link from the Nile valley at Atbara to the newly built Port Sudan was completed in 1905. The line passing through the rich Gezira was extended from Sennar to El-Obeid in 1911. This was extended from Nyala to Darfur in 1960. Another line was continued from Sennar to connect the

1 Peel, S. The Binding of the Nile and the New Sudan, London, 1904, pp. 227-246.

capital with the Gadaref Kassala area in the east and to tap the products of these lands. The only way to make people live a prosperous life in the Sudan at that time was to make them settle down and engage in agricultural production. The success of this policy led to an increase in population and the initiation of more trade.

Although trade and markets were well known in the northern parts of the country well before the Mahdiya, it was not until the Condominium that internal marketing supply networks as they are known today became established. In parts of central Sudan, such as the Qoz lands, settled agriculture remained a subsidiary activity to pastoralism up to the end of the last century. "The prevailing pattern of settled agriculture has developed during the last half-century and it is evolving. It has arisen as a result of firm government, improving communications and establishment of market towns, and a great programme of water reservoir development".⁽¹⁾

Evidence for the beginning of the activity of local markets in the more accessible parts of the Nuba Mountains is indicated in an article written by T. W. Salgar in 1922. He found that the Nuba had already learnt to produce for the market and "meanwhile the Arabs, led by the hand by the government, are learning to trade and to carry the Nuba produce on their bulls to markets. The two races are necessary to one another, the producer and the carrier".⁽²⁾

In the 1930's markets were found to be part of the social institutions of the nomadic Baggara tribes of Western Sudan. A visit to the market became as important a recreation as dance. In some places the market was held weekly, in others twice weekly. Best clothes and jewellery were worn and long distances were travelled to reach the suq.⁽³⁾ It was not uncommon for parties to sleep on the way to or from the market, and a walk of two or three hours each day, carrying milk or butter, was not considered a hardship. The market

1 Mountjoy, A. B. and Embleton, C. Africa: A Geographical Study, London, 1966, p. 318.

2 Saglar, J. W., "Notes on the History, Religion and Customs of the Nuba", Sudan Notes and Records, vol. 5, 1922, p. 137-143.

3 Suq is the local word for market, sometimes written 'suk'.

transactions were carried out by barter. The women sat in irregular rows, and every now and then one rose with a small part of her produce in a gourd bowl and toured the market looking for exchange. Butter, red pepper, honey, onions, grain and flour were the usual articles of barter. Sometimes wild fruits and dried meat, liquid butter and hides were brought by women on bulls' backs. Small merchants set up grass shelters in which they sold sugar, tea and clothing.

For many people the market's chief attraction was as a meeting place where women could gossip, see their friends and relations and be admired; new fashions could be seen there. After the market day was over, no one felt that they had wasted a day there, just because they had failed to buy or sell. (1)

In the Nuba Mountains after the introduction of peaceful conditions and cotton growing, people were required officially to move down hill, both for security reasons and to encourage them to make use of the best lands and water supplies. Water was provided either by deep bores dug by the government or by artificial pools Hafirs especially in the clay plains for the use of stored rain water over the dry season.

Motor transport was introduced and dry season motorable roads were made to open more new lands and to export the agricultural products to big commercial centres, also to link the villages and newly developed urban centres (2) Markets and permanent shops were planned and built in some market villages and small towns. The previous petty riverain traders settled and started bigger businesses. The larger settlements started to have daily markets beside the shops which were first introduced by the government to serve its officials, police and soldiers. Then, different kinds of amenities were built according to the administrative importance of each centre. Schools, health services and veterinary dispensaries were among the new amenities. Rural weekly markets were held even if there were no permanent market buildings, to serve the scattered surrounding villages.

1 Lempen, G. D., "The Baggara Tribes of Darfur", Sudan Notes and Records, 1933.

2 Arch, G. F. "Transport in the Sudan", in Tothill, J. D. (ed.) Agriculture in the Sudan 1948, Oxford University Press, London. p. 181.

The establishment of markets in market-less areas such as the Nuba Mountains, was deliberately planned as a means of encouraging economic development, and at the same time security and order were maintained. Some of the reports and letters of the District Governors and other government officials clearly explained the reasons behind the establishment of markets during the first third of this century. Some fragments of a report about Dilling District, in the northern Nuba Mountains, to the Governor of Kordofan province, written in 1905/6, said, "Since your visit to J. Kadaro in January there have been no outbreaks of the old quarrels there. The Jebel⁽¹⁾ is at present in a fairly satisfactory condition and I hope to improve it further by establishment of a suk there, for which there is great demand".

The market at Dilling was established at the same time according to the same report. More recent and better preserved reports show more evidence on this matter. A report about Kadugli Merkez written in January 1930 and found in the Assistant District Commissioner's office reports that "At the end of 1926 there were 28 red brick, mud roofed shops in Kadugli. The owners of these all wanted to build more shops and were told that they will be allotted sites to the area of their shops on which to build stores provided that they roofed their shops in zinc⁽²⁾, and repaired them properly. This a number of them did. At the end of 1928, trade had so increased that a further three blocks each of 14 shops were approved and all except 6 of these were allotted. . . . Many market improvements are needed, but have had to wait until official houses were built. The following are in my mind, an extension to the Butcher's shop, the removal of the grain market to the area north of the bakery, the position of the proper sheds for the womens' market, a walled in compound for the animal market or else a tamr el hindi⁽³⁾ or some such similar hedge. . . . There are a great number of peddlers

1 J. stands for Jebel, a local word for mountain or hill.

2 These are corrugated metal sheets.

3 Tamr el hindi is a local name for a plant which could be grown for hedges.

outside Kadugli, and I suggest that instead of allowing these men to roam about at will, or rather as at present in certain areas, that small markets should be established, and no peddlers allowed at all".

Written by H. G. Carless.

Following the recommendations of the above report, smaller markets were established in some places and the movements of northern traders were carefully observed and organized by the government. In the areas which later came under government control it was not before the mid- and late-thirties that markets were established. Some reports also revealed that road opening, cotton introduction and local markets establishment were all carried out at the same time. In File No. F. G. A. I-F161A, Department/Eastern Jebels Tribal Note Book, Subject, Koalib, Heiban, Otol, Allera Nuba and Tira and Otoro⁽¹⁾, in 1935, a report about Tira and Otoro says "a market should be started in the Kauda valley (not alongside a Nuba village) and the Arab merchants should then be removed from Kodillo's back-door!".⁽²⁾

Otoro, June 1936, "next season it is hoped to make a side road to Mek Arno's house and to start an all-Nuba market near Kalkadda".

Tira, June 1936 (F. D. K.). "A road will be made from Kuttee to Umm Dordo. A garden had been started at Kalkadda rest house where there is always plenty of water.....A Nuba suk will be started near Kalkadda and no merchant should be allowed in Tira".

Tira, May 1937. "The Nuba market near Kalkadda school did not get going but has been made".

The above monthly reports had been written to the Governor of Kordofan province by G. Hawkesworth, the Assistant District Commissioner of the Eastern Jebels at that time. Further southwards, in the Masakin Nuba tribal territory, people were taught to produce for market. Standard measures were also introduced. The following reports show how the progress was patiently made to continue.

1 Nuba Tribes.

2 Kodillo was a (Mek) local chief at that time.

Department: Talodi. Subject: Masakin Trek File.

Monday, 23rd of January 1939. (Reikha market). "About 13 ardab of sesame were brought for sale but very little grain. On 30th there were only 3 ardabs of sesame and some grain. Ruboa and Malwa⁽¹⁾ is now in force. Hope more will come in future. Masakin Tewal did not come to Reikha market.

February 6th 1939. A.K. in the absence of his clerk has mistaken the day and had gone to Reikha on Sunday, but the merchants had refused to buy. The suk was quite successful and they say they are selling a lot of sugar and coffee. Arabs are not really coming to Reikha. For the distant villages it is perhaps a bit difficult and A.K. thoroughly checked a couple who were buying in villages. The merchants would like to change Angolo to Abu Gamai for this year only and think if they had a slight re-arrangement they would manage a fifth market in Masakin Tewal. They also want to move Buram to Dimodongo".

October 10th 1939. "Gayalled⁽²⁾ at the foot of sheikh Nyam Nyam's village in a ful⁽³⁾ cultivation which had recently been cleared... crops good but some could not find seed, some have grown more cotton and want to sell it at Talodi. Told them to fix up with a Talodi lorry driver. They also want a suk at the rest house at the foot of Tenumi, Salim's village".

Reikha, February 26th 1940. "Merchants say they don't like Masakin Tewal market. Told them I had no objection I would give it to Moro, but they didn't like that either. Nothing is coming in at Reikha, but there don't seem Arabs about.

Tried to do some fine propaganda without success".

1 These are measures for grains and other produce.

2 Gayalled, is the local word meaning spent the afternoon.

3 Ful is the local word for groundnuts.

17th December 1940. The Reikha market lapsed. Mek said it was due to merchants failing to appear. The merchants at Buram when asked said it was not worth while, as no one appeared to work to trade".

Unfortunately the experiment was not successful in a few places but remarkably successful in others. It was noticed that large administrative centres sustained flourishing markets developed as central towns within their administrative boundaries. Dilling, the Divisional Head of the Northern Nuba Mountains District, has about 20,000 people in 1973. It had about 5,600 inhabitants according to 1955/6 census. It is now the main educational centre of the Southern Kordofan province. Its Teacher Training Institute, one of the best of its kind, was established in 1948. The district consists of four Rural People's Councils. Although it is sometimes bypassed to El Obeid for good supply, it is the main source for the smaller tributary markets and provides high order services for its complementary region.

In Kadugli, as discussed earlier, the market was well established; in 1928 the authorities had to approve expansion while minor improvements "had to wait until official houses were built". (1)

1 See page 55 of this chapter.

Table 3.2

The Development of Selected Markets in the Southern and Northern Nuba Mountains

Market name	District and Council	Date of establishment	Day and nature of activity	Present situation
Angolo	Southern district	1936/37	Friday	Friday + few shops
Tarogi	Buram Council	"	Thursday	Thursday + few shops
Dimodongo	"	"	Saturday	Failed to continue
Reikha	"	"	Monday	Daily shops
Masakin Tawal	"	"	Tuesday	Failed to continue
Buram	"	"	Daily shops	Daily shops
Kauda	Southern district	1935	Tuesday	Tuesday + daily
Kalkadda	Heiban Council	1937	Once a wk.	Stopped and re-established 1971
Eiri	"	1971	-	Tuesday + Fri. Wednesday
Karandal	"	1971	-	Sat. + Tues.
Tombera	"	1971	-	Monday
El Azrag	"	1971	-	Friday + shops
Abri	Northern district Delami Council	1936/37	Friday	Friday + daily shops
Deri	Delami Council	1936/37	Monday	Monday + daily shops
Delami	"	1936/37	Monday + Thursday and shops	Daily shops + Thursday only

Sources:

Archival material sited in pages 55-57 collected from the Assistant District Commissioner's offices of Southern and Northern Jebels Districts of Southern Kordofan Province, Fieldwork 1977/78 and interviews with elderly northern traders and local chiefs 'Meks'.

Kadugli was the District Head of the Southern Jebels until it was promoted into the Provincial Headquarters of Southern Kordofan province formed in 1974. It also heads the four Rural People's Councils forming the Southern District of the province. The town's population increased from about 5,000 in 1955/6 to about 19,000 in 1973. Being the chief administrative town, Kadugli is growing into a serious rival to Dilling. Both towns depend on El Obeid for their supplies of imported goods, and their local produce eventually reaches El Obeid to be shipped to Khartoum or Port Sudan for export. The towns were connected by a metalled road in 1977. (See Figs. 1.3 and 5.2).

The smaller markets established during the period 1925-1940 either developed as permanent daily markets and later became Rural People's Council Centres, or continued as active periodic markets with few permanent shops or failed to continue. Table 3.2 shows some of the details. In Newly formed councils such as Heiban in the Southern District, a few new markets were established in 1971.

3.3 Theories of Market Origin and the Sudan Case

The history of the markets in the two areas of study shows two important facts. First, market place trade in the Gezira dates from at least the 16th century. There is strong evidence that the presence of markets in the period 1500-1900 was greatly activated by long distance trade and continuously used caravan routes, which passed through the area from Sennar to Arabia through Suakin on the Red Sea coast or northwards to Egypt. The area was also passed through by the caravans proceeding north and east from ^kMordofan and Darfur. The area itself had a considerable amount of grain production and a good marketing system. The presence of the Blue and White Niles bounding the area helped trade as they functioned as highways from the early days of the country's history. Markets were known at various places along the rivers. Among the important markets of this period were Fahl, Messellemiya, Tabat, Wad Medani and Arbagi, west of the Blue Nile, and Rufaa, Hilaliya, Tambul and Abu Haraz, east of the Blue Nile.

Fig. 3.1. The Gezira scheme planned a new system of settlement whereby the tenant would not need to travel more than five kilometres from village to tenancy. This has resulted in an even distribution of settlements and small hamlets were consolidated into larger ones to facilitate the provision of social services. Larger existing villages were chosen as community centres but facilities such as deep bore holes or filter wells for domestic water provision were extended to other villages also. Community centres were designed to provide services such as medical and veterinary dispensaries, elementary schools and police posts, as well as halls for village meetings and

sites for rural markets. Not all community centres possess all these amenities.⁽¹⁾ As the level of income rises among the population, these community centres inevitably assume greater importance than their civic amenities alone would allow, since the services they provided rapidly promoted the growth of markets as well.

The new settlement hierarchy necessitated by the Gezira scheme helped some of the old markets to grow while others declined because they could not benefit from the newly introduced modern economy. Modern means of transport reduced distance friction and aided the re-arrangement of centres. It became cheaper and easier for people to by-pass small market centres to larger ones. As a result, larger market centres gained more importance while the smaller ones lost. This is particularly apparent in the Phase One area of the Gezira Scheme. Towns such as El-Hosh, Tabat, El-Kamlin and Wad Madani grew, while others like Fahl and Mesellemiya stayed stagnant or declined. (Figs. 3.1 and 5.1)

East of the Blue Nile where most of the population is still nomadic. Many of the old markets still operate several with twice weekly meetings. Some also provide daily services for their growing urban population. Of these are Rufaa, Tambul, Hilaliya and Abu Haraz. (Fig. 7.1).

Secondly, in the Nuba Mountains up to the beginning of the 19th century, the area was not open to external trade. Except for the individual jallaba traders, no caravan routes or markets were known in the area. Available information and maps mentioned El Obeid in Kordofan and Cobbe and El Fasher in Darfur, and a few centres along the route connecting them.^(Fig. 3.1) Even if there were some trading activity in the northern parts of the Nuba Mountains it was not vigorous enough to allow markets to grow. In the interior, households were self sufficient; they cultivated sorghum, sesame and raised pigs,

1 Randal, J.R. "Patterns of Settlement in the Manaqil Extension to the Sudan Gezira Scheme", Sudan Notes and Records, vol. 47, 1966, p. 88.

goats and cattle. Bartering between homesteads was widely known (especially in tobacco and salt) but not market place trade. Production for market was unknown so was the value of money. (1) Markets in the sense of permanent places where buying and selling takes place are more recent, introduced less than eighty years ago by the northern traders and assisted and closely supervised by the government. The government also introduced cotton as a cash crop and levied poll-tax. After currency came into wider use, bartering was officially abandoned and standard measures were enforced.

The history of trade and markets in the two areas suggests support for one of the theories concerned with the origin of markets rather than the other. It supports the idea that markets evolve as a result of the presence of a surplus of goods in one place and a deficiency in others. Trade happens if the two places are connected with long distance routes, represented by caravans in the old days and modern lorry transport in our present time. (2) Central and northern Sudan had long ago supplied countries beyond its boundary, as well as one another, with their specialities. The Nuba Mountains had produce to offer but did not have the knowledge or means to do so. It is suggested that 20 persons per sq. kilometre is the critical population density below which markets hardly exist. (3) In Northern Sudan, where markets such as Shendi have flourished since the 17th century or even before, was sparsely populated. The total population of the country in 1955/6 was slightly above 10 million. No reliable population figures were obtainable before that. On the other hand reports written by District Commissioners estimated the population of the Southern Jebels District to be over 280,000, leading

2 Hodder, B. W. "Some Comments on the Origins of Traditional Markets in Africa South of the Sahara", Transactions of The Institute of British Geographers, No. 36, June 1965, p. 97.

1 Pallme, 1844, op cit, p.160.

3. Hodder, B. W. Economic Development in the Tropics, London, 1973, p.203.

to a population density of 27 persons per a km² in 1958, and that of the northern Jebels as 241,350, resulting in a density of about 16 persons to the sq.km. in 1959.⁽¹⁾ If the estimates are correct, population numbers for the 1920s and the 30s are not expected to be much less. Therefore, low population density could well be excluded from the decisive factors accounting for the lack of markets in the Nuba Mountains. The Nuba Mountains case could also deny the second theory, which emphasises the importance of local demand, rather than long distance trade, for the initiation of trade and markets. Pure subsistence was argued to be non-existent even within the simplest societies, because exchange of goods must take place even if it is not planned for. Differences in products could happen even within communities living in the same proximity.⁽²⁾ The Nuba did have various products which they exchanged between themselves by carrying the produce to the neighbour's homesteads. This could suggest a reason for the lack of markets, as it was discovered by Polly Hill in northern Katsina Emirate, where Hausa women conducted house trade. This was found to lessen the importance of the market place.⁽³⁾ The difficult mountainous terrain of the Nuba territory could be one of the explanations for their isolation from important trade activities before the colonial period. Another explanation could be the lack of a firm administrative body, although this was found to cause no hinderance for the development of trade in some central African societies, while in other cases kingdoms owed their origins to trade.⁽⁴⁾ The absence of a standardized currency could also be considered as one of the reasons for the discouragement of market development among the Nuba.

1 Nadeem, M.A. District Commissioner, Kadugli, letter no. JDK/SCR/12. B. Subject: Proposed Bank Branch at Kadugli, dated 13 Aug. 1958 and, Arabi, A.A. District Commissioner, Dilling, Report No. JDD/94.B-1 dated 26th March 1959.

2 Hopkins, op cit, 1973, p. 54.

3 Hill, Polly, "Two Types of West African Trade", The Development of Indigenous Trade and Markets in West Africa, Meillassoux, Claude, (ed.), 1971, pp. 303-318.

4 Gray and Birmingham, "Some Economic and Political Consequencies of Trade in Central and Eastern Africa in the Pre-Colonial Period," in Gray and Birmingham (eds.), 1970, op cit., pp.15-18.

3.4 Conclusion

Of the different justifications explained above, no one proves to be conclusive and applicable to all developing countries. Evidence from the two areas of study seems to owe the development of trade to many factors, the strongest of which is the presence of long distance trade connections. This factor, though highly supported by different cases from different African countries, is still controversial. (1) However, considerations of variations in environments and cultures even within the boundaries of the same country are necessary for the explanation of individual cases.

1 Hodder, op cit., 1965, p.102.

CHAPTER FOUR

The Present Marketing System and the Role of the Government in the Advancement of Internal Trade

4.1 Introduction

In order to examine and evaluate the role of the Government in the present marketing system in the two areas of study, it is useful to review the attempts made by different past governments in the development of resources in these areas and the direct and indirect stimulus of government intervention on the marketing system. Then, to examine the effects of government intervention on the organization and administration of the markets.

An attempt is also made to investigate whether the intervention has been for the improvement and promotion of the system, and for the benefit of the producer, or for the monopoly of the local trade by the private sector.

4.2 Indirect Government Contribution to the Activation of Commerce

The first attempts made by the government to initiate development and growth in the different sectors of the economy, as well as in internal and external trade, are as far back as the beginning of this century. After the Mahdiya period (1884-1898) the first concern of the Condominium Government (1898-1956) was to improve security over all the country and to help the people to settle and lead prosperous lives. More security was provided along the caravan trading routes; water resources were also improved and new wells were dug along those routes wherever it was necessary. As part of the general policy for the development of agricultural resources wells were dug manually before the War, and mechanically after it, to assist the expansion of the traditional harig⁽¹⁾ cultivation, both in the Gezira and the Nuba Mountains fertile clay plains. The Government has looked after the drilling of deep tube wells and hafirs since 1927/28. A Soil Conservation Board was formed in 1941 to carry out this work. The major expansion of permanent water provision for both human and livestock use came between 1967-72 especially in the

¹ A farming method by which the previous year's grass and the new seedlings are burnt soon after the first rains and before sowing new seeds.

Western Sudan during the Anti-Thirst Campaign. The programme was conducted by the then formed Rural Water and Social Development Corporation.⁽¹⁾ The area west of the Nile between Latit 10° and 16° north was badly hit by the Sahel Drought. Hafirs are artificial surface reservoirs, excavated and connected by a depression or a canal to a seasonal stream to collect the rain water for use in the dry season. They are mainly constructed in the clay plain where there is high impermeability and where subsoil water is scarce. In these places the basement complex is sometimes hundreds of meters deep. The deep tube bores are only constructed when they can tap the Nubian or Umm Rwaba aquifers or occasionally the weathered zone of the Basement Complex. These wells are often 200 metres deep with diesel pumps for power, and supply water for human and livestock use at minimum charges.

The priority given by the government for water provision in the clay plains was because here were the soils most suitable for both irrigation and wet season cultivation, but which were rarely suitable for permanent human settlement, owing to the lack of permanent water supplies. This fact rendered the presence of water supply as a principal location factor in the distribution of settlements.⁽²⁾

During the early years of the Condominium period, the Government was also concerned with the introduction of a valuable cash crop as well as the encouragement of the people to expand the already known food crops. Cotton as a cash crop was first considered about 1904. The cultivation in the Gezira scheme started in 1925 by the cultivation of 50,000 feddans which rose to 300,000 feddans in the following year. The Abdel Magid scheme to the north-west was added in 1941, and the Manaqil Extension between 1958 and 1964. Guneid and Tambul schemes east of the Blue Nile were irrigated in 1955 and 1967/68 respectively. Each extension, to the south-west of the original First Phase of the Gezira Scheme, was started in 1965/66. The whole are of the Gezira Scheme and extensions is now about two

1 Shawki, M. K., Rural Water and Development Corporation in the Sudan, Book No. 3, Khartoum, 1968 in Arabic and English.

2 El-Bushra, El-Sayed "Population Growth and Economic Development in the Sudan", Bulletin of Arab Research and Studies, vol. 5, June 1974, pp. 3-11.

million feddans.⁽¹⁾ (Fig. 5.1). The introduction of motor and rail transport and steamers along the Nile at the same time as the introduction of commercial cotton production led to the opening of more roads and new rain cultivation areas in places away from the scheme.

The distribution of the tenancies greatly affected the previous settlement pattern. The new villages are distributed at regular intervals and not far from the distributary canals which sometimes supplied domestic water. Because of the rearrangement, some of the existing smaller villages gained more importance and some previously large villages lost importance, and many completely new villages were set up. Of the new ones which gained in importance some were provided with more services, allowing them to develop as central places. These became administrative centres with educational and health services together with agricultural extension offices, irrigation offices, and the Gezira Board division centres. The administrative hierarchies categorised the settlements into Provincial Heads, Divisional Heads, People's Local Council Centres and Village Councils for smaller villages of fourth and fifth importance.⁽²⁾ Some of the settlements were also designed as commercial centres with permanently built markets including essential provision shops, butcheries, flour mills, bakeries and demarcations for livestock markets wherever necessary (Chapter Three). Settlements like Wad en Nau, Hag Abdullah and El-Hosh market towns were built between 1921 and 1923 to serve the working personnel during the Gezira scheme construction, while certain other towns grew up from small villages. These are mainly along the western bank of the Blue Nile and made use of the railway passing from Sennar to Khartoum. The 1968 metalled road running parallel with the Blue Nile and the railway also caused some towns like El-Kamlin to gain in importance (Fig. 1.3).

1 The Democratic Republic of the Sudan, 1976/77, Economic Survey, p. 37.

2 The People's Rural Councils replaced the former Rural Councils after the Local Government Act of 1971 came into action in 1973. Village councils were then created, see Howell, J. (ed.), Local Government and Politics in the Sudan, 1974, Khartoum University Press.

Trade in the Gezira was known since the Black Sultanate period (1504-1821) when Sennar was the capital. Well established market centres on the long distance caravan routes were already famous during the Turkish period (1821-1881) and some coins were also in use at that time. Markets like Fahl, El-Kamlin and Mesellemiya in the Gezira proper and Rufaa east of the Blue Nile, survived through the Mahdiya period. These market centres commanded the trade of the western provinces of Darfur and Kordofan as well as of the eastern part of the country, supplying places as far away as Egypt with the products of the wetter parts of the country in the interior. These markets evolved without government support. As has been discussed previously, their presence supports the thesis put forward by previous authors on the subject that long distance trade is an active catalyst in the life history of old market centres.⁽¹⁾ The case of the 19th century Gezira markets seems to indicate that market development was also necessitated by growing specialization in grain production on one side and the livestock products offered by the nomadic population on the other side. Inter-regional trade also evolved as a result of the needs of the population in the drier parts of the country including the Gezira, for the products of the wetter southern parts. These were wooden saddles, beds and chairs, leather bags and water containers, sandals, honey and beeswax, ivory and ebony and ostrich feathers as luxury goods coming from Kordofan and Darfur and the upper reaches of the Blue Nile. Long distance trade to supply the needs of Egypt, Arabia and Ethiopia had stimulated the collection of these goods as well as the slave trade for the whole period up to the end of the last century.

Markets like Fahl were fairly large periodic markets meeting twice weekly. Tabat and Mesellemiya markets were originally religious centres with religious leaders and accordingly they attracted people from fairly wide areas. At that time Monday and Thursday or Friday were the most popular market days. Some of these markets, like Rufaa, retained

1 Hodder, B. W. op cit., 1965, p. 97.

their days together with the permanent daily activity they developed after the Condominium when they gained their administrative importance.

The importance of Fahl market at that time was described by an eighty-year-old man when interviewed during the fieldwork period (November 1977) as it was described to him by his father: "If you want to talk to the person next to you in the market place, during the market day, you had to talk in that person's ear to make him hear you from the noise and the haggling of the thousands in the market place". The goods exchanged were coffee beans, tobacco, chilli, honey, gold from Sennar and Er Roseires area, wild fruits, salt, ropes made of wool, coarse cotton cloth locally known as 'damour', sesame oil produced by hand and animal driven presses. Wholesale dealers were also present. Livestock from Kordofan, Southern Blue Nile, White Nile and the Ingessina Hills were among the merchandise. Bartering was popular and there was a trade in slaves.⁽¹⁾ The market was described as being as big as Sennar and Mesellemiya. Trade was mainly with Egypt and Gallabat in the Ethiopian border but not with the Red Sea coast. One well-known trader was said to own a two-storey house built with sun-baked bricks. Four times the number of villages were served by the market at this period than in 1977 at the time of the fieldwork. The southern limit of the local area was Sennar, the eastern limit was Mesellemiya and the western limits were villages near Ed-Dueim along the White Nile. The market was attacked in 1898 when the British army followed the Khalifa's followers from Omdurman southwards. By the time they reached Fahl, the Khalifa's men were hungry and mad with terror. They attacked the market and stole and destroyed merchandise, killing nearly twenty people including well-known traders. Marketing was affected for a short time but continued soon after security and order were re-established by the new rule. The presence of the market helped the village to attract some basic services in a comparatively earlier period than other places of equal importance. The boys' elementary school was established in 1911, the dispensary in 1934.

1 This information was collected by interviewing a group of elderly people in Fahl village on 14 November 1977.

Fahl's slow development based on traditional elements of the economy was at a critical stage of its life cycle when the Gezira scheme was constructed. The impact of the scheme was unfavourable to the further development of the former famous market. El-Hosh at a distance of about 17km was made into a Rural Council Centre in 1901. Its market was built in 1923. The new development of El-Hosh reduced Fahl as well as the former important market Mesellemiya which is now not more than a central village of fourth order. Even the presence of the railway station did not help it. It has lost its importance to El-Hosh and Wad Medani, the Provincial Headquarters. Fahl was not included in the irrigation scheme until 1965/66 but Mesellemiya was included in Phase One of the Gezira Scheme. The improvement of transport and the increase in population mobility added to the diminution in importance of the above-mentioned places. With ease of movement people could shop more cheaply, they had a wider choice of goods and could make multiple purpose single visits to El-Hosh and Wad Medani, for the hospital, the council offices, to the judicial court and to shop etc., and return home on the same day. There is evidence for the rearrangement in the internal marketing systems and centres in other developing countries, resulting from the introduction of modern transport, particularly motor transport, which makes people's movements cheaper and easier.⁽¹⁾

Another previously important commercial centre (but not any more) is Gedeidim, which has a completely different history. The market was flourishing until the late 1950s. It is situated in the area between the Gezira proper and the Manaqil extension. The market was built in 1924, but destroyed by the floods in 1929 and rebuilt in the same year. It had about 120 permanent shops. In November 1977 only seven shops were open and many of the buildings were disused and most of the traders had become bankrupt or had migrated elsewhere. The market is supposed to be a permanent market with Sunday and Wednesday as big days for the villagers around. It was visited on a Wednesday but

1 Bromley, R. J., "Periodic and Daily Markets in Upland Equador", Ph. D. Thesis, 1976, Cambridge, pp.12-13.

the market place was empty except for three open shops, one of which was a tailor's. The place revealed an obvious state of decline. The reasons for the decline arose from the construction, without a bridge, of the main canal for the irrigation of the most western extension of the Gezira Scheme in 1960. The engineers and hydrologists did not consider the importance of the market for the villagers beyond the canal to the east nor the convenience of the villagers by allowing the market to survive. No bridge was built for pedestrians and people with their donkeys could not reach the market. Former customers stopped patronizing the market because they could not afford the time and effort to travel twice the distance they used to travel. The final blow came when Manaqil town developed as the centre for the new extension as well as becoming an administrative and commercial centre for the newly irrigated area. Gedeidim lost the rest of its customers in the west to Manaqil (Fig.5.1). Before the 1960s the government would not allow any licence for the establishment of shops in places less than six kilometres apart and twenty kilometres for places with flour mills. Now there are no restrictions. This created great competition between places.

Some of the markets away from the direct impact of the re-arrangement necessitated by the Gezira Scheme gained importance by being administrative, commercial or important educational centres. Rufaa is one of these. This town now commands the commercial activity of the Butana and eastern Gezira, with a group of other periodic markets and some daily with twice weekly big markets. El-Kamlin and Hasiheisa, both to the west bank of the Blue Nile, gained great importance as they both lie on the metalled road from Gedaref, near the eastern border, passing through Wad Medani to Khartoum (Figs. 1.3 and 7.1).

The Nuba Mountains area in contrast to the Gezira area did not have any markets before the Condominium period. The area under study, the Northern and Southern Jebels, remained closed except for some slave raiders up to the end of the nineteenth century. Households produced grain, sesame, and a few vegetables with a few cattle, goats and pigs and some chicken for subsistence. The Nuba were also hunters and gatherers. Farming was done with the help of sharpened

ebony tools. Bartering was the only way for people to obtain other needs; no market places were known. Exchange was effected by carrying the produce from one homestead to another as mentioned before. Sesame, goats and tobacco were paid for bride-wealth and goats and cattle for blood compensation.

Some areas like Heiban were not exposed to the Condominium intervention until after 1916. Two of the tribes of the area had a violent quarrel and the weak tribe called the Government from Kadugli and Talodi. Before this they only paid tributes of rifles to the Government. When the Government controlled the area, they had to pay the tribute in dura and poll tax was levied after the introduction of the currency. In the years 1914-1916 riverain jallaba merchants visited the area on their donkeys, but only under close supervision by the Government. They were not allowed to move freely or to settle in the area. They traded in beads, salt, fluid butter and coarse cotton cloth which was not known in the area before. Small markets were initiated by the Government for Nuba people only. Some of these markets were supervised by the Missions in Kauda and Abri; not all of these were successful enough to continue (Chapter Three). Outside traders were allowed to settle in the area after 1919 when it came under governmental control and the presence of the outsiders led to an enhancement of trade and commerce. The 1920s and 1930s witnessed the introduction of cotton as a cash crop, hoes and motor transport brought in by the Government and the riverain traders, together with the wider use of money. Christian Mission schools and dispensaries were also established at that time as well as the leprosy colony. The colony with its special market and garden was first established at Kauda in 1932-34 and then moved to Nykma northwards in 1947-48. (1)

Settlement and cultivation in the Nuba Mountains in general have undergone two major stages during this century. The first stage was when the relatively remote upland terrace cultivation for

1 The information was collected on 8th Jan. 1978 at Heiban town in an interview with Mr Kambigi Komi, the Chief 'mek' of Heiban. He was a member of the first and second parliaments in 1954 and 1958.

subsistence was abandoned between 1901 and the early 1920s. This was when the Nuba people were required to resettle on the more accessible hillsides. Meanwhile they used the natural spring water but later wells were constructed. This resettlement was enforced by the Government for security reasons.

The second stage was initiated by the provision of water resources, motor transport, money currency, hoes, the opening of new roads and new areas for production, the establishment of markets and administrative centres, the introduction of weights and measures and the complete abandonment of bartering in major markets. Most important was the introduction of short staple American cotton as a cash crop.

The sites of the settlements, especially the larger ones that evolved as a result of these developments, were generally away from the unhealthy flat clay plains. They are usually on higher grounds by the side of the mountains or on gardud lands, near an accessible good source of water, mostly beside a large seasonal stream. Other factors that affected the layout of the settlements were the market places and the services. If the water source, market place and services were built in the centre of the village then it tended to maintain its circular or nuclear layout. When new services were built outside the centre, then they tended to pull the new extensions in their direction.⁽¹⁾

4.3 Direct Government intervention in the present marketing system

In the Sudan as a whole as well as in the two areas of study the movement of agricultural products from the production areas, mostly in the remote rural parts of the country to the big consumer centres, and to Port Sudan for export, is conducted almost entirely by a network of private merchants. Oil seeds and gum Arabic for

1 This was also noticed in Northern Kordofan by Al-Samani, M.O., Lower Order Planning Units for Rural Development in the Sudan, African Studies Seminar Paper No. 11, Sudan Research Unit, Faculty of Arts, Feb. 1971, p. 46.

export as well as cotton are the main concern of the export companies which are responsible for the government. Government authorities are also involved in some regulatory functions such as fixing minimum prices for the main export crops and issuing licences for both domestic and export trade, and they always intervene with subsidies for export crops if prices become too low. When export and import restrictions are needed, the Government enforces heavy export and import taxes.

Most of the large market buildings are planned and their use is supervised by the Government. Hygiene and security amenities in the market places are also the concern of the Government. In the Nuba Mountains there are few registered crop markets at which all marketed crops except cotton are purchased by traders as well as consumers. At the peak season the local government makes road checks for tax collection.

From the bulking markets crops are distributed to local markets or to regional markets, or are shipped to the big consumer centres or transported to the largest line-of-rail markets outside the Nuba Mountains area to be carried to Port Sudan for export. In the case of oil seeds, crops are sold to the Sudan Oil Seeds Company which is responsible to the Government for the export of oil seeds. For export crops and also for sorghum the Government established minimum prices at the main line-of-rail markets. The stabilized price is estimated according to the expected international prices. This is a policy operated by the Government to provide the producer with the maximum benefit possible from his produce. Producers are guaranteed the sale of their crops by the fact that the Government is obliged to buy all the crops unsold to private merchants. This well-established network with the producer at one end and the international market at the other end, makes the prices of all products except cotton largely determined by market rather than non-market forces, whether they are national or international. This is evidenced by the fact that sometimes the prices offered at some major urban centres for local crops are higher than those paid on the markets along the railway line. This is because of the constantly high demand in the urban centres on one hand and the competition between the private merchants on the other.

Cotton marketing is the sole responsibility of the Government. In the Gezira area the crop is a compulsory one for every tenant. The Government provides improved seeds, water for irrigation, the machinery used in the production and the advice needed. In return it gets 40% of the income obtained from the selling of the cotton. The Gezira Board takes 10% for the supervision and extension works it provides. The tenant's share is the remaining 50%. Out of his 50% he has to pay his labour costs, especially for cotton picking and mechanical ploughing. He shares in the cost of the transport of cotton to the ginnery, sacks for packing and the cost of spraying the crop with insecticides. A great number of the farmers make little or no profit, some of them are in debt to the Scheme year after year. Other crops the tenants grow are groundnuts, wheat, sorghum and rice in some parts of the Scheme. They are free to market their groundnuts and sorghum but wheat is sold by the Government to supply the big wheat flour mills. The farmers are often short of cash and obliged to sell their basic products of sorghum even if they do not have enough for the whole year. They sometimes sell some of the wheat secretly to the private merchants. In other cases they may have to hand the product to the traders and village shopkeepers for payment of an overdue loan.

Cotton cultivation in the Nuba Mountains is optional. The Government provides free seeds which are supplied only through the ginneries. Only improved and treated seeds are allowed to be cultivated. They are usually provided only in the quantities needed so that none remain for sowing another year; this is for pest control reasons. The area cultivated is determined individually within the locally known tribal limits and where the soils are suitable for cotton production. The accessibility of the cotton plots to the nearest water supply and the villages is one of the factors determining their distribution. Seed improvement and the application of pesticides at times of disease outbreaks is the responsibility of the Government through its appointed inspectors. All the cotton produced is sold by the Government at seasonally held markets or at the ginneries, where cotton is bulked, graded and weighed by the Nuba Mountains Agricultural Corporation. The price for each grade is fixed by the

Corporation. After ginning the lint is transported to Port Sudan where it is handed over to the Cotton Public Corporation which is responsible for the export of cotton. Some of the cotton seed is used by oil pressing plants in Eastern Kordofan and El-Obeid.

Cotton production in the area is becoming less important. Hand cultivation of the heavy clay soils, using the harig system to dispose of the early weeds by burning, is very difficult and severely limits the area which one man can manage. Cotton production is becoming an unprofitable business as it is very sensitive to pests, diseases and droughts. Most important of all is the fact that prices paid for cotton are distinctly low. The prices are fixed arbitrarily no matter how difficult or expensive the production is and no matter whether international prices rise. Other crops where prices respond directly to the market forces are gaining more ground. The justification for this is the fact that their prices are far higher than cotton prices. The table below shows the prices of products in 1977/78. Cotton marketing also involves a great deal of delay as farmers have to wait for the markets to be officially opened.

Table 4.1

Prices of Crops in 1977/78

<u>Produce in Kontars</u>	<u>Price in Sudanese pounds</u>
Cotton	3.250 (for the best grade)
Dura (sorghum)	9.000
Sesame	5 to 6.000
Groundnuts	5.000

Source: Unpublished material from The Nuba Mountains Agricultural Production Corporation, Kadulgi.

As a result of the above reasons, from the early 1960s onwards cotton output in the Nuba Mountains has fluctuated widely but generally showing a reduction. The table below shows the details.

Table 4.2

The Nuba Mountains Cotton Production from 1962/63 to 1973/74 - in Kontars

Season	Amount in Kontars (1 kontar = 45kg. approx.)
1962/63	930,000
1963/64	720,000
1964/65	700,000
1965/66	570,000
1966/67	750,000
1967/68	330,000
1968/69	520,000
1969/70	640,000
1970/71	350,000
1971/72	480,000
1972/73	500,000
1973/74	220,000

Source: Unpublished material from the N. M. A. P. C. Kadugli

The total ginning capacity of the eight ginneries in the area is 34,000 tons of lint but the actual output recently (1974-76) averaged only about 4,000 tons. As a result of the decline of cotton production the Umm Berembitta Ginnery in the Eastern Jebels District has been closed for a number of years.

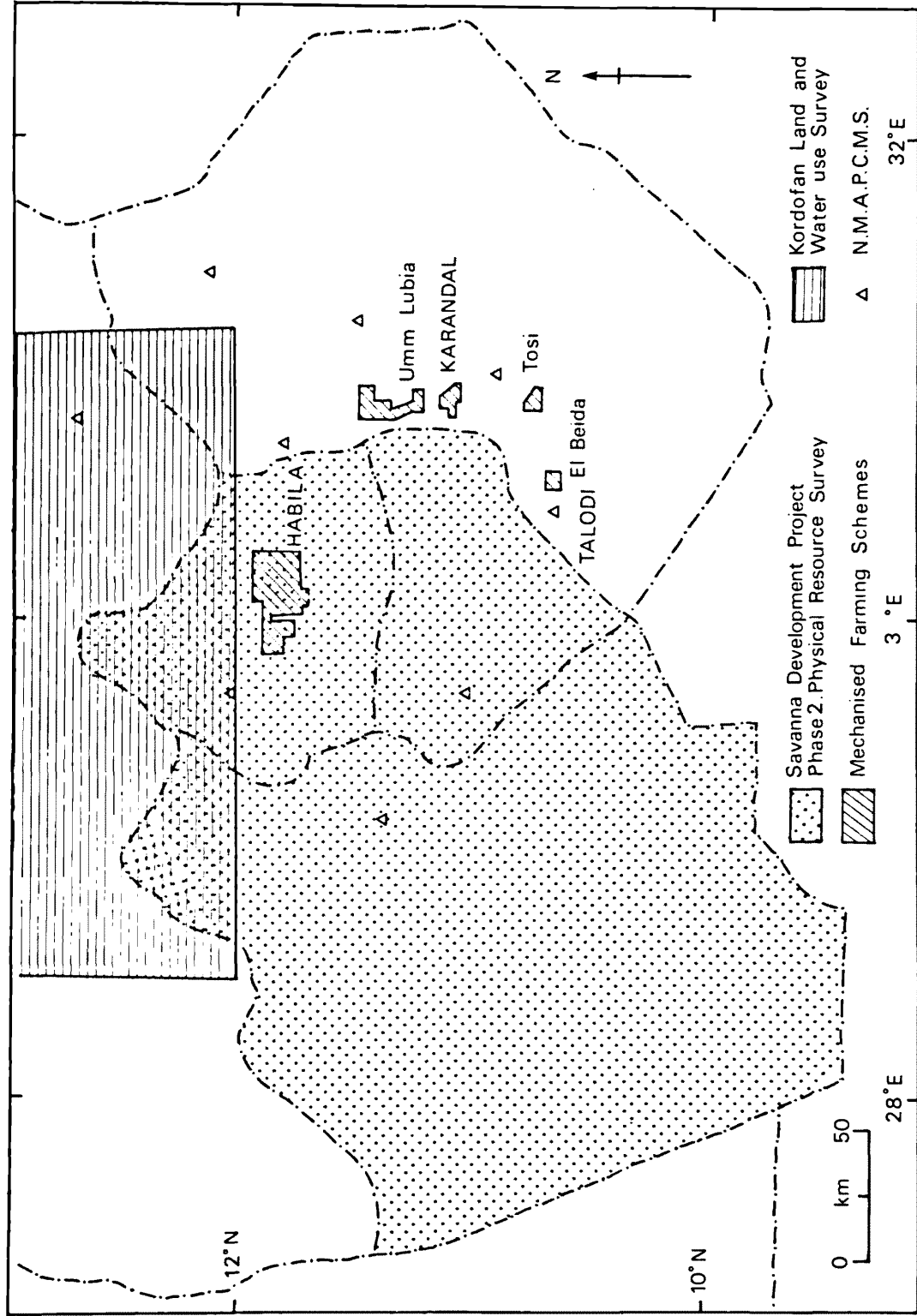
Modernization of the traditional production in the area has been attempted by Government intervention through both the Nuba Mountains Agricultural Corporation and the Mechanized Farming Corporation. The former is a subsidiary branch of the Public Corporation for Agricultural Production. It owes its origin to the Nuba Mountains Cotton Corporation founded in 1924. This Corporation was reconstituted in 1969 to promote a modernization programme which involved providing mechanization to groups of farmers. Initially it was thought that this programme would stimulate cotton production. Although the Government's emphasis is still on cotton, the planting of sorghum has increased in importance.

The second body concerned with the modernization of the production in the Nuba Mountains is the Mechanized Farming Corporation, which is an autonomous body within the Ministry of Agriculture. The demarcation of the areas suitable for mechanized farming on the clay plains began in 1962/63. The first holdings were developed in 1969/70. The total area planned for the purpose in Southern Kordofan Province is over 900,000 feddans. The largest site is at Habila 50km east of Dilling in the Northern Jebels District. In this site a 30,000 feddans state farm is managed directly by the M.F.C. (Fig. 4.1). An area of 150,000 feddans is privately owned but financed under an International Development Aid Project. The oldest plots, 111,000 feddans, are privately owned by tenants who are merchants from El-Obeid or Khartoum and who employ managers to operate their holdings.

The marketing of the sorghum cultivated in these schemes, especially Habila, is mainly handled by large-scale merchants who are in many cases also tenants. They usually supply the Armed Forces, deficient provinces and major towns. It is the increase of production and the improvement of the farmers' standard of living that is behind the adoption of modernizing traditional farming and for the mechanization of rain cultivation.

Nevertheless, all the above approaches are associated with problems of one kind or another and some of these problems lie beyond the scope of the present study. However, it might well be suggested that Government intervention for improving production could be approached through the improvement of the marketing system. This could be done by the protection of the small producers from the wealthier merchants' exploitation by providing loans, cheap efficient transport and fair prices and by supplying them with useful, up-to-date marketing information. The present system is characterized by the fact that services such as credit supply, insurance and transport and marketing information necessary for every marketing system to function well, are provided not by the Government but by the private merchants.

FIG.4(1)MECHANISED SCHEMES & CURRENT DEVELOPMENT STUDIES
IN THE NUBA MOUNTAINS



The activities of the Agricultural Bank of Sudan, a governmental body, in the Nuba Mountains area is limited to the provision of seasonal and medium-term credits to large-scale mechanized farming tenants. It also trades in the importing of tractors and other farm machinery. The only scope for the provision of credit to the small farmers is if they form a cooperative, the assets of which could be used as a collateral for a loan. Informal private credit is the most important source for most people. This often operates within the extended family, especially when trade is involved. Many small traders start business financed by friends and relatives. This system is in fact applicable to both areas of study. Shortages in cash and food in the pre-harvest period create the sheil system in which loans are made by merchants to farmers. It involves the pre-harvest mortgaging of a crop for a cash loan or consumer goods, which is repaid with an agreed quantity of the crop after harvest. This is one way by which merchants are able to obtain crops at low prices. The farmer is always on the losing side because consumable goods provided under such an agreement are always overpriced while the crops accepted by the merchants are always under-priced. The sheil system is extremely difficult to replace because it provides small quantities of credit, mostly required for consumption purposes, to a large number of individuals. Despite the fact that it has been estimated (in Southern Darfur) to affect only around 10% of all cash crops markets⁽¹⁾, it cannot be accepted as an ideal system.

The effectiveness of the present marketing system for all local produce except cotton and wheat can only be appreciated in the present prevailing conditions, because it can operate with scarce working capital, and also spreads the risks of collecting produce from widely scattered small producers and the losses that arise from such situations. It also handles more quantities spread over greater areas.

1 The Democratic Republic of the Sudan and The World Bank Regional Mission in East Africa, "South Kordofan Agricultural Development", 1976.

4.4 Conclusion

The system described above together with the rigid cropping system imposed by the Gezira Board and the government-controlled cotton marketing policy for all the Gezira tenants as well as the cotton cultivators in the Nuba Mountains, contributes to the poverty of the farmer. The farmers have neither a large agricultural surplus to dispose of freely at the local markets nor the incentive to produce more. They are always crippled by their endless debts to the Gezira Board or the Nuba Mountains Agricultural Production Corporation or to the local merchants. They are always short of money and lacking the minimum amount for saving.

The problem with the rain-land mechanized schemes is that they benefited the already wealthy and better-off traders from outside the immediate area. Even the labour employed is mostly from outside the area, from the Dinka and Nuer. The fewer indigenous workers employed are seasonal labourers. The crops produced do not affect the local marketing system at all as the crop is not marketed in the area but taken directly to El Obeid and other larger urban centres. It is sometimes smuggled outside the province boundary without the taxes being paid. It is also difficult to detect any evidence to show that mechanized schemes of this nature activated to any great extent the emergence of urban settlements. Habila market centre, serving the largest of these areas, was established in the mid-1950s but the houses and most of the shops and restaurants are still in semi-permanent buildings, mainly thatch. Although domestic water shortage is one of the reasons, one expects that revenues from crop taxation could pay for the expensive deep-bore water yards construction. What is feared most is the resultant 'reduced regional multiplier effect', noticed by Friedmann to happen in areas of similar schemes, because "the export investment is in the hands of extra-regional interests that will channel most of the profits earned to places outside the region".⁽¹⁾

1 Friedmann, J. 1973, Urbanization, Planning, and National Development. Sage, London, p.115.

And "the group that benefits is a small number of very high income earners (up to £s 5000 per year or more), while irrigation creates middle income tenants (£s500 to 1000 per year)".⁽¹⁾ To compare the first group of tenants with the majority of the population in the Nuba Mountains, the average annual family earning there is about £s 323.⁽²⁾

However, the success of the early governments in promoting both internal and external trade through the development of agricultural production is undeniable. All governments from the Condominium up to our present time have recognized the importance of the establishment of urban centres to act as administrative as well as commercial centres. This resulted in the rearrangement of the 19th century markets in the Gezira and the emergence of new ones. The Government's efforts in this respect are more apparent in the Nuba Mountains as the very presence of the markets is owed to the Government. No markets were ever known in the area before the beginning of this century. Indeed, the Government's activity is still in progress as further markets were established in 1971 after the Local Government Act came into force. Price fixing for local crops is done by the Government. The marketing of the most important export crop of the country is government-controlled. The Government also organizes larger line-of-rail crop markets as well as the distribution of the rationed imported consumable goods. Export of crops other than cotton is shared between large private companies and the government.

The present marketing system allows the exploitation by larger crop traders of the small producers at the bottom of the marketing chain. This could be minimized by the more effective government intervention for the producers' benefit.

1 ILO/UNDP. Growth Employment and Equity, 1975, op cit., p.111, 15.

3 Sudan and Federal Republic of Germany, "Nuba Mountains Region Agricultural Development Feasibility Study Report", 1977, pp.20-25.

CHAPTER FIVE
CHARACTERISTICS OF LOCAL MARKETS

5.1 Introduction

Rural local markets are now recognized as effective factors in bringing about rural change. Their role as agents of change is emphasized in that no plan for the transformation of rural economics can now afford to ignore rural marketing systems.⁽¹⁾ By studying the Yoruba markets in the early 1960s, Hodder realized that studies concerned with geographical analysis of the economic life in the developing countries of the tropics have to pay attention to the local marketing systems as they are of immediate and vital concern to the majority of local people. He also pointed out the practical importance of this kind of knowledge to the planning for commercial and business expansion as well as for economic development in general.⁽²⁾

The performance of markets and market-places as development nodes is related to their presence at the core of the spatial organization of the rural society. Their efficiency is explained by the fact that they shape the areal system within which the rural economy functions. They effect this in their networks and transport linkages with urban centres, connected by flows of commodities, traders, and rural producers. Their hinterlands, whether they are source or service areas, are important features of the rural scene. Markets also facilitate the distribution of manufactured goods from urban centres to rural consumers. They are regularly visited focal points for rural communities and this helps the spread of new ideas from urban to rural people and could prove to be useful in the process of rural development. This suggests that the design of more effective marketing systems may be important in the development process.

1 Gana, J.A., "The locational pattern and functions of periodic markets in Zaria Division, Nigeria", Savanna, December 1976, p.163.

2 Hodder, B.W., 'Markets in Yorubaland', Ph.D. Thesis, London University, 1963, p.190-191.

Interest here is focused on the analysis of the operational and locational principles of markets in the study area, with emphasis on the efficiency of their performance. It is particularly necessary to know more about their daily working and their periodic and seasonal variation in terms of participants and goods exchanged, and how these are organized in the system. We also need to examine closely the interplay between market systems and forces for political and social change in society at large. (1)

5.2 Periodicity and Permanency

In the two areas of study in the Sudan, the fieldwork reveals four types of local markets in terms of periodicity and permanency. Classification based on periodicity and permanency has so far been the most popular (Hodder, Good, Ukwu, Bromley, Funnell, Fagerlund and Smith, Stine, Gana and many others) although complete agreement on the structure of smaller groupings has not yet been achieved. However, the groups of the two study areas are:

(1) Daily markets: these are markets with permanent shops providing daily services. All of these were built during and after the British Government period, mostly in the 1920s, and designed by the government surveyors to surround a rectangular space with the butchery and the vegetable stalls in the middle. They form the core of the settlements. Beyond the shops come the bakeries and the flour mills, then the merchants' houses which form the oldest permanent buildings, together with the police station and the British Governors' administrative areas, if there were any. In the Nuba Mountains these are the only permanent buildings in a settlement. The indigenous houses and huts cluster around this core or spread towards it from the hill sides.

1 Filani, J. A. and Richards, P. "Periodic market systems and Rural Development. The Ibarapa case study, Nigeria", Savanna, December 1976, p.150.

These markets serve their settlements in which they are located as well as the surrounding rural villages. Sometimes they also have registered animal and crop markets which would be held inside the inner space, or outside wherever the space permits. The group of daily permanent markets is not necessarily the most important group for it ranges from Kadugli at the top of the administrative system as Southern Kordofan Provincial Headquarters down to Shat Safiya, a very small village council in the same province. This group constitutes nine out of the 46 markets visited and they are all located in the Nuba Mountains⁽¹⁾ (see Table 5.1 and Fig. 5.1).

(2) The second group of markets also has permanent shops and is similar to the first in every aspect except that there are two days in the week which are the suq big days. These days are organized and announced by local government authorities as special days to serve the villagers around so that they can meet and display their goods for buyers. In return people obtain cash to buy what they need, whether it is provided by the other villagers or by the permanent shops in the market. Local people also have the chance to make use of the non-commercial and social facilities provided by market villages or towns such as hospitals, courts, council offices etc. Suq days add obvious activity to the normal market. This is the biggest individual group (19) of markets, observed in this study, eleven of which are in the Gezira area (Table 5.1 and Fig. 5.2).

(3) The third group contains markets with permanent daily shops similar to the permanent shops of the two groups mentioned above and performing the same functions but with one big day instead of two. There were eight of these all in the Nuba Mountains (Table 5.1).

(4) The fourth group contains settlements without permanent markets but which have periodic market days each week and one or two shops in the settlements but not in the market place itself. Marketing during the suq days takes place under semi-permanent

1 See Chapter Three for market origins

sheds of wooden frames and thatch cover, or under tree's shade or directly under the sun. These markets, on their days, may attract from a few hundreds to several thousand people, but could be almost completely abandoned during the non-market days with only the empty sheds left behind. There are ten in this group, eight of them meet twice a week and two meet once a week. The Nuba Mountains have four and the Gezira has six of these. Table 5.1, Figs. 5.1, 5.2 below show their names and distribution. (See Plate 1)

Table 5.1

Types, Names and Distribution of Markets by Area and Days

Type	Name of market	Market day	Area
1 Daily markets only, in- cluding permanent shops	1. Kadugli	Daily	Nuba Mts
	2. Habila	"	"
	3. Kortala	"	"
	4. Himedayya	"	"
	5. Buram	"	"
	6. Reikha	"	"
	7. Teis	"	"
	8. Shat Safiya	"	"
2 Daily markets with two big des- ignated market days	10. Dilling	Monday + Thursday	Nuba Mts
	11. Farshaiya	Monday + Friday	"
	12. Berdab	Monday + Thursday	"
	13. Karko	Monday + Thursday	"
	14. Kaiga Tummero	Monday + Friday	"
	15. Hamra	Monday + Friday	"
	16. Demik	Saturday + Tuesday	"
	17. Heiban	Monday + Thursday	Gezira
	18. Rufa'a	Monday + Thursday	
	19. Tambul	Saturday + Tuesday	
	20. El Hosh	Sunday + Wednesday	
	21. Tabat	Sunday + Wednesday	
	22. Fureigab	Monday + Thursday	
	23. Futeis	Saturday + Tuesday	
	24. Abu Quta	Monday + Thursday	
	25. Meheiriba	Sunday + Wednesday	
	26. Ribi	Saturday + Tuesday	
	27. El-Kamlin	Sunday + Wednesday	
	28. Gedeidim	Sunday + Wednesday	

Type	Name of Market	Market Day	Area
3 Daily markets with one big market day	29. Delami	Thursday	Nuba Mts
	30. Abri	Friday	"
	31. Deri	Monday	"
	32. Kauda	Tuesday	"
	33. El Azrag	Friday	"
	34. Wali	Friday	"
	35. Tarogi	Thursday	"
4 Periodic markets only	37. Tombera	Monday	Nuba Mts
	38. Kalkadda	Tuesday + Friday	"
	39. Karandal	Saturday + Tuesday	"
	40. Eiri	Wednesday	"
	41. Hedeiba	Saturday + Tuesday	Gezira
	42. Ummshaneq	Wednesday + Sunday	"
	43. Amara	Monday + Friday	"
	44. Tekeina	Monday + Thursday	"
	45. Fahl	Monday + Thursday	"
	46. Aulad Yasin	Saturday + Friday	"

Source: Fieldwork 1977/78

The above results reveal facts which suggest that the study areas have markets in which part-time and mobile trading are practised. Except for the first nine markets of the daily permanent group all other markets in the study have all or part of the trading activity performed periodically. This is a fact which places Sudan among the other developing countries in Africa, Asia and Latin America as periodic markets are a characteristics of low income rural economies. (1)

Some of the theorists have tried to rationalize the economies of the periodic markets by employing the two "central place" concepts of range and threshold, or maximum and minimum range, where the maximum range means "the farthest distance the dispersed population is willing to go in order to buy a good offered at a place", while "minimum range" incorporates the "threshold demand necessary for initial provision of the commodity in question". (2)

1 Good, C.M. "Periodic Markets and Travelling Traders in Uganda", The Geographical Review, vol. 65, no. 1, 1975, pp. 49-72. Funnell, D.C., "Rural Business Centres in a Low Income Economy. Some Theoretical Problems", Tijdschrift Voor Economische En Sociale Geographie, 1973, p. 91.

2 Christaller, W. Central Places: Southern Germany, translated by Carlisle W. Basken, New Jersey, 1966.

FIG. 5(1) MARKETS VISITED,
THE GEZIRA, EXTENSIONS AND THE RAHAD SCHEME

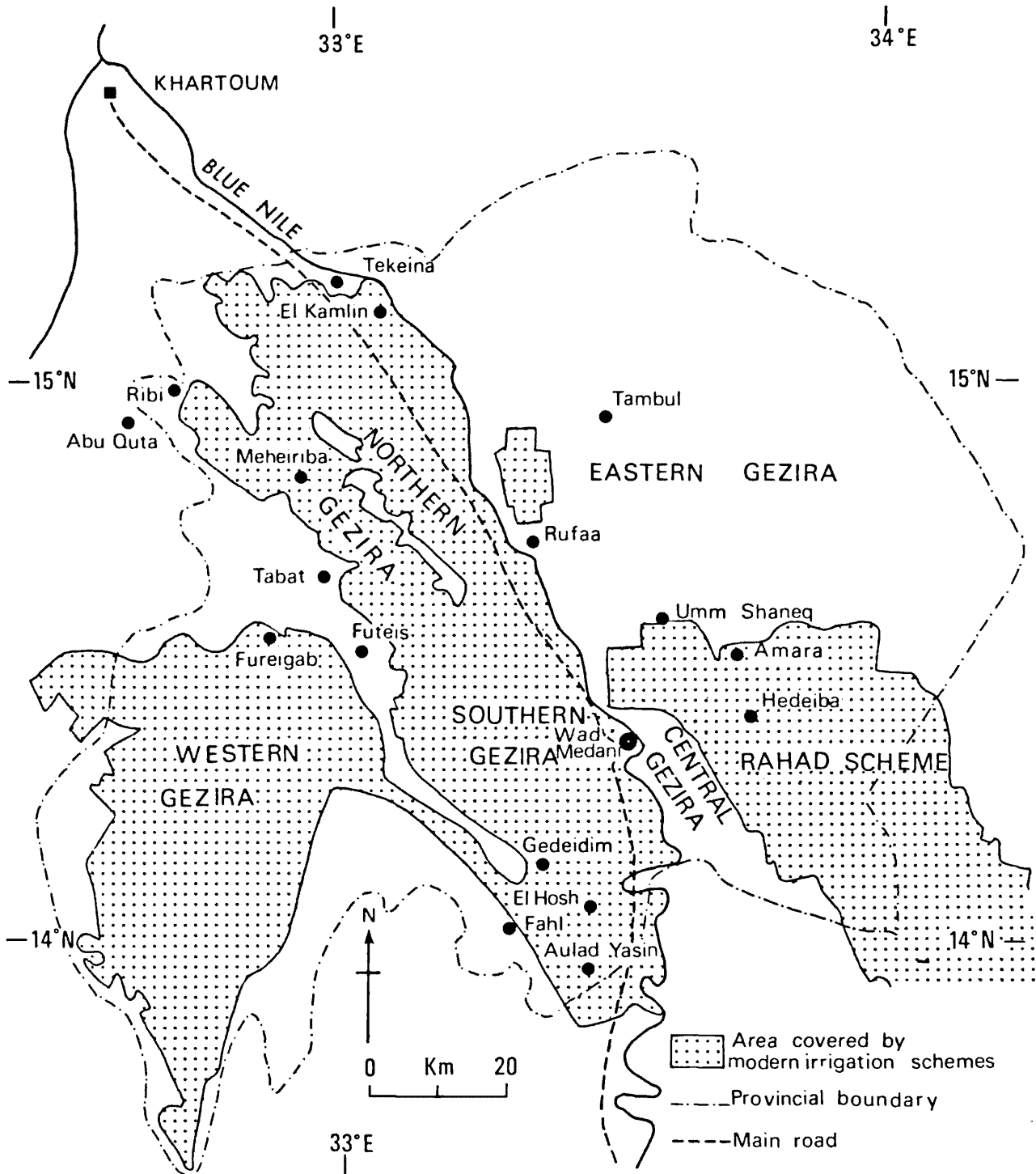


Fig 5(2) MARKETS VISITED AND COMMUNICATION NETWORKS IN NORTHERN & SOUTHERN NUBA MOUNTAINS

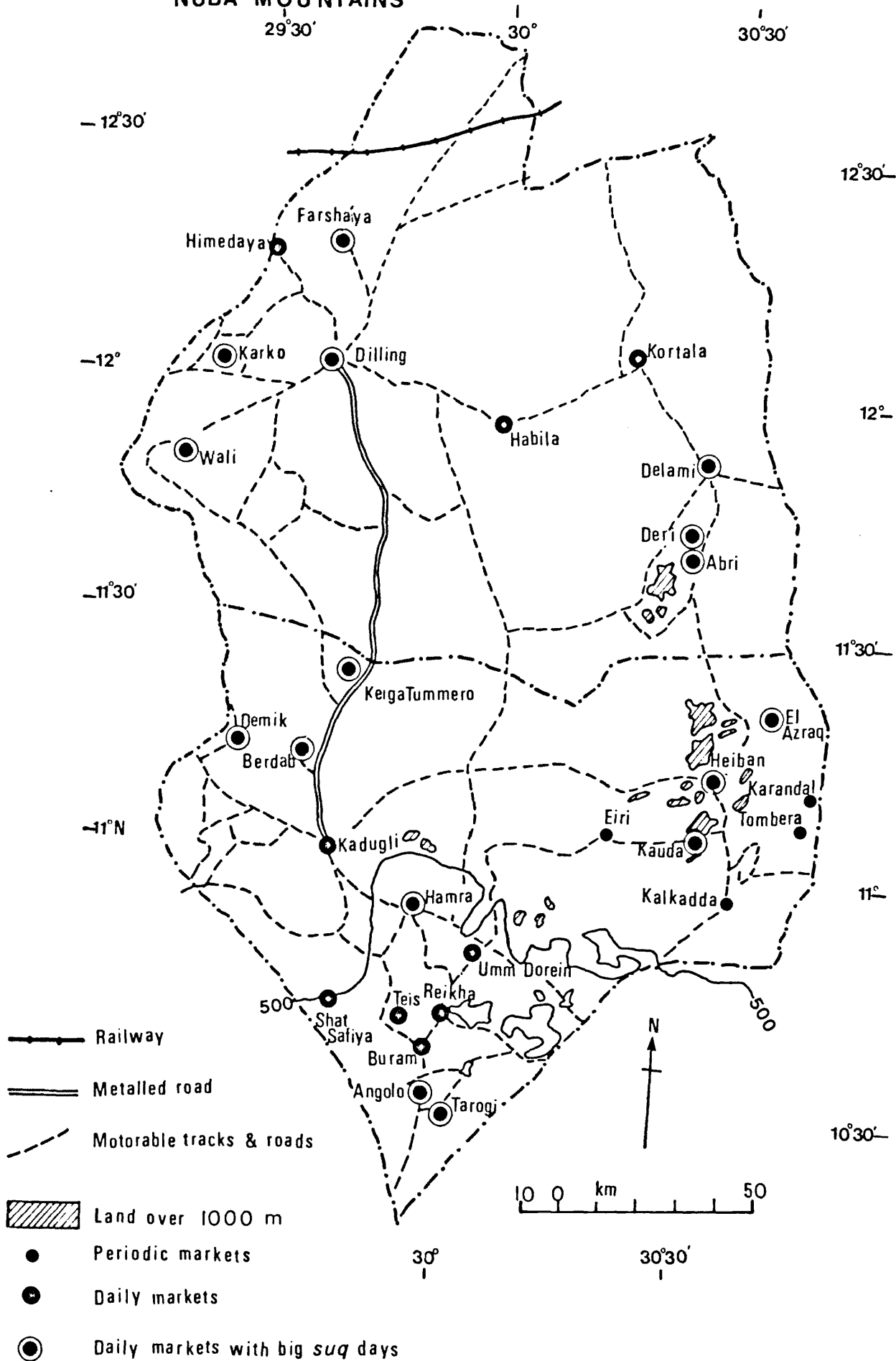




Plate 1 Hedeiba Market of Eastern Gezira on a non-market-day



Plate 2 Bulking of local crops Tambul Market (Eastern Gezira)

J.H. Stine accounts for the presence of permanent markets by stating, "when the maximum range is greater than or equal to the minimum range, the firm will survive and will be fixed in a spatial position"⁽¹⁾. On the other hand G. W. Skinner explains the presence of periodic markets as periodic central places which arise "when the maximum range is smaller than the threshold requirement of the firm, the firm either ceases to function or else it becomes mobile."⁽²⁾

A.M. Hay on the other hand explains periodic marketing as the outcome of itinerant traders trying to economise their overhead costs, i.e. transport cost, storage costs, fees or licences costs which become reduced with any increase in volume traded. This results in two types of trading, (1) part-time trading in which traders trade a few times a week and thus reduce the overhead cost by not trading every day and (2) mobile trading where traders trade in more than one market, moving between markets; this is intended to spread the overhead costs among the number of markets visited and increases the profits.⁽³⁾

The results of the fieldwork offer support for the conclusions reached by other writers about African markets.⁽⁴⁾ Overhead costs in the different parts of Africa including Sudan are mainly transport costs. Food could be obtained cheaply either from home or from the markets visited; labour is very cheap if needed; licences for semi-permanent stalls are not expensive, and indeed such trading could be

1 Stine, J.H. "Temporal Aspects of Tertiary Production Elements in Korea", in F.R. Pitts, ed. Urban Systems and Economic Development, 1962, pp.68-78.

2 Skinner, G.W., "Marketing and Social Structure in Rural China", Journal of Asian Studies, Part 1, Vol. 24, 1964, pp.3-43.

3 Hay, A.M., "Notes on the Economic Basis for Periodic Marketing in Developing Countries", Geographical Analysis, 3, 1971, pp.393-401. Ref. in page 395/96.

4 Gana, J.A., op cit, 1976, pp.163-174.

practised without licensing. On the other hand transport is expensive which makes mobile trading particularly expensive, especially if motor transport is used to reach the markets and to return to the home village at the end of the market-day.

To explain periodicity in the two areas of study it seems quite satisfactory to postulate the arguments that spatial and temporal periodicity is a reflection of -

1. Effective purchasing power and sufficient demand, so that the presence of periodic marketing is appropriate for low income rural areas. ⁽¹⁾
2. Rural customers are producers and sellers as well as buyers and for them market periodicity permits the combination of production and shopping for needs.
3. The role of the trader as the only factor governing the organization of the periodic markets was over-estimated by Hay.
4. Diversification in goods transacted and engagement in other economic activities counter-balance the insufficiency of periodic trading as a main way of livelihood.

5.3 Commodities and Items Transacted

Despite the fact that the three groups of people visiting a market sometimes perform the same function of selling goods and services provision, there is still some difference between the goods and services provided by each group. The goods provided include locally produced crops like sorghum dura, sesame, groundnuts, cotton, wheat, rice, lobia, red pepper, gum Arabic, a variety of vegetables and fruits and other non-perishable crops. The manufactured imported goods provided are of two types, low order daily-needed consumables like sugar, tea, coffee, salt, edible oil, cigarettes, matches, soup, etc., together with cheaper fabrics for clothes-making and shoes. These goods are imported to both areas from the core area or from outside the country's boundary.

1 Alao, Nurudeen, "Theoretical Issues in The Geographical Dimensions of Market Periodicity", Nigerian Geographical Journal, 1972, vol. 15, pp. 97-104.

Permanent traders in big urban marketing centres sell high order sophisticated and mainly imported goods, such as fine expensive fabrics for clothes-making, ready-made clothes and shoes, perfume, cosmetics, glass and china hardware, pharmaceuticals and drugs, watches, radios and various electrical appliances. Even furniture and building materials are sometimes provided.

The largest number of the permanent traders group as a whole sell clothes, shoes, daily consumables and local crops all together in the same shop. Specialization is very limited. It is only noticeable in big markets like Kadugli, Dilling and Rufa'a, which are at the top of the scale as provincial and district headquarters. They sustain urban populations of about 20,000, where more shops are found and demand makes specialization feasible.

In most cases especially in small markets, permanent shops as well as semi-permanent stalls sell salt, onions, edible oil, sugar, coffee, matches and cigarettes, etc., together with fine and cheap fabrics and cheap rubber and canvas shoes for farmers' use and Japanese batteries beside Chinese torches and household utensils. This high degree of diversification is necessitated by the fact that specialization is not profitable when demand for that particular good is not enough for the trader's business to continue. Traders have to sell high and low profit margin goods together. Low order consumables cannot bear high margins of profit and have to be sold with prices slightly higher than the wholesale prices when they reach the level of the small rural markets' consumers. On the other hand, some high order goods could be found in very small periodic and rural markets as their presence is necessary for the consumers who cannot travel long distances to get them from high order centres, as well as for the rural trader who could charge as much as double the wholesale price or more to make his small business survive.⁽¹⁾

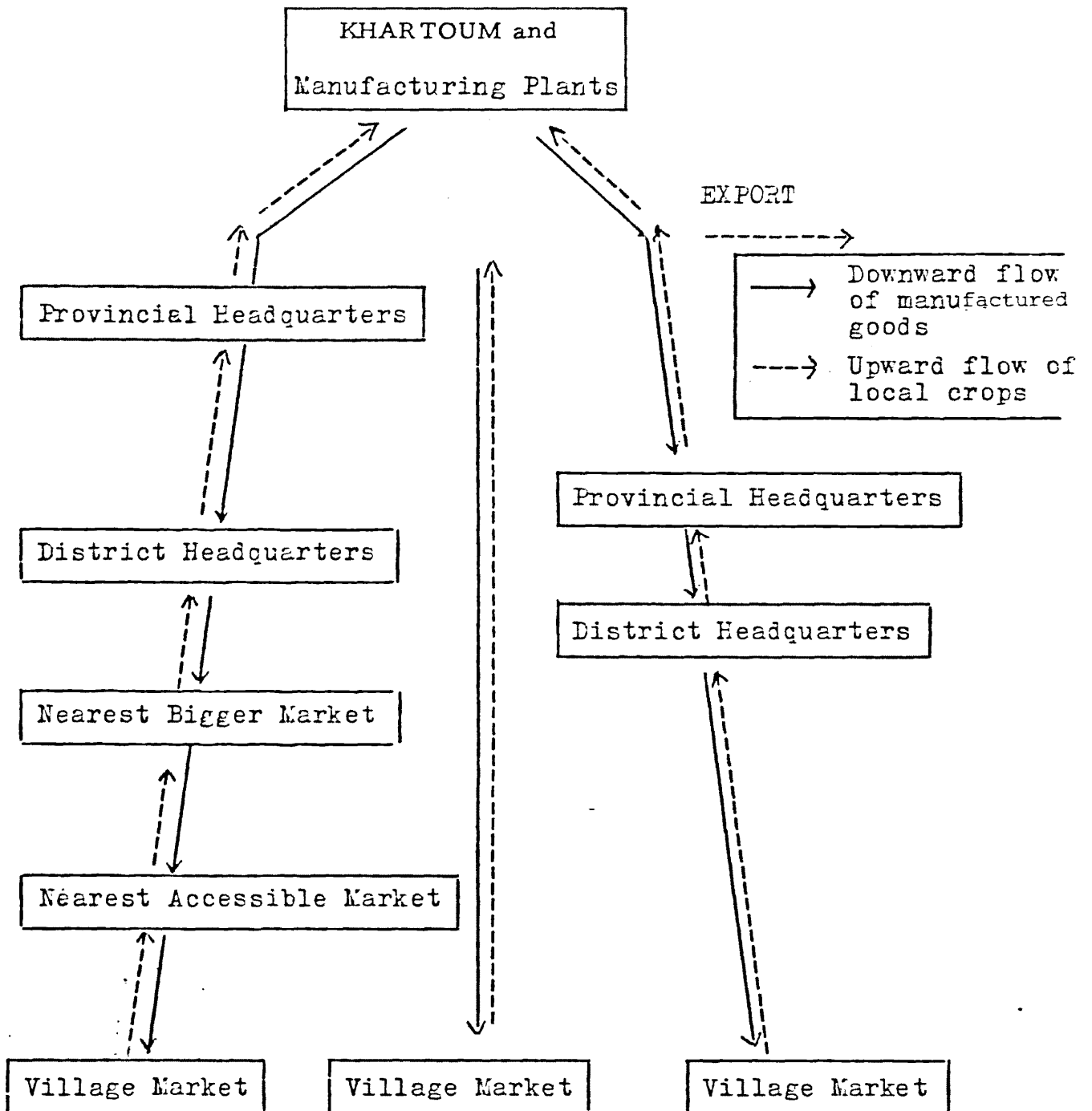
1 Funnell, D.C., 1973, p.88, op cit.

In tracing back the supply channels it is revealed that 68% of the manufactured goods provided by the permanent traders' group, whether local or imported, reach the consumer in the tiny remote villages directly from Khartoum the capital, or indirectly through the province and district headquarters. This latter distributes to the nearest bigger market, the nearest market, then the consumer in the smallest village market. Fig. 5.3 illustrates the flow of goods to and from the rural markets.

The rest of the goods exchanged and provided by the permanent traders group represent about 32% of the total exchange carried on by it. These are mainly local crops and some handicrafts. They reach the traders from different sources including the market itself, surrounding villages of similar market size and the area of production. These goods are either exchanged horizontally or vertically upward within the market system, tapped through the smallest shops in the very remote villages in small quantities. They are collected and transported to the consumption areas through the same channels which brought the manufactured goods from large centres in the hierarchy. Local produce moves from the smaller to the larger markets and urban centres until they reach consumption areas, industrial plants or export outlets.⁽¹⁾ (Fig. 5.3).

1 Mintz, S.W. (1959), 'Internal Market System as Mechanisms of Social Articulation', in Ray, V.C., ed., Intermediate Societies, Social Mobility and Communication, pp.20-30.

Fig. 5:3 A diagram to show the flow of goods to and from the rural markets



Lorry transport is very important in both areas. One quarter of the traders are well-off and they own lorries to transport their goods to and from higher order and lower order markets as well as transporting other people's goods. Nevertheless 53% of the whole group depends on other people's lorries and a small group depends on wholesalers' lorries. The railway plays a very minor role in transporting goods to and from the Gezira and the Nuba Mountains. The dependence on motor transport renders the movement of goods extremely seasonal. Metal roads are completely absent except for Khartoum to Wad Medani in the Gezira, 187km (1968) and Debeibat to Kadugli through Dilling, 187km, (1972-75). The newly-built Wad Medani-Gedanef road, 227km, came into use only in 1977. The seasonality in transport affects the replenishment of goods to the extent that at least one third of the permanent traders have to bring in a big stock of goods once before the rainy season. This requires a substantial sum of capital to be invested in goods and kept idle for a period of 2 to 5 months, particularly in the Nuba Mountains where the rainy season is longer. It also requires a safe storage space for the goods during the same period. Traders who cannot provide storage are at a disadvantage as they may run short of highly demanded goods during the rainy season and eventually lose customers. During the dry season 38% of the permanent traders interviewed in the two areas replenish their goods fairly often, that is, from once or twice a week to at least once a month.

Other services found are permanent jewellers, tailors, hairdressers, shoe repairs, blacksmiths, carpenters, and restaurants to provide cooked food, tea and coffee and cold drinks. All permanent markets and some of the periodic ones have permanent butchers and vegetable traders. All those suffer from a great competition in market days as itinerant artisans double or even triple the permanent number.

Exchange carried by the semi-permanent traders for imported goods is mainly horizontal serving customers from the villages around and the market village itself. Those comprise three quarters of the customers for this group. Vertical exchange forms 25% of the exchanges, and is carried on between this group, other traders, middle-men from



Plate 3 Bulking and transport of local crops (Nuba Mountains)



Plate 4 Household utensils sales in Farshaiya Market of Northern Nuba Mountains

the same or other markets or wholesalers at larger markets who bulk the local produce and transport it to yet larger consumption areas. The manufactured goods provided by semi-permanent traders are cheap fabrics for farmers' use, cheap shoes and enamel, glass or aluminium hardware, Plates 2,3&4. Nevertheless, some of these traders, especially those who travel between markets and the better-off ones display high value fabrics, torches, lamps, batteries and mirrors, cheap cosmetics and perfumes, and daily consumables. Sometimes all these commodities are combined with sorghum, dried okra, red pepper and dried tomatoes divided into small amounts and displayed on the ground. A trader sitting on the ground or on an empty box in the middle of the goods displayed around him, and with a weighing scale at his front, is a common feature of periodic markets. There are also itinerant tailors, blacksmiths, shoe repairers, carpenters and even radio repairs are carried out under the shade of trees or in semi-permanent stalls (Plate 5).

Handicrafts, mainly baskets, mats and ropes made of native palm trees are also available. The Nuba Mountains area supplies the whole of Sudan with pleasant colourful as well as white mats, baskets and ropes for bed making. Water, coffee and cooking pots, skilfully made of pottery, are among the handicrafts displayed. Locally used wooden beds and chairs and saddles are also available (Plate 7).

Fresh meat, vegetables and fruits of different types were present in all markets, especially tomatoes, onions, lemon, jauavas and mangoes which were in season at the time of the survey. In the study, all these were either displayed by the producers themselves or by middlemen and traders who buy them from the producers in the early hours of the market day to be sold directly to consumers, or to other traders who bulk and take them to other markets.

Market visitors who practise some selling visit the markets with some of their farm produce such as a combination of dura (the staple food grain), sesame and groundnuts (the main cash crops), red pepper, lubia and okra and tomatoes (whether fresh or dried) and a few vegetables, and sometimes animals, goats, sheep or cattle. Chickens, eggs, fresh and sour milk, fluid butter are mainly brought by women. However, they are collected and carried to major urban centres by men (Plates 6,7 and 8).



Plate 5 An itinerent tailor at Hedeiba Market



Plate 6 Chicken at Ribi Market of Nothern Gezira to be transported to Khartoum



Plate 7 Handicrafts in the Nuba Markets

Different kinds of cooked meals, hot and cold drinks are provided by restaurants or itinerant individual sellers roaming the different parts of the markets looking for buyers. Head loading, particularly by women, is a popular way of transporting goods in the Nuba Mountains.

Local beer, Merissa, is a highly esteemed good displayed by women only. In the Gezira Merissa houses are located at a distance from the market place itself, in permanent square mud rooms or rows of huts built together. In the markets of the Nuba Mountains women could be seen with tins and big pots full of the local sorghum beer they make themselves. Beer selling commences a few hours after the market day starts and continues well after it ends. Usually beer markets are apart from the market places under the biggest trees where people stay for hours. Most of the people from the market pay a visit to the beer sellers before they finally go home. Some people visit the market only to drink beer and see friends. In the Nuba Mountains there are periodic markets for beer selling and gambling only. Nevertheless, no public Merissa selling is allowed in urban markets.

5.4 Market Participants

The markets visited in the two areas of study have two types of traders, i.e. permanent traders and semi-permanent traders and a third group who may be termed market visitors, who visit the market for various reasons, occasionally buying and selling.

Permanent Traders

The total number of permanent traders interviewed in both areas was 173 or 18.5% of the sample (932 people in the 46 markets visited). They practise trading every day and occupy permanent-built shops. The largest group of traders (37%) were originally from the places in which they were trading at the time of the survey and 26% were from the same province. Those who were originally from other places, mainly riverain areas, settling in the Nuba Mountains, formed another 26%. They came from Khartoum, Gezira, Northern, Nile, White



Plate 8 Nuba women displaying local produce

Nile, Kassala and Blue Nile provinces. Those from Northern Kordofan province form more than 10% of the whole group of permanent traders. The survey revealed that there were no traders settling in the two areas of study from the southern part of the country, nor from Southern or Northern Darfur.

The largest group of the permanent traders were farmers who had saved some capital and started small businesses, probably as semi-permanent traders in the beginning, becoming well established as time passed. Some of them still practise commercial farming on a larger scale than ordinary farmers. They constitute about 38% of the whole group of permanent traders. The second largest group were students who were old merchants' sons taking over from their retiring or deceased fathers and they comprise about 30%. A group of 13% were previously shop assistants, semi-permanent traders, restaurant keepers, or merchants who had been in partnership with others and saved some money to establish their own business. Less than one quarter of the group were previously workers, government employees, car drivers or car mechanics.

This group of permanent traders shows a great degree of permanency for, as the fieldwork results reveal, more than half of the group (53%) started their business in the place they were in at the time of the survey. A smaller group (14%) started within the province or district boundary, and 12% started in other provinces and moved to the present place afterwards. These left, about one-fifth of the whole group, began in their own villages, gained confidence and capital and then moved to the last destination.

The permanency of this group is further explained by the fact that 56% of them own permanently-built shops, 41% lived in permanent rented shops and a very small group, 3% only, own semi-permanent shops which could be locked up.

Regarding their residence conditions, except for the 8% who rent houses, about 92% of the permanent traders own their own houses whether they are permanently-built (56%) or semi-permanently (36%) built of mud and thatch roofs or of thatch and wood, which is a common case for the Nuba Mountains.

Permanent traders interviewed claimed that though they are permanently established the demand for their goods shows an obvious seasonal fluctuation. This was the view of 86% of the whole group who indicated a noticeable drop in the rainy season, generally from June to October (cf. Funnell, 1973).⁽¹⁾ The largest group of permanent traders (80%) justified the reasons for fluctuations to be: (a) in markets serving a rural population limited cash at certain times of the year, especially the rainy season, and at the ends of months just before monthly payments in urban centres; (b) limited demand in the rainy season when remote areas are closed and cut off from the rest of the world by impassable roads. At this time, people are busy farming and there is no demand for expensive clothes or luxury goods as there is limited time for entertainment.

However, 14% of the permanent traders interviewed felt that the demand is constant and there is no fluctuation. This could be explained by the fact that some of the areas served are better off and could provide a constant demand for particular goods or by the fact that this group is located in an area which is accessible to the goods as well as to the customers during the rainy periods. A third, though smaller, group of traders (about 6%), held a different view because they benefit and sell more during the rainy season as the demand in their areas increases. This is because:

- a) roads to other markets are closed during the rainy season while their market is still accessible, so they drain other markets' customers;
- b) large numbers of workers and seasonal labourers visit their area for casual farming work and this increases the purchasing power;
- c) Some of these markets supply thousands of nomads with their needs as they lie near or on the routes of the rhythmic movement of the nomads to and from Northern Kordofan as with their livestock they follow the first

rains southwards. Towards the middle of the rainy season they move back northward avoiding the excessive humidity of the south.

Besides the provision of constant supplies of goods the permanent traders also provide other services. They form an important body for granting credits to farmers whether with a degree of exploitation of the farmer or exchanged benefits between both traders and farmers. About 56% of the traders interviewed lend farmers money or goods when needed and the repayment is either in cash or kind. In either case the farmers have to pay more as the prices agreed upon are always less than the market prices after harvest.

The above group (56% of the traders) buys local crops either for sale immediately and in the same place, or after prices rise, or for export to other urban centres. Of those 18% sell immediately and 38% sell after prices start to rise - from December until just before new crops reach the markets again.

Another group of 42% of the permanent traders interviewed practise wholesaling on a limited scale by supplying small traders from smaller village markets and shops with the imported manufactured goods (a fact noticed by Funnell in Teso district of Uganda).⁽¹⁾ The remaining group representing 58% of permanent traders directly sell to the consumer in retail bases. To conclude: the permanent trader's job seems to be very diversified; he is a retailer, an exporter of local crops, a wholesaler and a money-crediting institution in addition to his role as an innovator (of which he may have little realization). This has also been noticed in Northern Sudan.⁽²⁾

Traders were also asked about the general overall increase, decrease or stability of demand (over a longer period) for the goods they provide since they established their businesses. Some 59% affirmed an increase in demand, 16% a stability and 25% a decrease. When the traders were asked the causes of the changes in demand, the first group attributed them to:

1 Ibid.

2 El-Haj Abdalla Bilal Omer, "Rural Traders and Socio-Economic Transformation in Dongla Area, Northern Province," Economic and Social Research Council Bulletin, no. 47, Nov. 1976, Khartoum.

- a) increase in purchasing power;
- b) increase of population;
- c) increase of desire for goods.

These are indicators of development. The one quarter of the respondents who suffered from the decrease in demand related it to negative causes in the area of their markets but positive to the overall development and those are:

- a) markets are now spread all over the country draining customers from older centres, including the respondents' own markets;
- b) the second cause for the decrease in demand is that transport is getting better, helping people to shop in cheaper areas such as larger markets which can provide a greater choice.

A very small group (2.3%) which is in fact part of the above group (decrease in demand), pointed out some reasons which are the most serious problems for the rural economy and these are:

- a) goods are becoming expensive due to inflation and this affects demand;
- b) migration from rural areas decreases the number of rural population and affects demand (Nuba Mountains);
- c) migration results in decreasing production and this indirectly affects the activity of the markets.

Semi-permanent Traders

Three hundred and eighty-five were interviewed, forming about 41% of the total sample group of 932 people. Semi-permanent groups do not exist in all markets but they are mainly a characteristic of markets with big suq days and periodic markets. For our purpose they are termed semi-permanent; within this descriptive definition there are number of variations:

- 1) those who visit more than one market in a week on the particular market day or days; this resembles Hay's mobile traders;

- 2) others visit one market a few times a week and trading is not their only occupation. This is again similar to Hay's part-time traders. (1)

The above definition was based on the fieldwork results which revealed that the majority of the traders are either farmers or practising other jobs for their livelihood besides trading. None of the semi-permanent traders interviewed was occupying a permanent building at the time of the survey. The majority, about 65% of them, were either occupying no buildings at all or were sheltered from the sun only by trees (48% and 17%). The rest of the group (35%) occupied semi-permanent stalls.

Trading activity in Sudan is mainly carried on by men, for 76% of the whole group were male, although the two areas of study show different proportions. Male traders in the Gezira were 93% of the whole group while in the Nuba Mountains they form 60%. Generally the women market their own produce or their husband's surplus on his behalf. The difference in male to female ratios between the two areas and between Sudan as a whole and other African countries (2) could be attributed to Muslim traditions. It could also be justified by the inapplicability (to the Sudan case) of the reasons mentioned by Hodder regarding the fact that women were a protected group in Yorubaland in ancient war times and they were allowed to trade even in hostile grounds. (3)

The majority (79%) of the semi-permanent traders visiting the markets were from the market villages themselves (31%), or the villages around (48%). Nevertheless, semi-permanent traders visiting the markets from outside their province boundary form about 14%, which is a larger group than those who come from within the province but from a different district (7%). Usually administrative boundaries do not hinder traders from moving between different districts or even different provinces. (4)

1 Hay, 1971, op. cit. p. 395/96.
 2 Filani, 1976, op cit, p. 158.
 3 Hodder, 1963, op cit, p. 136.
 4 Good, op cit, p. 61. 1970.

The largest group of the semi-permanent traders (53%) travel to their markets for a short distance, between 0 to 5kms. A quarter of the group travel a distance between 6 and 15kms; the smallest group (16%) travel for more than 16kms. Sixteen kms is exactly 10 miles and this is the maximum average distance a person could travel on foot or on animal and manage to stay in the market for a few hours and return home before dark. ⁽¹⁾ Beyond the 16kms limit mechanized transport has to be used. Comparing Sudan's case with that of other countries, Filani and Richards (1976) in their findings about Ibaraba district of Western Nigeria and Hays in Northern Nigeria ⁽²⁾ show that the distance travelled to visit the market ranges between 2 to 12km with an average of 8km. This resembles the 6 to 7 miles (10 to 11 km) recognized by Dickinson to be the average radius of hinterlands to England's Mediaeval urban centres. ⁽³⁾

The above results within the Nuba Mountains and Gezira areas of Sudan coincide very closely with the type of transport used (see Table 5.2), as 73% of the semi-permanent traders travel on foot, animals, horse- and donkey-carts or bicycles. The remaining 27% use motor transport which forms regular services to markets particularly in the Gezira area. The table below compares the detailed results.

Table 5.2

A Comparison between distances travelled and transport used by the semi-permanent traders

Distance in km	% of total traders	Means of transport used	% of total traders
0 - 5	53.0%	On foot	53.2%
6 - 10	13.5)	Bicycle	15.6)
11 - 15	11.4) 24.9%	Animal	4.4) 20%
16+	22.1%	Motor transport	26.8%
Total	100.0	Total	100.0

Source: Fieldwork 1977/78

1 Hopkins, op cit, 1971, p. 53

2 Filani and Richards, op cit, 1976, p.155/156 and Hays, H. M., "Agricultural Marketing in Northern Nigeria", Savanna, 1976, p.144.

3 Dickinson, E., "The Distribution and Functions of the Smaller Urban Settlements of East Anglia", Geography, 1932, p. 20.

Investigations into the frequency of visits to the markets showed that semi-permanent traders visit the markets fairly regularly, far more than two-thirds of the traders visit the markets once or twice a week, mainly on the market days. Another group (17%) visits the markets even more often - every one, two or three days. These are mainly suppliers of vegetables, fruits and meat. The third group is the smallest - 15% - and visit the least often. They visit the market once or twice a month because they are either nomads or housewives who visit the markets once in a while to exchange their own produce for daily needs.

The survey of the mobility of those traders and the number of markets visited by each trader resulted in the fact that 43% of the traders trade in one market only and it is always the nearest market because of the difficulty of transport, perishability of goods, and the fact that trading is not the only livelihood for this group. Yet, 31% of the respondents move between two markets. About one-fourth move between two or three markets and less than one per cent visit five markets or more.

Table 5.3

Percentage of traders by number of markets visited

<u>% of semi-permanent traders</u>	<u>Number of markets usually visited</u>
43.4%	One market
30.6%	Two markets
25.5%	Three or four markets
0.5%	Five markets
<hr/>	<hr/>
100.0%	Total

Source: Fieldwork 1977/78

The last three groups make a total of about 57%. These move between markets to increase the threshold of their goods so as to make it viable to trade, as the demand for their goods is highly periodical. This fact has been recognized earlier by Skinner and Stine⁽¹⁾ in explaining

1 Skinner, 1964, op cit. Stine, 1962, op cit.

the economics of periodic marketing. The 43% proportion of traders visiting one market only is further explained by the fact that a similar percentage (45%) couple farming with trading and divide the weekdays between the two activities.

Table 5.4

Division of semi-permanent traders' weekdays between occupations

<u>% of semi-permanent traders</u>	<u>Division of occupational activity</u>
19.4%	Marketing two to four days a week without any other activity
13.2%	Marketing six days a week and taking the seventh day off
27.5%	Marketing seven days a week
29.6%	Marketing two days, the rest farming
13.0%	Marketing four days, the rest farming
2.2%	Farming most of the time
<hr/>	
100.0%	Total

Source: Fieldwork 1977/78

Similar results were reached by Filani and Richards in Ibaraba District of Western Nigeria. It is interesting to note that about 43% of their sellers described themselves as mainly farmers and farmers' wives and 58% as traders. (1)

Investigations were also made to discover the trading situation during the rainy season, particularly whether there is a different trading pattern within rain cultivation and perennial irrigation cultivation areas. The analysis revealed that semi-permanent trading is an activity more adopted in the rain cultivation areas of Eastern Gezira, the south and north-western fringes of the Gezira Scheme and the whole of the Nuba Mountains area. Semi-permanent traders who practise perennial irrigation cultivation form only a small group (7.5%) of the whole, 5.7% of the group stop trading completely in the rainy season which is the peak for the most vital cultivation operations.

1 Filani and Richards, 1976, op cit, p.158.

Traders who are also rain cultivators form a group of 70%, of whom 45% continue in trading during the rainy season and the rest stop trading as they are too busy farming. The reasons for combining the two activities together are:

1. rain cultivation alone is not enough to earn a living;
2. rain cultivation could only be practised at the rainy season which lasts for barely six months in the Nuba Mountains and for, at most, four months in the Gezira;
3. Some of the traders have to continue visiting the markets during the rainy season because it might be the only means of obtaining cash in this dead season;
4. it is also worthwhile visiting the markets even with very small amounts of goods in order not to lose their customers or their places in the markets.

A small group of 16% could afford not to practise any farming and to depend wholly on marketing during the rainy season. Another small group of 5% practise trading, house-keeping or nomadism or engage in casual work in other people's farms in the rainy season when more labour is required. Table 5.5 below shows the details.

Table 5.5

Main Occupation during the rainy season

<u>% of semi-permanent traders</u>	<u>Main occupation</u>
5.7%	Perennial cultivation only
1.8%	Perennial cultivation and trading
25.4%	Rain cultivation only
45.0%	Rain cultivation and trading
16.4%	Trading only
4.8%	Trading and other jobs
0.9%	No job at all
100.0%	Total

Source: Fieldwork 1977/78

Market visitors

Market visitors are a third body of people who were interviewed as another group that visit the markets. They are termed visitors because when they were interviewed they were not apparently displaying goods for sale. Nevertheless, they contribute to the selling activity together with their engagement in buying. The number interviewed was 374, making 40% of the whole sample population. About 81% of this group were male and the rest were women. Women visitors comprised 32% of the Nuba Mountains market visitors, while they were only 4% of the Gezira market visitors.

Visitors come to the markets mostly from the market settlements themselves (40%) or from nearby villages within the administrative district (54%). This group is less mobile than the semi-permanent traders group. This is because they visit the markets mainly as shoppers to obtain goods to satisfy their needs, and making use of the services provided by those markets. Secondly, though about one-fourth of the visitors interviewed visit the markets to sell their own produce and exchange it for cash to buy other needs, their main occupation is farming and not trading. Thirdly, as these visitors are not so well-off as the semi-permanent traders, they cannot afford to pay transport fares to shop at distant markets. Only 6% of the whole group interviewed were originally from distant villages within the same province or from a completely different province.

The distance visitors travel may be closely compared with the means of transport they used (see Table 6 below).

Table 5.6

A Comparison between transport used and distance travelled by market visitors

Distance in km	% of total visitors	Means of transport used	% of total visitors
0 - 5	48.7	On foot	48.9
6 - 10	13.9)	On animal	20.6)
11 - 15	11.0) 24.9	By bicycle	02.9) 24.8
		Animal carts	1.3)
16+		Bus or lorry	26.2
Total	100.0	Total	100.0

Source: Fieldwork 1977/78

The above table makes it clear that almost one half of the visitors travel for a short distance to reach the market - 0-5km only - and they come to the market on foot. Another group (25%) of the visitors travels for a distance of 6 to 15km and they use animals or horse- and donkey-carts or bicycles. The rest of the group travel for 16km or more and use mechanical or motor transport, either buses or lorries which provide regular services to and from markets, otherwise they cannot manage to walk the distance.

Visitors may be grouped according to the frequency of their visits to markets. The most frequent group (about 23%) are those who attend daily markets or visit the flour mill which provides service every day. In fact this group visits the markets one, two or three days a week. The majority of the market visitors (60%) visit the markets once or twice a week, mostly on market days. About 10% of the visitors visit the markets once or twice a month and they are mainly nomads who live in areas away from the settlements during their movements with their livestock in search for water and fodder. As the journey they make is always long, they visit the markets less often and then buy three or four weeks' stocks. The smallest group of visitors was the group that had not previously visited these markets at the time of the fieldwork year. They were mainly people on short visits to the area to see relatives or friends or casual workers visiting the area for a limited period only.

Unlike semi-permanent traders, market visitors, as mentioned before, do not have the time to move between markets, and 80% of them visit one market only. The 20% left shop in more than one market.

Market visits vary between commercial and non-commercial purposes.

Table 5.7

Groups of visitors by purpose of market visit

<u>% of visitors</u>	<u>Purpose of market visit</u>
45.2%	To buy domestic needs, whether imported or home produced, and clothes.
25.5%	To sell their own agricultural produce and some of them buy other needs with the cash they get.
3.2%	Sell very little amounts of goods, mainly manufactured domestic consumables, tea, sugar, cigarettes, etc.
26.1%	Non-commercial reasons, not to sell nor to buy. Most of them come for entertainment, to meet friends or to drink beer and watch wrestling, especially young people at the Nuba Mountains.

Source: Fieldwork 1977/78

5.5 Conclusion

Hays described periodic markets as "the next most complex form of marketing occurs where people meet periodically in some organized manner to buy and sell goods to satisfy their needs as well as to exchange information with relatives, friends and strangers"⁽¹⁾, and this explains the situation in Sudan. Thus, it is of considerable interest that the results show that for more than one quarter of the market visitors, markets are social institutions for exchange of news, new ideas and entertainment.⁽²⁾ For another quarter of the visitors,

1 Hays, H. M., op cit, 1976, p.140.

2 Hodder, 1963, op cit, pp.86/89, markets were recognized as social meeting places in Yorubaland as well. Also Mintz, op cit, 1959.

they provide the main outlet for the very small quantities of self-produced agricultural products surplus and handicrafts which provide continuous cash for daily needs, and the only inlets for cash. For a big group of indigenous Nuba people they are the only outlet to the outside world beyond their hill settlements. The market for every visitor interviewed is the main provider of what they cannot produce locally. About 74% of the market visitors were farmers only, one-fourth of the group were not.

All locally produced crops in both areas reach the markets except cotton which is marketed by the government. Wheat in the Gezira area is supposed to be marketed by the government as well. In reality much of it is smuggled to the markets where it is exchanged for cash on the spot and a lot of bureaucracy and paper work is avoided. Although cotton is not marketed in the markets the cash obtained from it reaches the market and they witness a period of apparent affluence after the cotton markets are opened. Sometimes some of the crops do not reach the market, especially dura sorghum, groundnuts and sesame which are marketed on the farms. Well-off traders who could afford hiring or owning lorries visit farmers on their farms and collect crops from places far away from the markets and which had never been reached by any government car, or from the local shop-keepers who work as middle men and use their small shops and houses as bulking stations. This method of crop collection saves the farmers much trouble and expense in transporting their produce to the market. The crops in this case by-pass the market to bigger urban consumption areas. On the other hand some of the crops which should be marketed by the government reach the market secretly, thus escaping the delays of governmental routines. In both areas, sometimes as early as September when farmers are in great need of cash, they try to reach agreements with the shop-keepers to credit them with some money. They agree on the prices without regarding the benefit of the producer when prices rise after the harvest. Repayment could be in cash or kind. This is sometimes unfair for the producer and he only agrees because he is badly in need of the money or the goods he takes back home. The shopkeepers and permanent traders interviewed explained that this is fair and acceptable in order to get suitable interest on the loans.

It seems that this system, long established in the two areas of study, will continue unless better crediting institutions and co-operatives are introduced. Nevertheless, the efficiency of the markets and the present marketing system is reflected by the methods used for tapping the ridiculously small quantities of produce from the small homesteads on the Nuba hills. Village shopkeepers and permanent traders in the Nuba villages and markets have agents who are originally from hillside villages but they live in the market villages or towns. These agents, including a number of women, take edible oil, salt, onions and tobacco snuff from the traders, go up the hills and exchange that for sorghum, lobia, groundnuts or dried okra by mere bartering and headload the crops, trekking down the hills back to the trader. He or she would get one piaster⁽¹⁾ as commission for each measure brought. The money is either left to be collected until it is a pound or more and then taken or exchanged for goods to be taken home. It is probable that at present these are the only appropriate ways which could be performed with efficiency suitable to the living conditions in that area. The services provided by the agents make it beneficial to the three groups involved - the hilltop producer, the trader and the agent. Some of the agents were interviewed in one market and they all hoped to be traders themselves in the future. This is a self-teaching method for the indigenous to get involved in trading. A group of better-off agents and middlemen set themselves in the markets at market days to collect the produce either from small traders in the same market or other markets or directly from the producers. The job could be done by those agents on commission bases for the traders who provide the capital or they themselves bulk and pack the produce and carry it to larger markets and sell it to other merchants or consumers.

The system sometimes appears to be very complicated when one discovers that some of the produce, especially sorghum, is brought to the market by the producers to be exchanged for cash to buy other goods. This crop marketed is sometimes not part of the farmers' surplus

1 1 Piaster = $\frac{1}{100}$ of the Sudanese pound.

because the same person would visit the market a few months later before the new produce reaches the market to buy some sorghum for food, as she or he has none left in the family store or, if unexpected cash is available from a son in another part of the country. Sometimes a goat or a few chickens are sold if sorghum prices and availability are irresistible on that particular market day. It is also thought to be wiser for the sorghum in the family store to be kept and saved for leaner periods just before the rainy season, or when savings are running short and the new crop is far behind ripening. Nubas were noticed to be wiser than the people of the Gezira in this matter. They always save for hard times and even for hard years when the rains fail. That could be because of their geographical situation being in an area isolated after rains start and completely cut off from suppliers from other parts of the country and with practically no available cash at all. This makes them very careful in husbanding their family stores. In good years with good rains the produce of the previous year could last until the new crop is ready. In this case they consume the old one and keep the new.

Sorghum is always the most dominant crop in the markets, being the staple food in both areas. It was brought by 44% of the visitors interviewed during the fieldwork period, either alone or with other crops. Slightly more than one-fifth of the visitors brought other crops not including dura, sorghum and 35% brought nothing of their own produce.

Although in this chapter an attempt is made to discuss the three groups of people functioning in the markets separately, a great degree of overlap occurs and it is very difficult to separate or distinguish their different functions.

CHAPTER SIX

The Centrality and Importance of Sudanese Market Centres

6.1 Introduction

This chapter is concerned with the examination of the centrality and hierarchical ranking of the different market centres, the relationship between them and their hinterlands and between them and the other markets of the same and different order, according to the provision of different goods and functions.

6.2 The functional complexity of market centres in the Sudan

The importance of concepts derived from central place theory to the analysis of market centres was clearly pointed out by Christaller when he stated that the chief profession of a town is to be the centre of a region and supply its population with certain goods and services. This characteristic does not apply only to settlements which are usually called 'towns', but to any market location.⁽¹⁾ The presence of markets and market places has always been associated with centrality. Whether central goods and services are exchanged at a certain central place, may best be determined by considering the institutions which that central place has for the exchange of central goods. One very important institution is the market place itself, which historically has been a symbol of a central place - especially during the Middle Ages.⁽²⁾ One could argue that this is still the case for most of the Sudanese villages and towns, whose basic function is to act as service centres. In Sudan larger markets tend to be functionally more complex than smaller ones. However, it is necessary to test whether the market centres can be grouped in terms of their functional complexity into a hierarchy of centres

1 Christaller, W. Central Places in Southern Germany, translated by Baskin, W.C., Prentice Hall, New Jersey, 1966, pp.1-22.

2 Ibid., p.140.

Fig6 (1)

FUNCTIONAL COMPLEXITY OF MARKET CENTRES



Central functions are those performed and offered by central settlements for the dependent population in their tributary areas, at a variety of retail services, wholesale, administrative, social and religious outlets. This range of functions includes hospitals, dispensaries and health centres, post and telegram offices and postal agencies, provincial and divisional heads, and local council centres, mosques and churches, water points and flour mills, which all play an important role. Other services provided by the market centres are tailors, blacksmiths, shoe repairers and other artisans. The central functions identified in this study are shown in Table 6.1. Although Army Training grounds, transport establishments resorts, elementary schools and manufacturing industries are considered as non-central functions by Marshall and Christaller⁽¹⁾, elementary schools in developing countries like the Sudan should be included as central functions as they are not ubiquitous. In periodic markets itinerant artisans, periodic veterinary services, courts and village councils operate on the market days as additional types of central place functions. Larger markets provide most of the central goods and services provided by the small markets together with 'high order goods'. These are the goods that could only be provided by 'high order markets'. High order centres are the centres which have central functions that extend over a larger region, in which other central places of less importance exist. Centres which have only local central importance for the immediate vicinity are called central places of a lower order, and the goods they provide are low order goods. On the other hand high order centres usually serve large population numbers from beyond the central place's immediate physical limits.

In the two areas of study, high order market centres provide specialized medical services, more sophisticated goods, welding and maintenance for complicated tools and machinery, high legal services and higher education and administrative institutions. Market settlements always attract more services than the surrounding villages can do. (Fig. 6.1).

1 Marshall, J. U. *The Location of Service Towns: An Approach to the Analysis of Central Place Systems*. 1969, p. 82: and Christaller, 1966, op cit, p. 142.

Table 6.1
Showing the Identified Central Functions

A. <u>Administrative Services</u>			
1.	Provincial headquarters	31.	Daily butchers
2.	Provincial High Court	32.	Tea shop
3.	Provincial Police Office	33.	Periodic butchers
4.	Divisional Headquarters	34.	Shoe repair
5.	Divisional Police Office	35.	Constant fabric provision
6.	Judicial Court	36.	Handicrafts sales
7.	People's Rural Council	37.	Bakery
8.	Police Station	38.	Blacksmith
9.	People's Court	39.	Petty trader
10.	Village Council.	40.	Flour milling
		41.	General provision shop
B. <u>Commercial services</u>		42.	Tailoring
1.	Bank	C. <u>Education services</u>	
2.	Licensed Bar	1.	Ministry of education offices and above Senior Secondary School Institutes
3.	Battery Recharging	2.	Senior Secondary School for girls
4.	Welding	3.	Senior Secondary School for boys
5.	Drug store	4.	Junior Secondary School for girls
6.	Loud speakers' service	5.	Junior Secondary School for boys
7.	Photographic Studio	6.	Elementary School for girls
8.	Jewellery	7.	Elementary School for boys
9.	Furniture Shop	D. <u>Health Services</u>	
10.	Book Shop	1.	Dental clinic
11.	Watch repair	2.	Hospital
12.	Motor repair	3.	Dispensary
13.	General purpose cooperative	4.	Dressing station
14.	Daily market with one big day	E. <u>Religious Services</u>	
15.	Spare parts shop		Mosque) or the two Church) together
16.	Radio repair	F. <u>Other Social Services</u>	
17.	Daily market	1.	Cinema
18.	Periodic weekly or twice weekly market	2.	All weather road
19.	Ready made clothes, cosmetics and perfumes	3.	Post, telegram and telephone services
20.	Pottery sale	4.	Electricity
21.	Cooperative flour mill	5.	Periodic veterinary
22.	Petrol station		
23.	Livestock market		
24.	Building material shop		
25.	Wholesale shop		
26.	Crop market		
27.	Restaurant		
28.	Daily market with two big days		
29.	Carpentry		
30.	Straw mats sales		

Table 6.1: (F) ctd.....

6.	Permanent veterinary	7.	Postal agency
8.	Agricultural extension office	9.	Water tap
10.	Social club	11.	Sports playing grounds
12.	Shallow well, Hafir or borehole	13.	Motor road
		14.	Foot and animal minor motorable track

6.3 Techniques for defining the centrality of market centres

The centrality of a place is its relative importance with regard to its surrounding region, or the degree to which the town performs central functions. In other words, the concept of centrality refers to the attractiveness of a town from the point of view of consumers who live outside it. The measure of the centrality of towns is usually expressed in terms of the variety of goods and services they offer.

Several different variables are used to identify a hierarchy of central places. The three indices used for the measurement of centrality are population data, central functions, and the number of central establishments regardless of their type. There are some problems in using the population of centres for the measurement despite the fact that it is most easily obtainable, because part of the population of a place may be engaged in other non-central activities. Places of equal population are not necessarily equal in functional status. Christaller notes that "the town's importance is not necessarily parallel to the number of inhabitants because it is possible that a surplus of importance may exist".⁽¹⁾ However, the use of population data for the two areas of study of the Sudan is associated with many problems, the most serious of which is inaccuracy. The latest census figures for 1973 are not yet completely published and they are still considered as provisional because of a 5% assumed under-numeration. At the time of the census the Sudan had 10 provinces, at the time of the fieldwork (1977/78) they became eighteen. The available figures are the total population of the ten provinces divided into rural and urban and by sex. Some details are available for 35 selected urban

1 Christaller, 1966, op cit, p.140

centres including Rufa'a, Kadugli, Dilling, Meheiriba, Tabat, El-Hosh and El-Kamlin, examined in this study. The rest of the markets visited for this study (39) were considered as rural centres and figures for rural population are not obtainable. The figures in Table 6.2 are estimates from the Rural People's Councils officials and the Village Council Leaders based on the estimates for the provision of rationed consumer goods. Population for Hedeiba, Umm Shaneq and Amara were based on an independent study done for the new mechanized farming Rahad Project in 1975. Because of the shortcomings of the population data they were not used to classify the centres. Instead, two other methods were used.

Christaller suggested the use of every detail possible for the differentiation between functions of different sizes. Schools with 100 pupils differ from those with 1000, hospitals differ according to the number of meals they provide and the number of beds they accommodate. He also suggested the use of the net income earned by the people who offer the central goods as the best method for the measurement of centrality of places. "But this presents a difficulty for we must determine not only the net income originating economically and expressible in money, but also the ideal income of the educational institution, administration institution, or entertainment institution, etc..." Christaller realized that the whole problem lies in the quantification of the central importance of a place. "But it is not necessary to give up, because there is a perplexingly simple and sufficiently exact method for determining through numbers the importance of a place: one need only count the telephone connections; the number corresponds rather exactly to the importance of the place".⁽¹⁾ Such methods are not realistic in the Sudan nor most, if not all, the developing countries because centres clearly have centrality without having any telephone services at all.

The second and third indices referred to on page 122, used together, by counting all the establishments of all central functions, is the most desirable index to use for the measurement of centrality of

1 Christaller, op cit, 1966, pp.142/143.

places. This different approach from Christaller's, using a technique incorporating all the central functions of a place was devised by W. K. D. Davies.⁽¹⁾ The basic features of this technique are objectivity and capability of being tested. It also sought relevance and comparability of results obtained from different areas to avoid limited applicability. Davies' index was derived from the Localization Coefficient used in industrial geography.⁽²⁾ The centrality of each function varied with the total number of outlets of that particular type of function in an area which is assumed to be a closed system. The greater the total number of outlets of any particular type of function the lower will be the degree of locality in each individual outlet, since satisfaction of demand spreads over a number of outlets. Therefore, the location coefficient to measure centrality, or the degree of locality of a single outlet of any functional type is given by the expression:

$$C = \frac{t}{T} \times 100, \quad \text{where}$$

C is the location coefficient of function t,

t is one outlet of function t,

T is the total number of the outlets of function t in the whole system. Multiplication of the relevant location coefficient by the number of outlets of each functional type present in a settlement gives the degree of centrality (centrality value) of each settlement for every different type of function which is present. A functional index is derived by the addition of the centrality values attained by any given settlement.

1 Davies, W. K. D., "Centrality and Central Place Hierarchy", Urban Studies, vol. 4, 1967, pp. 61-79.

2 Alexander, J. W., Economic Geography, Prentice Hall Inc., 1963, p. 597.

6.4 The classification of market centres as central places

An attempt was made to examine and classify the centrality of market settlements in the two areas of study. Central functions appropriate to the Sudanese conditions in comparison with other developing countries were identified⁽¹⁾ (see Table 6.1 and Appendices 4, 5, 6 and 7). Table 6.1 shows a list of 78 central functions. For each market centre visited the number of central functions which occurred there at the time of the fieldwork was counted, and centres in both areas were ranked in terms of the numbers of the central functions they possessed. The results obtained are shown in Fig. 6.2 and Table 6.2 which also includes estimates for the population sizes of the market centres. According to the number of the central functions the Gezira markets revealed three groups. Rufa'a formed the only high order market centre, followed by five second order market centres and eleven third order centres. Between the second and third order centres lies Abu Quta which does not show a clear affinity to either of the adjacent groups. On the other hand, the Nuba Mountains market centres revealed two distinct groups, Kadugli and Dilling as first order market centres and the rest, 27, all formed a third order group. The second order group identified in the Gezira is completely absent here.

1 Gana, J. A., "Market Centres in Zaria Division, Nigeria, An Analysis of their Evolution and Locational Structure", unpublished Ph. D. Thesis, Aberdeen University, 1973, p. 292., and Mayfield, "A Central place Hierarchy in Northern India", in Quantitative Geography, Part One, Economic and Cultural Topics, Garrison, W. L., and Marble, D. F., ed., 1967, pp. 124-128 and Abdel Malik, Yousif Mohamed, "The Application of Some Central Place Models to the Planning of Service Networks in a Rural Area in Sudan", M. Phil., Edinburgh, 1974, p. 114, and Grove, D., and Huszur, L., The Towns of Ghana, The Role of Service Centres in Regional Planning, Ghana University Press, Accra, 1964, pp. 15-19.

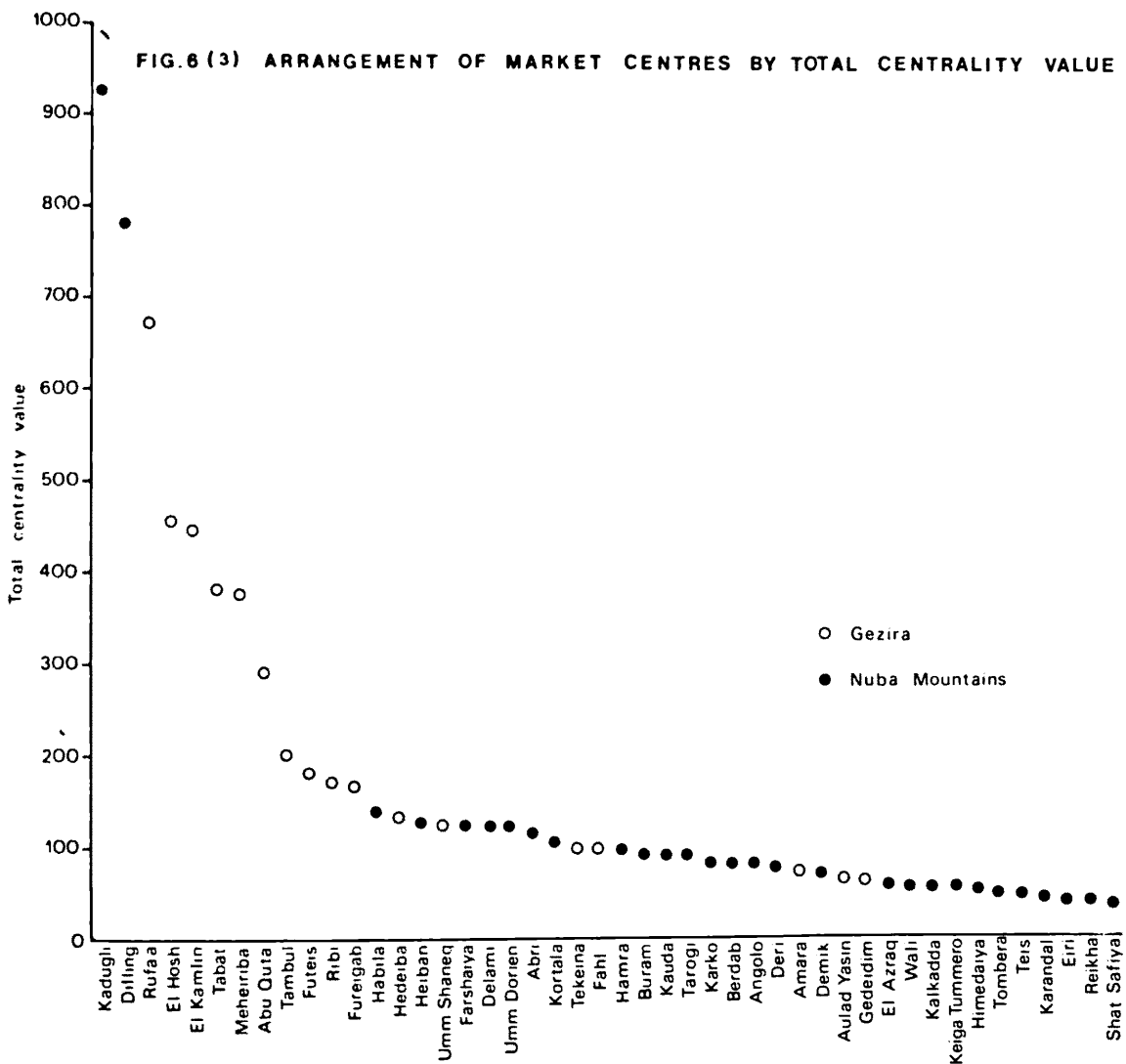
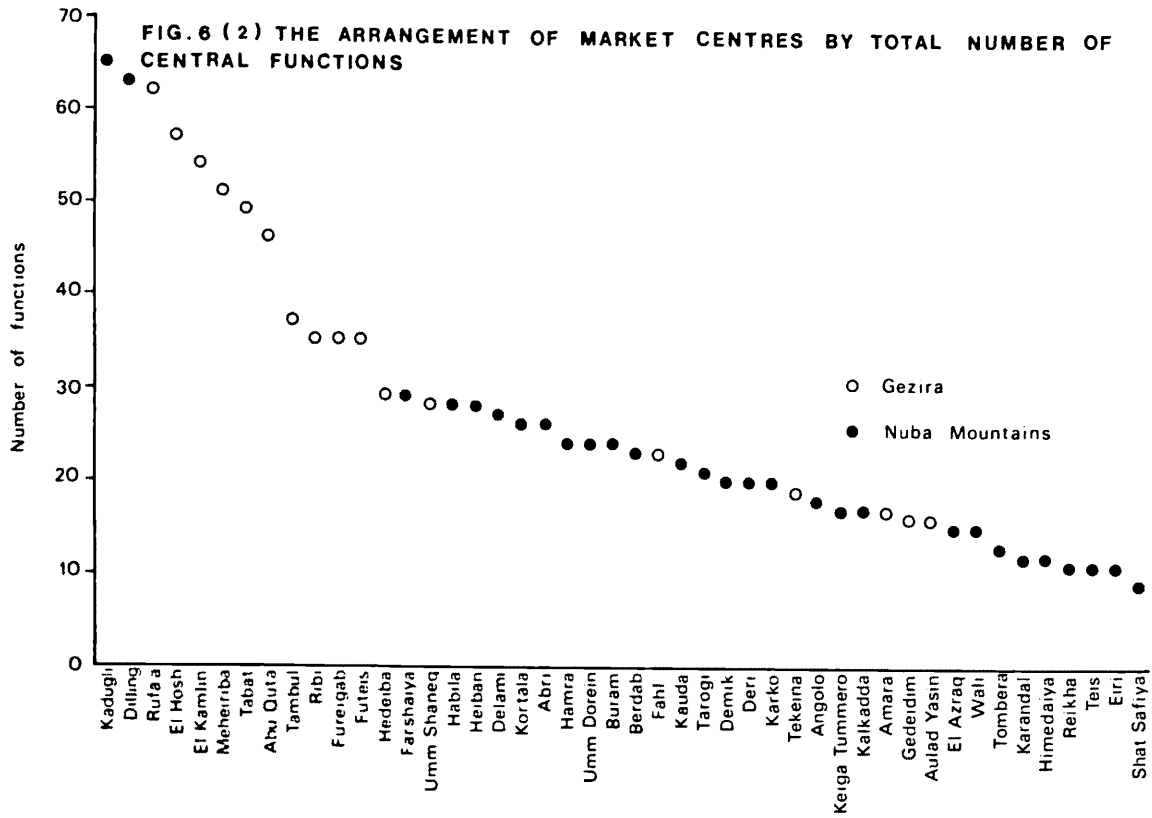


Table 6.2

The Arrangement of Market Centres according to their Total Central Functions and estimated population(1977/78)

<u>Market centres of the Gezira</u>			<u>Market centres of the Nuba Mountains</u>		
Market Centres	Total no. of functions	Approx. population	Market Centres	Total no. of functions	Approx. population
Rufaa	62	17740	Kadugli	65	20845
El-Hosh	56	3722	Dilling	63	21739
El-Hamlin	54	7567			
Meheiriba	51	3418	Farshaiya	29	3000
Tabat	49	5532	Habila	28	1000
Abu Quta	46	4800	Heiban	28	6000
Tambul	37	8000	Delami	27	4000
Ribi	35	3000	Kortala	26	200
Futeis	35	2000	Abri	26	4000
Fureigab	35	2000	Umm Dorein	24	4000
Hedeiba			Buram	24	6000
(villages around)	29	6000	Hamra	24	4000
Umm Shaneq	28	2012	Berdab	23	2000
Fahl	23	3000	Kauda	22	2000
Tekeina	19	2000	Tarogi	21	2000
Amara	17	1758	Demik	20	2000
Gedeidim	16	3000	Deri	20	2000
Aulad Yasin	16		Karko	20	3800
			Angolo	18	2000
			Kaiga Tummero	17	2000
			Kalkadda	17	2000
			El Azrag	15	2000
			Wali	15	2000
			Tombera	13	2000
			Karandal	12	2000
			Himedaya	12	2000
			Teis	11	2000
			Eiri	11	2000
			Reikha	11	2000
			Shat Safiya	9	2000

For Rufaa, El-Hosh, El Kamlin, Meheiriba, Tabat in the Gezira and Dilling and Kadugli in the Nuba Mountains area, population figures are based on the 1973 census with a calculated 2.5% annual rate of increase. For Umm Shaneq, Hedeiba villages and Amara in the Gezira area the only available figures are obtained from 'The Social Survey for the Northern Area of the Rahad Scheme' prepared by Galal Eddien, M. Elawad, 1975. For the rest of the settlements estimates from the People's Rural Council Officials and the Village Council leaders for the rationed consumable goods were the only sources available.

A modified functional index was constructed to improve the accuracy of the classification. The original location coefficient used by Davies is difficult to apply because of the lack^s and inaccuracy of statistics. It is expensive, laborious and time consuming to count the number of all establishments of each function, in each of the 46 market centres visited. Thus it is necessary to modify Davies' index in this particular study. The method of constructing the modified index was to use the total number of functions rather than the total number of establishments. Accordingly, in the original formula

$$C = \frac{t}{T} \times 100,$$

T, the total number of establishments in each central function in a place, is replaced by the total number of times that function occurs in the market centres of the two areas. Accordingly, if a function occurs in 10 centres then it has a centrality value of $\frac{100}{10} = 10$. The amount of centrality contributed to the centre by the functions it possesses is obtained by the addition of the calculated centrality values of all the functions it has. Then, the centres are grouped according to their total centrality values. The centres with the highest centrality values will be at the top of the hierarchy. Centres with rare functions will have higher values and those with common or ubiquitous ones come at the bottom of the hierarchy. The results obtained for the two areas of study are shown in Table 6.3 and Fig. 6.3. A further attempt was made to refine the procedure by basing the calculations on only the Gezira data. The resulting ranking of market centres by total centrality value is shown in Table 6.4 and Fig. 6.4. As the arrangement of centres by group was similar to that shown in Fig. 6.2 and 6.3. together, this refinement was not considered in any more detail.

When the results shown in Table 6.3 and Fig. 6.3 are compared with those in Table 6.2 and Fig. 6.2, which show the total number of functions and not the centrality values, some market centres have different positions in the rankings. In the Gezira markets, Tabat replaced Meheiriba and a few other changes in rank occurred at the bottom of the rankings. After examining the results obtained, the centres were put into groups because groupings were evident and quite distinctive.

Table 6.3

The arrangement of Market Centres according to their Centrality value

Market Centres of the Gezira	Centrality value	Market Centres of the Nuba Mountains	Centrality value
Rufaa	670	Kadugli	926
El-Hosh	454	Dilling	779
El-Kamlin	445	Habila	139
Tabat	380	Heiban	127
Meheiriba	374	Farshaya	123
Abu Quta	292	Delami	122
Tambul	200	Umm Dorein	121
Futeis	182	Abri	113
Ribi	179	Kortala	103
Fureigab	174	Hamra	97
Hedeiba	133	Buram	91
Umm Shaneq	125	Kauda	90
Tekeina	99	Tarogi	88
Fahl	97	Karko	81
Amara	72	Berdab	80
Aulad Yasin	63	Angolo	80
Gedeidim	60	Deri	78
		Demik	68
		El Azrag	57
		Wali	56
		Kaiga Tummero	55
		Kalkadda	55
		Himedaya	50
		Tombera	47
		Teis	46
		Karandal	44
		Reikha	40
		Eiri	40
		Shat Safiya	33

FIG. 6 (4) ARRANGEMENT OF MARKET CENTRES OF THE GEZIRA BY TOTAL CENTRALITY VALUE

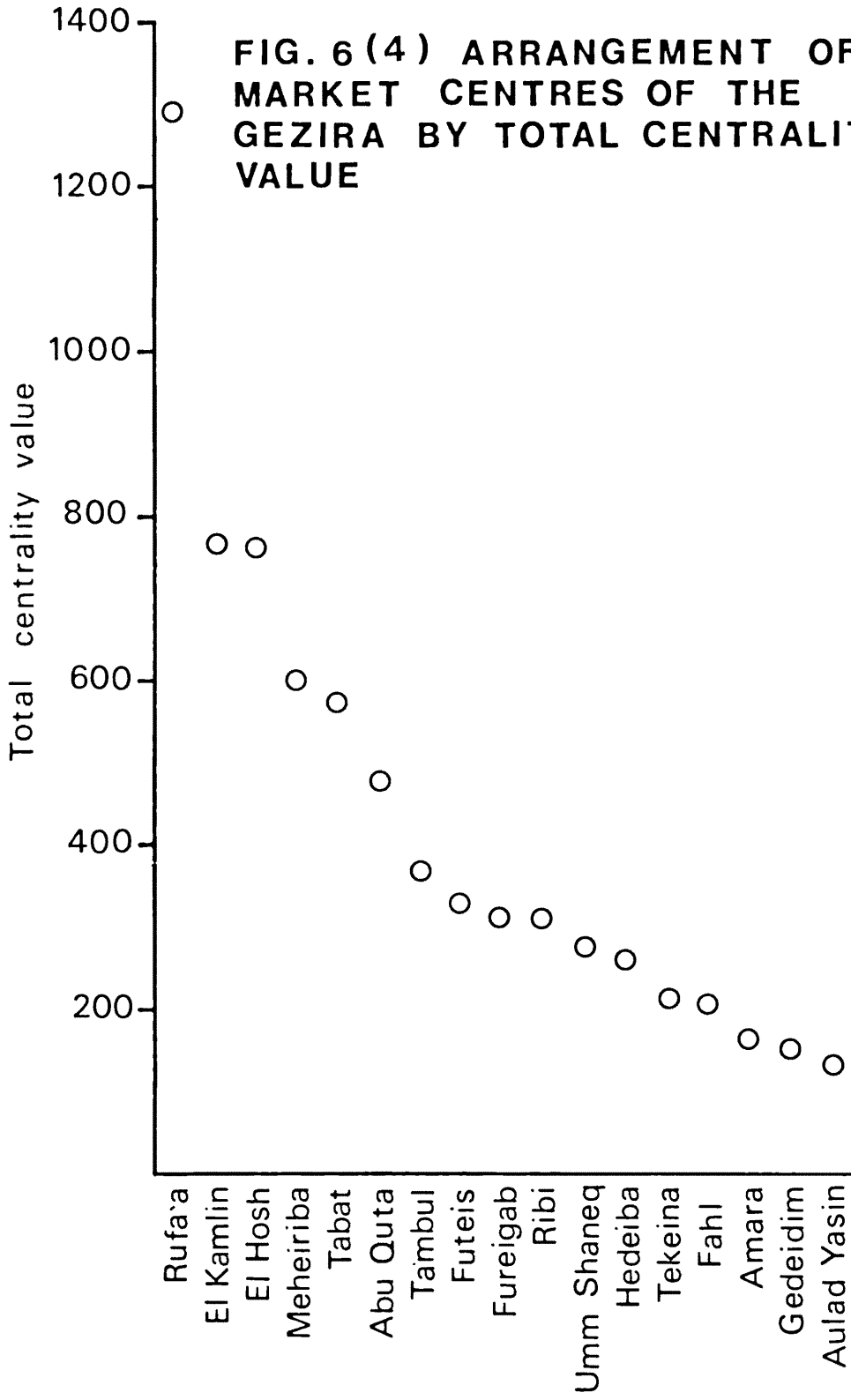


Table 6.4Market Centres of the Gezira by Total Centrality Value

<u>Market Centres of the Gezira</u>	<u>Total Centrality Value</u>
Rufaa	1287
El-Kamlin	766
El-Hosh	764
Meheiriba	598
Tabat	567
Abu Quta	478
Tambul	366
Futies	329
Fureigab	312
Ribi	310
Umm Shaneq	268
Hedeiba	254
Tekeina	213
Fahl	204
Amara	162
Gedeidim	148
Aulad Yasin	130

The most interesting result was obtained by comparing the two areas of study. The Gezira and the Nuba Mountains areas revealed contrasting groupings of settlement. The Gezira showed three complete classes of market centres with Rufaa as the largest. It is the Divisional Head of the Eastern Gezira District, and thus the highest order settlement. The next most important group contains five market centres. They all lie within the Gezira Scheme itself west of the Blue Nile (see Fig. 6.5). Although Rufaa shows far more importance and centrality than the five centres that follow it, on the national scale it is a third order settlement to Wad Medani, the Provincial Headquarters and Khartoum the country's capital. All market centres here obtain most if not all their goods directly from Khartoum. Only El-Hosh and Tabat depend on Wad Medani for some of their provisions. A third group of eleven market centres are next in the centrality scale. Of all these, only Tambul is a People's Rural Council centre. It is also close to the second order centres but still closer to the third order centres in the centrality value it possesses. The rest of the third order group members are all village councils and provide some lower order functions for the still smaller villages around them (see Fig. 6.7). These smallest hamlets and villages do not have markets and depend on the third order markets for their essential services.

On the other hand the Nuba Mountains area appears to contain only two identifiable groups of centres. Kadugli and Dilling are first order market settlements in the local scale. They sometimes depend on El-Obeid - the Headquarters of Northern Kordofan province - which still provides them with some of the wholesale consumable provisions. On the administrative scale, Kadugli comes second to Khartoum as it is the Provincial Headquarters of Southern Kordofan province. It is also the Divisional Head of the Southern Region of the province. Dilling is second to Kadugli and third to Khartoum on the national administrative scale, as it is the Divisional Head of the Northern Region of Southern Kordofan province (see Fig. 6.6). However, both Kadugli and Dilling are the most important markets in their own regions.

FIG.6 (5) THE SIZE OF MARKET CENTRES IN GEZIRA ACCORDING TO THEIR TOTAL CENTRALITY VALUE

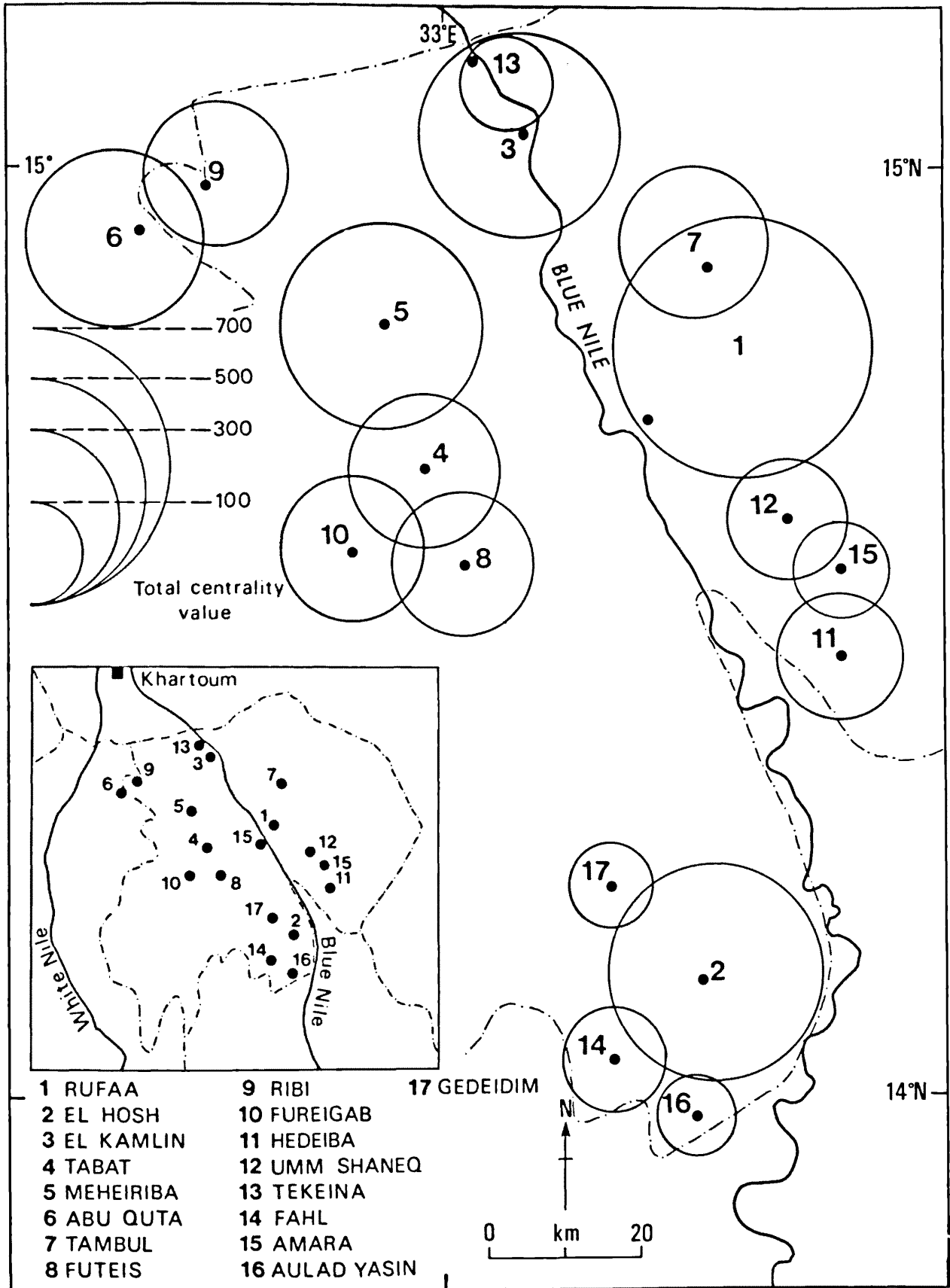
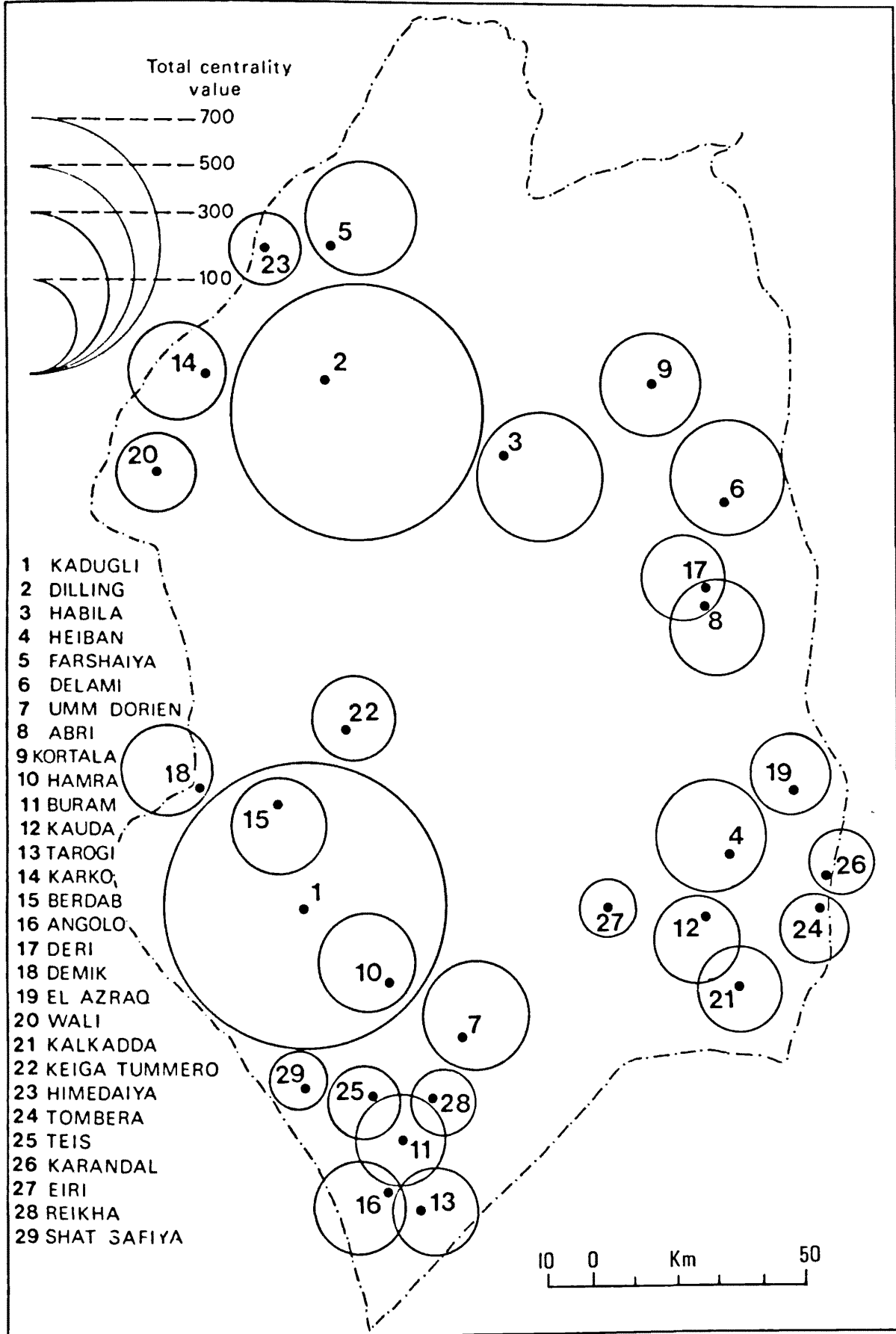


FIG.6 (6) THE SIZE OF MARKET CENTRES IN THE NUBA MOUNTAINS ACCORDING TO THEIR TOTAL CENTRALITY VALUE



The second group of market centres found in the Gezira appears to be completely absent in this area. The rest of the market centres (27) are equivalent in functional complexity to the third order market centres of the Gezira at the top of which are the Rural People's Council centres. The lowest order central market in the Nuba Mountains only has half the centrality index of the lowest order central market in the Gezira area.

In the Gezira area most of the groups are quite distinctive in terms of their centrality values, thus they show a comparatively well-developed hierarchical system with the majority of the market centres as third order centres (11), five second order centres and only one large centre. However, Abu Quta, the fifth second order centre, could be assigned to either the second or third order group. The problem was resolved by using Clark's method. The method was used to assign individual centres like Abu Quta into their classes, by subtracting the functional index values of the adjacent centres, bearing in mind that differences between groups' members should be equal to or less than the differences between members of different groups. (1) Accordingly, Abu Quta is closer to the second order group but it lies nearly half way between the second and third order centres. Eventually it was added to the second order centres as an "arbitrary adjustment of centrality values of not more than twenty percent of all centres is allowed if the system is imperfectly hierarchical". (2) The adjustment here is less than six percent, one centre out of seventeen.

The results give an indication of the spatial distribution of development as it is reflected by the distribution of services whether commercial, social or others. The difference between the two areas of study in this respect shows that services and central

1 Clark, P. J. and Evans, P. C. "Distance to nearest neighbour as a measure of spatial relationships in populations", Ecology, vol. 35, 1954, pp. 445-453.

2 Marshall, op cit, 1969, pp. 92-93.

functions are rather evenly distributed for most of the people of the Gezira. People in the Nuba Mountains have to travel to the highest order centre for most of their needs because their Rural People's Council centres such as Umm Dorein, Buram and Heiban can only provide less than half the functions offered by Kadugli, the largest town (see Figs. 6.3 and 6.6). The absence of an intermediate second order group of centres in the Nuba Mountains may be attributed to the following factors:

1. The general backwardness of the Nuba Mountains area as a whole if compared with the Gezira, and the southeastern part of the Nuba Mountains in particular.
2. Remoteness and difficulty of transport as the area is one of the most rugged and mountainous parts of the country (see Fig. 5.2).
3. The indigenous people of the area still form closed traditional communities with very limited desire for sophisticated needs and services.

When the central functions provided by the markets are set out according to their presence or absence, the results show a clear hierarchy. Some of the functions are ubiquitous, being present in all the 46 markets visited, such as minor motorable tracks and tailors, or in 45 of the markets, such as the general provision shops and flour mills (see Table 6.5). The above are present in high as well as in low order centres. Such functions are characterized by low population threshold. Other functions are more scattered, present in some places and absent in others. These include police stations, restaurants, daily butcheries, constant fabric provision, handicraft sales, and others. These are provided for a larger area including the population of the market settlement itself. Other more specialized functions are found in fewer places, mainly the second and first order settlements; these are permanent veterinary services, hospitals, radio repair, spare parts shop, watch repair and senior secondary schools for girls, judicial courts, District Police and Administrative Heads, etc. Some functions are only provided by the highest order

Table 6.5

The arrangement of central functions according to frequency of occurrence

Central functions	Frequency of occurrence	Central functions	Frequency of occurrence
1. Tailoring	46	31. Crop market	16
2. Foot and animal minor, motorable track	46	32. Dressing station	15
3. General provision shop	45	33. Wholesale shop	15
4. Flour milling	45	34. People's rural council	14
5. Motor road	41	35. Building material shop	14
6. Petty trader	38	36. Agricultural extension office	13
7. Elementary school (boys)		37. Livestock market	13
8. Elementary school (girls)	37	38. Petrol station	11
9. Blacksmith	37	39. Postal agency	11
10. Mosque or church or the two together	36	40. Permanent veterinary	11
11. Village council	32	41. Cooperative flour mill	11
Bakery	32	42. Pottery sales	11
13. Handicraft sales	28	43. Ready made clothes, cosmetics and perfume sales	11
14. Shallow well, Hafir, or borehole	27	44. Junior secondary school for girls	10
15. Constant fabric provision	27	45. Periodic weekly or twice weekly market	10
16. People's court	26	46. Hospital	9
17. Shoe repair	26	47. Periodic veterinary	9
18. Periodic butchers	26	48. Daily market	9
19. Police station	23	49. Radio repair	9
20. Tea shop	22	50. Spare parts shops	9
21. Junior secondary school for boys	54. 21	51. Electricity	9
22. Sports playing grounds	21	52. Senior Secondary school for boys	8
23. Daily butchers	20	53. Daily market with one big day	8
24. Straw mat sales	20	54. General purpose cooperative	8
25. Carpentry		55. Motor repair	8
26. Daily market with two big days	19	56. Watch repair	8
27. Restaurant	19	57. Book shop	8
28. Social club	19	58. Furniture shop	8
29. Water tap	19	59. Senior secondary school for girls	7
30. Dispensary	18	60. Jewellery	7
		61. Photographic studio	7
		62. Loudspeaker service	7
		63. Welding (mainly sophisticated)	7

Table 6.5 - ctd.

64. Drug store	6	71. Licenced bar	4
65. Post, telegram and telephone services	6	72. Divisional police offices	3
66. Judicial court	6	73. District headquarters	3
67. Ministry of education offices and above senior secondary institutes	5	74. Bank	3
68. All weather road	5	75. Dental clinic	3
69. Battery recharging	5	76. Provincial head- quarters	1
70. Cinema		77. Provincial police offices	1
		78. Provincial court	1

centres and those are found in the most important and accessible places to serve the whole population of the smallest villages as well as the central town's population. These include drug stores, dental clinics, banks, furniture shops, photographic studios, Provincial Police Offices, Provincial Headquarters and high courts.

6.5 Description of the spatial linkages between market centres

The development of the markets and their tributary areas allows for their arrangement into hierarchical groups. Five groups of markets are identified in the Gezira. Within each group a difference in the number of functions provided and centrality values reveal a hierarchy. In the Nuba Mountains six groups are shown. Table 6.6 and Figs. 6.5 and 6.6 show the details.

The hierarchy established by the analysis of centrality values provided above was clearly confirmed by the use of the market analysis technique.⁽¹⁾ For the application of this technique the information given by the market visitors, semi-permanent traders and shopkeepers about their villages, origin and sources of their customers and goods was used. The information obtained is summarised in Figs. 6.7 to 6.8⁽²⁾ which illustrate the actual hierarchies and spatial relationship between the markets themselves and the population they serve from the smallest villages in their complementary regions. Thus, settlements are assigned to higher order places on the basis of which centres the traders obtain their supplies from, and from which lower order places visitors to the larger centres originate. The market analysis technique reveals best the existing integration and interdependence of market centres within their areas.

1 Dickenson, R. E "The Regional Functions and Zones of Influence of Leeds and Bradford", Geography, vol. 15, 1929/30, pp. 548-557 and Berry, B. J. L., Geography of Market Centres and Retail Distribution, 1967, pp.10-23, Prentice-Hall.

2 The method of illustration in these figures is adopted from Barker, D., "The Development of Central Places with Special Reference to the Towns of South West England", Ph.D., Bristol, 1976.

Table 6.6

The groups of markets within their own regional contexts

Market centres of the Gezira	No. of functions	Central values	Market centres of the Nuba Mts.	No. of functions	Central values
Rufaa	62	670	Kadugli	65	926
Tambul	37	200	Berdab	23	80
Hedeiba	29	133	Demik	20	68
Umm Shaneq	28	125	Kaiga Tummero	17	55
Amara	17	72	Heiban	28	127
El-Hosh	56	454	Kauda	22	90
Fahl	23	97	El-Azreq	15	57
Aulad Yasin	16	63	Tombera	13	47
Gedeidim	16	60	Karandal	12	44
El-Kamlin	54	445	Eiri	11	40
Tekeina	19	99	Umm Dorein	24	121
Meheiriba	51	374	Hamra	24	97
Abu Quta	46	292	Euram	24	91
Ribi	35	179	Tarogi	21	88
Tabat	49	380	Angolo	18	80
Fureigab	35	174	Reihka	11	40
Futeis	35	182	Teis	11	46
			Shat Safiya	9	33
			Dilling	63	779
			Farshaya	29	123
			Habila	28	139
			Karko	20	81
			Wali	15	56
			Himedaya	12	50
			Delami	27	122
			Kortala	26	103
			Abri	26	113
			Deri	20	78

FIG. 6 (7) INTERDEPENDENT MARKETS & VILLAGES OF GEZIRA: HIERARCHICAL SCHEME SHOWING RUFAA, TAMBUL, UMM SHANEQ, HEDEIBA and AMARA

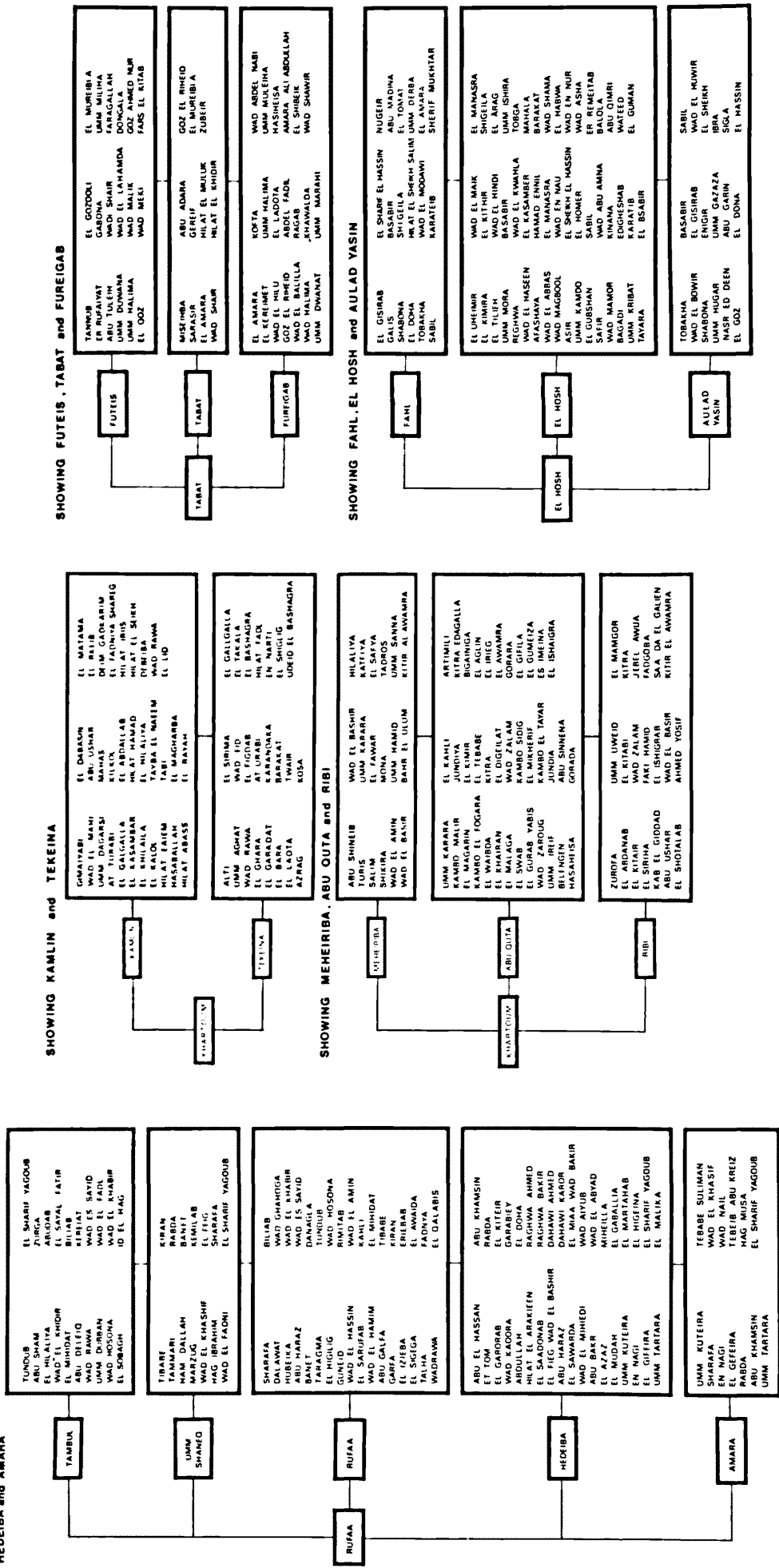
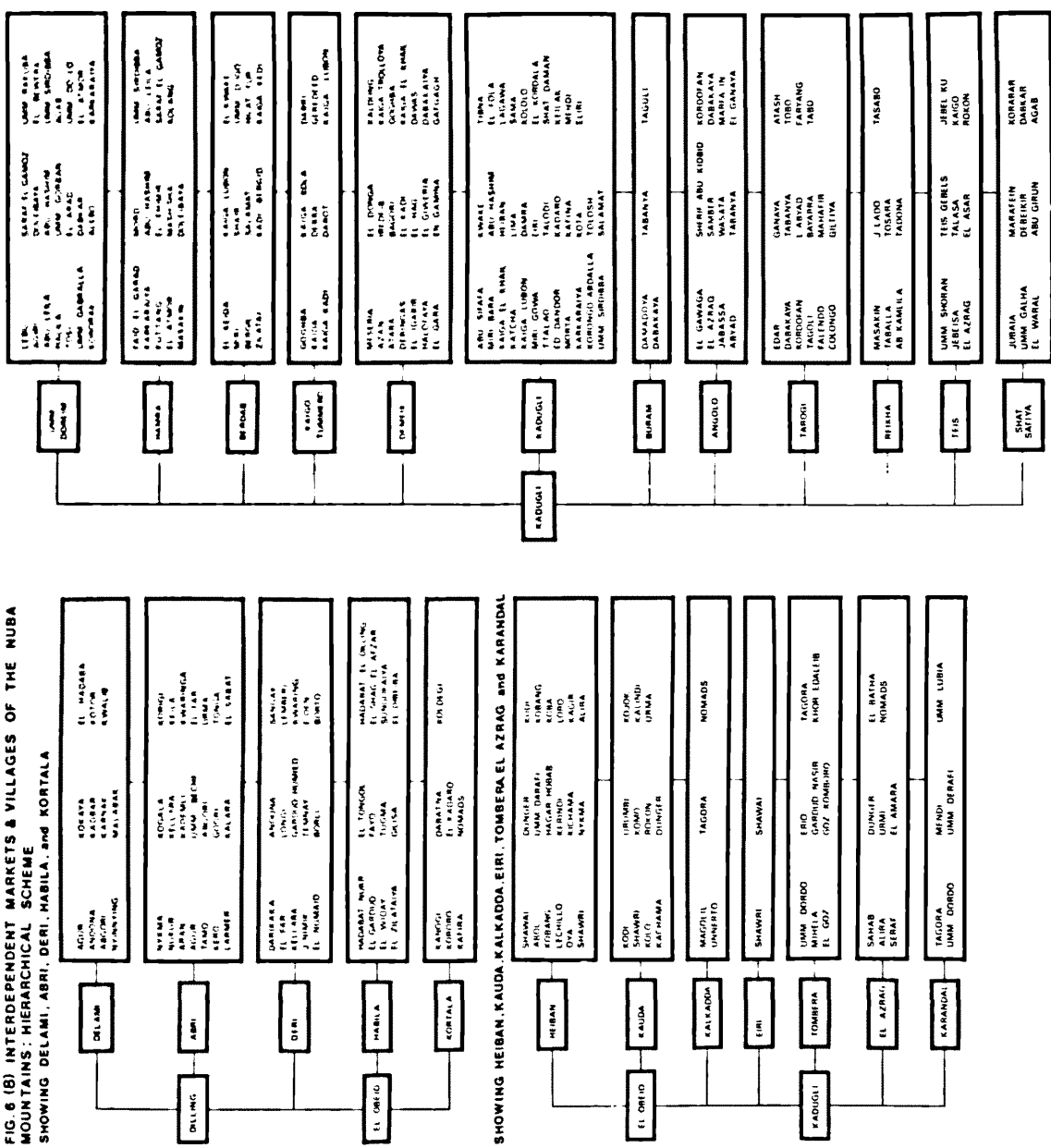
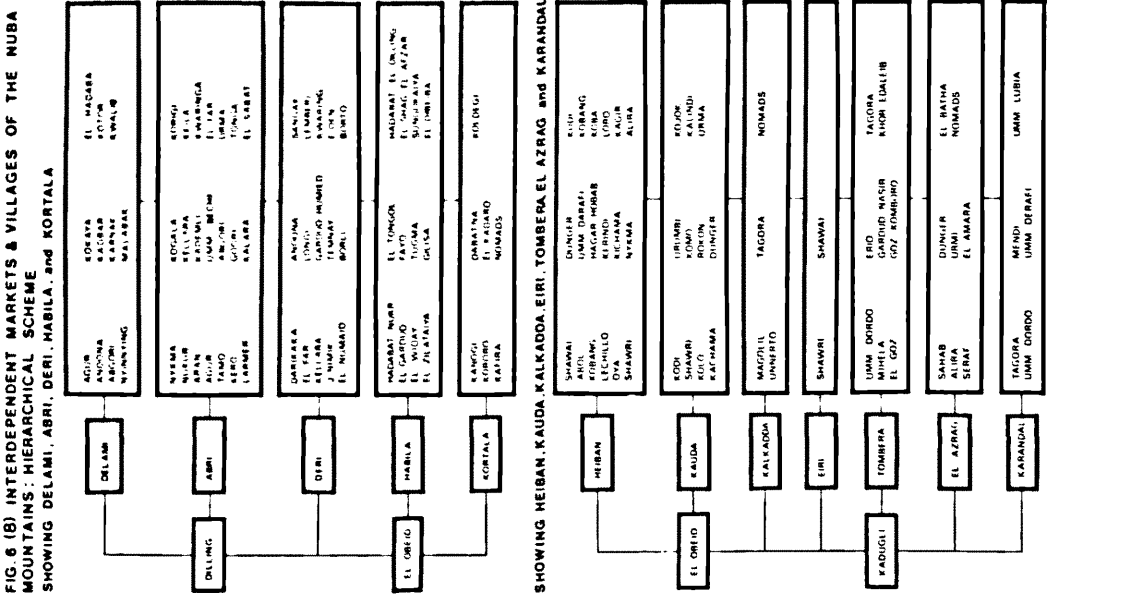


FIG. 6 (B) INTERDEPENDENT MARKETS & VILLAGES OF THE NUBA MOUNTAINS: HIERARCHICAL SCHEME



SHOWING UMM DOREIN HAMRA BERDAB KAIGO TUMERO DEMIK. KADUOLI BURAM ANGOLO TAROJI REIKHA TEIS and SHAT SAFIYA



SHOWING KARRO, WALI, DILLING, FARSHAYA and HIMEIDAYA



In this study the analysis emphasises the delimitation of the market areas regarding all varieties of goods and services they provide, within their alternating periodic market cycles, rather than the impossible emphasis on one particular market centre for a particular type of goods and services. The periodic marketing is complex and it differs from the daily marketing of the permanent central places of the western world. Most of the markets that operate periodically are organized in rings to serve the population evenly and to limit the competition between themselves. The most common arrangement is that three markets group together to operate two days a week for each. The 19 daily markets with the two big market days (Table 5.1) serve their own population daily, and provide special extra services for the population of their complementary region during the big suq days. This is particularly clear in the Gezira area where the system was well established a long time ago. The two days of each market are either Saturday and Tuesday, Sunday and Wednesday, or Monday and Thursday. Friday is normally for rest except in places where four markets operate or when an extra market is added. The newly organized market would choose Friday only or with another day of the week.

The central place system described above rendered the process of mapping the villages collected by the market analysis technique in relation to a specific central place market area impossible. The reasons for this difficulty are: firstly, where periodic market meetings are dominant, there is great overlap as the markets operate on alternating days. Most villagers visit at least two markets a week. Secondly, although there is every confidence that the village and place names mentioned by the respondents are true existing entities in the form of villages, hamlets or nomads' camps, some of them do not appear on the available maps.⁽¹⁾ This is either because they are too small to be shown or because they are recently established

1 This is a problem of many of the developing countries, see for example Good, C.M., op cit, 1970, Rural Markets and Trade in East Africa.

settlements. The available maps date back to the fifties and early sixties and sometimes to earlier dates. This is particularly applicable to the Nuba Mountains, where the settlement system is still under continuous evolution and development. New communication networks and administrative boundaries are usually inserted on the existing 250,000 scale maps without updating the settlement system. Mapping these details is a laborious and an expensive operation which lies out of the scope and resources of this study. Nevertheless, the market analysis technique is useful for delimiting the area of influence of market centres and central places, which could be of great value for practical planning purposes as it is suggested in the concluding chapter of the present study.

6.6 Attraction of market centres for the population of their hinterlands

As previously mentioned, it is both difficult and misleading to measure by the size of their market settlement population, the actual size of the commercial activity that takes place in local Sudanese markets. This is because the markets always attract and serve more people than their immediate population. The number of the permanent shops could also be misleading. Most of the exchange in the periodic markets is carried out by semi-permanent traders who do not occupy any buildings at all (see Table 8.8). Some exchange is also carried out by market visitors. Turnover statistics are impossible to obtain, book-keeping in the rural markets is either very poor or not available at all. The fear of jeopardising the whole study by asking too many detailed questions about income and turnover is another reason for the difficulty in collecting turnover statistics. Nevertheless, some estimates of the population attracted by markets could give an idea about the size of the commercial activity of a few markets on market days.

First order markets such as Rufaa, Kadugli and Dilling serve all the population of the administrative districts they head. This is not less than 150,000 people including their own population which is about 20,000. Second order markets may well serve between 10,000 to 15,000. Third order markets may serve between 2,000 to 5,000 people, if not more.

Tambul market in Eastern Gezira serves a mainly nomadic population of the Butana and Eastern Gezira. It also serves some of the population of the Gezira scheme west of the Blue Nile. It is at the top of the third order markets, See Figs. 6.2 and 6.3 and 6.4. The market centre has 37 central functions, an estimated population of 8000 people and serves about 10,000. Its livestock market could have about 50 to 60 camels, 100 cattle, 200 sheep, 500 goats and 60 donkeys all brought for sale especially on market days in the peak seasons. Usually about one third of the livestock brought in is sold. Annually the market is said to handle most of the crops produced by the rain cultivators as well as that produced in the irrigated area not far from the market centre. The produce that reaches the market was estimated as 10,000 sacks of sorghum and 200,000 sacks of groundnuts, each sack is about 90 rottles in weight.⁽¹⁾ The total produce handled in this market is about 10 thousand tons. See Plate 9

Umm Shaneq market is a third order market in eastern Gezira. The market place has 6 permanent shops and restaurants. It was visited on a Sunday (one of the market days) at 9.40 a.m. At the time there were 13 lorries, 3 large buses and 4 small buses at the truck park. All these could transport about 900 at the African standard full capacity. In the peak season cars would sometimes make more than one trip to the nearby villages to bring people and goods to the market.

The market also handles some livestock trade. At peak seasons about 20 camels and a similar number of cattle, 600 sheep, 100 goats, and 20 donkeys turn up to the market on market days and one third of the number is sold.

In the markets of the Gezira scheme the number of people that visit the markets rises three to five-fold the number of non-market days. Abu Quta in Northern Gezira is a second order market with 80 permanent and 31 semi-permanent shops at the time of the fieldwork. The increase of the number of market participants is

¹ 1 ton is 2222.22 rottles



Plate 9 Tambul Market of Eastern Gezira on a market-day

shown by a butcher's sales. In a good market day, the meat of 17 bulls and 3 to 4 sheep is sold. In non market days, 8 sheep are slaughtered. People visit the market from as far south as Tabat, as far east as Rufaa and as far west as the Manaqil extension.

The most western markets visited are Futies and Fureigab between the Gezira scheme and the Manaqil extension. In Fureigab a butcher said that on non market days his slaughter is 1 bull and 2 sheep, on market days it is 5 bulls and 4 sheep. In Futeis the increase is from one bull and 4 sheep to 4 bulls and 4 sheep. Both the above markets are third order markets. The figures do not show the exact population number, but give an idea of the increase in commercial activity during market days. It is also apparent that larger markets such as Tambul and Abu Quta are more attractive than small ones.

CHAPTER SEVEN

The Role of Markets in the Development Process

7.1 Introduction

It is now relevant to discuss answers to two questions. Firstly, does the presence of a local market help the provision of more social services (such as schools, health services, provision of drinking water) or increase administrative importance? Secondly, do the local markets aid the diffusion of knowledge for general advancement: in farming, in the adoption of machinery, in changing social habits (such as wearing clothes in the Nuba Mountains, driving vehicles, etc.)?

7.2 The Experience of Sudan among other Developing Countries

On a wider scale the role of markets in the socio-economic life of agricultural societies is recognized by earlier studies. Skinner studied the central places in Southern China as they are readily analysed on the assumption that the economic functions of a settlement are considerably associated with its position in the marketing system, which itself exhibits a regular hierarchy of:

- a) standard markets
- b) intermediate markets
- c) local city
- d) regional city. (1)

They carry out various functions from serving peasants (standard markets), up to being central markets (regional city), providing strategic transport functions, distributing imported goods as well as exporting the internally produced goods. Charles Good stated that in some parts of Kenya, markets are serving as focal

1 Skinner, Op Cit, 1964

points of growth in an area in which real towns are a rarity. They could be the beginning of Central Places in an African agricultural context or the market hamlets as mentioned by Christaller. (1)

Hodders observations proved even more than that, as sometimes the establishment of a market on a road junction or at cross roads leads to settlement establishment and this sometimes happens at the expense of other parent settlements. Markets had also evolved from what were originally resting centres along the long distance caravan routes in ancient Yorubaland. Hodder also mentioned the stimulation of food production in the vicinity of the newly growing markets. The newly developing towns of Somaliland were originally old market villages founded by Arab traders at intersection points of the main caravan routes. (2) The significance of markets in the socio-economic life of the tropical communities, and the relationship between market development and increase in agricultural production was also pointed at by the same writer. (3) In Central and Eastern Africa in the pre-colonial times, trade had greatly helped to raise the standard of living, the range and volume of goods produced and increased the wealth that could accumulate. (4) The growth of a merchant community linked with commerce was considered as one of the most important aspects of social development in West Africa in earlier times. Here, market towns where transactions are carried out sometimes existed to provide the beginnings of urbanization and a demand for more subsistence produce. Daily markets develop to provide food for the local inhabitants and travellers. (5)

1 Good, Op Cit, 1970, p.59

2 Hodder, PhD Thesis, Op Cit, 1963, pp.51-53 and Hodder, Op Cit 1965, pp.97-105

3 Hodder, B.W., Economic Development in the Tropics, 1973, London, pp.201-203

4 Gray, Richard and Birmingham, David, in Gray and Birmingham (eds.), 1970, Op Cit, pp.1-23

5 Meillassoux, Claude, 'Introduction', The Development of Indigenous Trade and Markets in West Africa (ed.) Meillassoux, Claude, 1972, pp.49-86, ref. pp.67 and 64

In Latin America, in Bolivia, the development of new markets and marketing relations after the land reform in 1952 was considered as a sign of economic development.

"For example, a greater number of markets with an increased number of peasants participating in them on a cash basis signifies a greater frequency of contact between peasants and buyers from the city. A result of this is that new channels of communication are created. Markets and commercial contacts can be a source of change in attitudes and of expansion of social, political and economic horizons, leads to new wants, purchases and consumption patterns. It also acts as a stimulus to the manufacture of commodities for a mass market..... Development within the agricultural sector, has been stimulated by the creation of new markets for agricultural products in precisely those areas where the land reform took place. Those small but growing markets for agricultural products are for all kinds of fruits, vegetables, coffee, wheat products (such as bread and noodles), sugar, rice, corn, corn flour, wheat-flour, and soft drinks and beer..... regional and national markets have been created which have given and may continue to give a significant impetus to economic development over the coming years. (1)

In new nations such as Papua New Guinea, which had independence only in 1975, markets were first established by the Australian Government to organize and ensure the provision of food products by the rural population to satisfy the needs of the urban dwellers who are mostly administrative staff. The market regularization ensured the provision of hygienic and clean newly introduced food crops and vegetables. The presence of these markets was advantageous to the authorities since new seeds could be distributed through them.

As more development takes place markets themselves show rapid signs of change. They grow bigger and tend to meet more often and the consumers behaviour changes as well. The same writer observed that the distance travelled to the market in 1967 was 11.3 kilometres

1 Clark, Ronald J., 'Land Reform and Peasant Market Participation on the North Highlands of Bolivia', Land Economics, vol.XLIV, May 1968

in average, in 1973 it was 17.5 kilometres. In 1967, 53 percent of the sellers walked to Mount Hagen market, by 1974 only 39 percent did. Even the frequency of market meeting days is increasing and there is a tendency towards daily marketing. The most innovative role of the market had been proven in this particular case by the increasing adoption of new crops. The author concluded with the fact that the markets of the highlands of Papua New Guinea show an obvious development with a minimal cost and extension work.

"The town markets find themselves attracting over 20,000 people every week, to be centres with enormous potential for the diffusion, if not of European seeds, of new internally generated ideas, to be a gigantic social success whose gross turnover exceeds A\$ 1 million a year. These markets and the many small rural markets have all developed in the last 15 to 20 years with little official encouragement." (1)

In many other developing countries the important market settlements also provided vital administrative and cultural functions for the surrounding population. (2) Bromley writing about markets in the developing countries whether daily or periodic, realized that they are the most important features where they may have a significant central place function. He also emphasized that differences in their sizes result in their hierarchical arrangements. Typical central place hierarchies may become rearranged by improved transport. For Bromley the importance of the internal trade is because it involves a far greater proportion of the population than does the export sector of the economy. Goods handled are also more than those handled in the external trade. This is applicable to the Sudan case as well as to the other developing countries. Internal trade and the mechanisms of commodity distribution

1 Jackson, R., "The Impact of the Introduction of Markets: A Case Study from the Highlands of Papua New Guinea", Savanna, 1976, vol. 5, no. 2, pp.175-182

2 Hays, H.M., Op Cit, 1976

as a whole are as important as the mechanisms of production. Internal trade centres are nodal points to and from which flows of commodities are directed. (1) Although some periodic market places in the developing countries could be found in places like communication nodes but away from settlements, they still work as central places. This could be because they serve dispersed nomadic tribes, as in Morocco. (2) The Hedeiba market in Eastern Gezira is located on high ground in the middle of a group of settlements which are not less than about two to five kilometres from it. It was originally serving the nomadic tribes of the Butana (see Figure 7.1). Other reasons for the location of markets away from settlements may go back in their history. When markets grow to serve villages which are enemies or rivals, they have to grow on neutral ground to prevent trouble between the competing villages.

The above briefly reviewed evidence of the importance of markets, whether in affecting peoples' ways of living or in changing and advancing ways of life, has clarified the cases of some nations in the developing parts of the world. Evidence from Sudan so far is slight, for studies of Sudanese markets are still in their infancy and only limited work in this field of geography has so far been done. A paper published in 1971 concerning the urban shopkeeper as an agent of change is the first known. (3) The authors indicated the village shopkeeper as an ambitious person of peasant origin who migrated while young to work in one of the cities, as an errand boy or a domestic servant or other jobs of the same nature. After he had

1 Bromley, R.J., "Markets in the Developing Countries: A Review", Geography, part 2, 56, 1972, pp.124-132

2 Micksell, M.W., "The Role of Tribal Markets in Morocco, Examples from the 'Northern Zone'", Geographical Review, vol.XLVIII, 1958, pp.494-511

3 Yousif Hassan Saeed and Osman Hassan Saeed, "The Urbanized Village Shopkeeper, An Agent of Change", African Urban Notes, 1971, p.141

saved some capital he returned to the village and became engaged in farming and in petty trading of manufactured consumable goods. These goods seem very simple to the western mind but were non-existent either altogether or at least as saleable items about the turn of this century. By starting his small business this shopkeeper created the desire in the local people for new goods. If he did not initiate and continue in carrying this function, those subsistence farmers would have remained as they were three-quarters of a century ago. The creation of new needs made people produce for cash and contribute to, and participate in, the exchange economy. The shopkeeper also provides another service by accepting very small quantities of the farmers' produce in exchange for the goods he provides. He bulks what he collects, stores it and transports it to bigger urban dealers if it is economically feasible. This links the rural producer to the urban consumer. As a member of the village society his contacts with his consumers are not only trading ones, for he is obliged to lend his money when it is badly needed or he would endanger his status. In most cases shopkeepers, being the most acquainted with the urban people and with how to deal with administrative and government authorities, are always chosen as leaders and village representatives whenever this is needed. As the village shopkeeper needs people's support to compete for the leadership of a group of villages in some cases, he has to be helpful to gain people's confidence.

The authors even suggested that the village shopkeeper is a good substitute for the village co-operative, as they found that the co-operatives are an expensive and impersonal alternative and they also need strict control and support from the government. On the other hand, the shopkeeper is found to be an independent, effective and influential force in the adoption process in agricultural practices

and techniques, than the "designated government official, who had at his disposal tremendous modern facilities." (1) The usefulness of the shopkeeper as an innovator is centred on the fact that he innovates on his own farm. The evidence cited by the authors was the spread of the application of nitrogenous fertilizers which had taken place when the material had been used by some shopkeepers or deposited in their shops. If the shopkeeper's role is compared with that of government inspector, the latter's influence is less significant and less influential in affecting people's behaviour in general as their contacts are always short and too aloof to be of direct significance in influencing people's lives. According to the observations from the five months period of the author's fieldwork in the two areas of the present study, it was found to be very difficult not to support the points raised by the authors of the paper cited above. A utilization of the present role of the village shopkeeper for more advancement could be organized by extending his efficiency through more and proper agricultural extension training, health education programmes and mobilization of savings.

Another author found that the substantial change from a subsistence to a commercial economy in the Northern Province of the Sudan, took place without large scale government intervention in agricultural planning. Here both town merchants and village shopkeepers played a major role in the expansion of agricultural production. That took place through their direct investment in agriculture, the introduction of machinery and their involvement in agricultural co-operatives. (2)

1 *ibid*, p.47

2 Omer, El Hag Abdalla Billal, "Rural Trades and Socio-economic Transformation in Dongola Area, Northern Province", Op Cit, 1976, pp.1, 7, 28-30

The other study which has recognized traders and markets as active agents of rural change concerned Umm.Rwaba area in Northern Kordofan Province and El Fashir area in Northern Darfur Province. The researcher had pointed out that until the beginning of this century the people of Kordofan, Darfur and the three Southern Provinces were completely closed from any developmental influences whatsoever. It was not until the 1920s, when lorry transport was introduced by the British government, that these areas were exposed to slow development, as it initiated the immigration of petty traders, locally known as Jallaba, from the north. This stimulated production for cash as the market was ready for the new produce. Money was also needed to buy the newly introduced goods provided by the immigrant traders. (1)

The goods in the Nuba Mountains varied from beads, cowrie shells, vegetable oil, salt and metal or iron hoes in the late 1920s and early 1930s to the more sophisticated and diversified goods seen in the markets of the Nuba during the fieldwork period (December 1977 to mid-March 1978). The manufactured goods displayed by the shops and the markets during this period included hundreds of goods which were not known in the area until the first or second decade of this century: needles, safety pins, mirrors, spoons, glasses, enamel and aluminum household utensils, chinaware, dry batteries, flashlights and torches, bicycle spare parts, screws and nails, face creams, cheap cosmetics, perfumes, earrings and bracelets, head scarves, nail polish and a variety of sophisticated goods from different parts of the world as far away as China and Japan. Clothes were not used in this area at all before the late 1920s. In the 1940s and 1950s, the traders said that the only fabrics they displayed in the market were

1 Mohamed, Y.A., "Some Spatial Aspects of Rural Change in Western Sudan: The Case of Eastern Kordofan and El Fashir Districts", PhD Thesis, Liverpool, 1975

cheap coarse cotton material. Now the most sophisticated, colourful, fine materials for women's dressmaking are among the important items for trade. This fact makes the development of rural markets and the immigrant petty traders qualify as contributors to the slow process of rural change in the remote areas of the Sudan as well as in other developing countries.

The main purpose of this study is the examination of the role of the local markets in the rural people's way of living and their significance in changing and advancing those people's ways of life. This study has been stimulated by the above-quoted studies, whether they concern the Sudan or in the wider sense as applicable to many of the developing countries. What must be stressed is that social change is very difficult to quantify, even if it is evident, because it is sometimes intangible and slow. Socio-economic development signs may arise from a variety of things as they are relative. In the primitive natural societies it could be deduced from the mere use of simple trivial daily consumables like soap or shoes and clothes or anything which is not locally known or traditionally produced in an area. It could mean substituting living in caves by living in homesteads in some parts of the Nuba Mountains. It could also mean the use of the bicycle, radio, and motor transport and the use of electric torches, of metal furniture, toothpaste and toothbrushes, soap, and new food crops and vegetables not necessarily imported from abroad but imported from other parts of the same country. It could also mean the use of fertilizers and mechanization to increase production. In some studies of northern India (Punjab area), "the diffusion of consumer goods such as electric fans, sewing machines, watches, radios, as well as the consumption of bread and biscuits was used as a guide to rural development." (1)

1 Barbara Harriss, "The Role of Punjab Wheat Markets as Growth Centres", The Geographical Journal, vol.140, part 1, p.68

7.3 Does the Presence of a Market help the Provision of more Services?

To answer the question whether or not the presence of a local market helps the provision of social services together with its importance as a marketing or commercial centre, the answer is briefly 'Yes'. In the rural areas of Sudan most if not all of the schools started as boarding schools at the beginning of this century. The presence of the market was considered important to provide the pupils as well as the teachers, who are in most cases from other villages and towns, if not from a completely different part of the country, with their needs. These needs are mainly food, with other services like tailors, shoe repairs and barbers also needed. Administrative as well as military and police staff for the establishment of the first administrative centres needed the presence of a market. At the beginning the encouragement of the riverain petty traders was not planned for by the British government as the exploitation of the native Nuba and conversion to Islam was feared. On the other hand the presence and provision of supplies needed for the staff and civilians proved impossible without the presence of the traders in the area. Then licences were given and traders were allowed to settle.

The presence of the government staff necessitated the establishment of dispensaries and dressing stations and the provision of drinking water. Then more services clustered around the original market, demonstrating the pull of the increasingly powerful core area. This is applicable to most of the administrative centres in the Gezira and to almost all of those in the Nuba Mountains, as settlements or urban centres in the present sense were not known in the area before the British rule.

Recently, and after the present government came into power in 1969, the Local Government Act was passed in 1971 and village councils were formed as the smallest administrative units in a hierarchy rising to the province headquarters. The presence of a market is a very important qualification for the formation of a village council after the required minimum of 2,000 inhabitants. For the newly established councils the market days and places or buildings are the times and location for meetings. People are always easy to contact then and there for the registration for the elections and the estimations for the supplies of government controlled consumables and goods. Collection of taxes, contributions and payments for self-help projects are also easy on market days and in market places. In some places in the Nuba Mountains, such as Tombera, Karandal, Eiri, El Azrag in Heiban People's Rural Council, markets were established and market days were fixed in 1971 because village councils were needed. Every village with a village council in this People's Council area has a market (at the time of the fieldwork) but not the reverse. Sometimes both markets and councils operate in semi-permanent stalls or no buildings at all. The importance of the presence of the market for the village councils in this area is because it is a very hilly area with the villages scattered on remote inaccessible hillsides. The area is inhabited by the Tira, Otoro and Allira Nubas. The first outside contact took place through the Missionaries and many of the people are Christians, some are Muslims but the majority are pagans. The first market was formed about 1932/33 or 1934 by the mission at Kauda for the leprosy patients to produce and exchange for themselves. The market is still there held at the same day (Tuesday) in the afternoon while another one, a kilometre away, takes place in the morning. The leprosy colony and market was moved to Naykma in 1947/48. (1)

1 Personal interview with the Tira 'Mek' or chief during the fieldwork period in Heiban Town.

However, the importance of the village councils for their villages is that they are taking over the responsibility for the development of services such as dispensaries, schools, police stations and co-operatives from the government. The government stopped the provision of these services with the excuse of lack of funds. The village councils could collect contributions and carry the responsibility of building and providing self-help services. The members of the village councils are chosen from among the people themselves for this purpose. Government officials are only at the People's Rural Council which controls the village councils. In the Gezira area village council members were met and interviewed as market visitors. Their purpose in the market was the collection of contributions for their villages' electrification and provision of tap water. In the Nuba Mountains, police stations, schools, dispensaries and wells have been built by the village councils. Though the building material used is the local straw and wood, the presence of these amenities make the villagers keener to develop and repair them. The government only interferes to provide the teachers, the medical assistants and the policemen or to pay for the completion of any very expensive projects. In most cases the leaders of the village councils are the traders who are relatively appropriate representatives for their people.

The evidence cited above of the operation of the village councils mainly through the markets indicates the participation of the markets in the distribution of political knowledge as well as general information necessary for both daily and longer term decision-making.

To illustrate the fact that villages which have markets tend to attract more services than villages without markets, the services present in the villages of Kadugli Peoples' Rural Council of the

Table 7.1

Services present in some Villages of Kadugali Peoples' Rural Council
in Southern Nuba Mountains (1978)

Village Name	Educational	Health	Drinking water	Commercial	Flour Mill	Admini- strative	Other
1 Abu Sifafa	No	Services	At	All			
2 <u>Miri Bara</u>	Elementary school Boys	Dressing Station	Reservoir		Co-operative Mill	Village Council	
3 * <u>Keiga el Kheil</u>	Elementary School Girls and boys	Dressing Station	Seasonal Stream	Few shops + peri- odic market, cot- ton market	Private mill	Village Council	Postal agency
4 <u>Miri Gowa</u>	Elementary school Boys	Dispensary	Bore hole	-	-	Village Council	-
5 <u>Dandor</u>	Elementary school Boys	Dressing station	Bore hole Shallow wells	2 shops	Private mill	Village Council	Forestry station
6 Karkaraya	Elementary school Boys	Dispensary	Hafir	Few shops	Private and Co-operative mill	Village Council	
7 Korongo	Elementary school Boys	Dispensary	Seasonal stream	2 shops	-	Peoples' Court	-
8 ** <u>Keiga Tummero</u>	Elementary school Boys and girls	Dispensary	Shallow wells	6 shops + peri- odic market, pe- riodic butchery, cotton market, tailoring	Private mill	Peoples' Court + Village Council	Social Club
9 ** <u>Demik</u>	Elementary school Boys and girls	Dispensary	Bore hole Shallow wells	9 permanent + 6 semi-permanent periodic markets, tailoring, ba- kery, handicrafts sales	Private mill	Peoples' Court + Village Council + Police Station	Postal agency
10 ** <u>Berdab</u>	Elementary school	Dispensary	Bore hole	13 permanent + 6 semi-permanent markets, bakery, blacksmith, tail- oring, carpentry	Private mill	Peoples' Court + Village Council + Police Station	

Source: Fieldwork 1977/78

* village with a twice weekly market but not visited during the survey

** villages with twice weekly markets visited during the survey

Table 7.2

Services Present in some Villages of Abu Haraz Peoples' Rural Council
in Eastern Gezira (1977)

VILLAGE NAME	EDUCATIONAL	HEALTH	DRINKING WATER	COMMERCIAL	FLOUR MILL	ADMINISTRATIVE	OTHER
1 DAHAWI KAKOK	Depend on Raghwa and Wad el Ubeid	Depend on Abu el Hassan	One well	Depend on Hedeiba Market	-	-	-
2 DAHAWI BAKIR	Depend on Raghwa and Wad el Ubeid	Depend on Abu el Hassan	One well	Depend on Hedeiba Market	-	-	-
3 WAD AYUB	Depend on Abu el Hassan	-	Shallow well	2 small shops, one licensed	-	-	-
4 EN NAGI	Elementary school Boys and girls	Dressing Station	bore hole	2 licensed shops	-	-	-
5 RAGHWA BAKIR	Elementary school Boys and girls	Dressing Station	Shallow well	4 shops, bakery	Private mill	-	-
6 UMM KUTEIRA	Depend on En Nagi and Amara	-	Shallow well	4 shops, 3 licensed	-	-	-
7 ABDEL BACI							
8 KHAMSIM	Depend on En Nagi and Amara	-	Bore hole	3 licensed shops	-	-	-
9 AMARA**	Elementary school Boys and girls Junior school boys	Dressing Station	Water tap	7 licensed and 4 not licensed shops 2 butcheries, periodic market, bakery	Private mill	Village Council	Mosque Local bar
10 HAG MUSA	Elementary school Boys and girls	-	Shallow well	5 licensed shops	-	-	-
11 EL TOM**	Depend on Abu el Hassan	Depend on Abu el Hassan	From river bed	Depend on Hedeiba Market	-	-	-
12 ABU DOMA	Depend on Abu el Hassan and Abu Haraz	Depend on Abu el Hassan	Bore hole	4 licensed shops	-	-	Mosque
13 TEBLIS	Depend on El Nafaab	Depend on Amara	Shallow well	3 shops	-	-	Mosque
14 ABDULLAH**	Elementary school boys and girls	Dressing Station	Bore hole and 2 shallow wells	2 lorries, 5 licensed shops, 3 butcheries	-	-	Mosque, Social club and local bar
15 EL NAFAAB	Elementary school Boys and girls	-	Shallow well	-	-	-	-
16 UMM TARTARA	Depend on Amara and Wad Nail	Depend on Amara	Bore hole	4 licensed shops	-	-	-
17 ABU EL HASSAN**	Elementary school Boys and girls Junior Boarding school, Boys, for surrounding villages	Dispensary	Water tap in the houses	7 licensed shops 2 buses, many lorries, people own most of the Hedeiba market	Private mill	Village Council	Mosque and social club
18 HARAN	Depend on El Nafaab	-	Shallow wells	-	-	-	-
19 WAD NAIL	Elementary school Boys and girls	-	Bore hole and shallow well	2 licensed shops and depend on Umm Shaneq and Amara markets	-	-	-
20 RAGHWA AHMED							
21 EL GEFEIRA	Depend on Amara and En Nagi	Depend on En Nagi	Shallow wells	3 licensed shops and depend on Hedeiba and Amara markets	-	-	-
22 RABDA and EL KITIR	Depend on Amara and En Nagi	Depend on Amara and En Nagi	Bore hole and 3 old shallow wells	6 licensed shops 4 semi-permanent	-	-	-

Source: Fieldwork 1977/78

** Villages with twice weekly markets visited during the survey. Et Tom, Abu el Hassan and Abdullah are the villages which surround Hedeiba market.

Southern Nuba Mountains District, and Abu Haraz Peoples' Rural Council from Eastern Gezira District are shown in Tables 7:1 and 7:2. and Fig. 7.1

From the above tables it is clear that the more commercial services a village has the greater the overall services it provides. In all cases the presence of the local market seems to be the strongest cause of attraction.

7:4 Do Local Markets Aid the Diffusion of Knowledge For General Advancement?

We may ask ourselves whether the local markets aid diffusion of knowledge for general advancement, e.g. of farming, machinery, social habits, adoption of clothing, knowledge of driving cars etc. Local markets are places where new ideas and goods brought out from the bigger centres and the relatively more developed parts of the country are exposed and seen. Before the development of motor transport the only group of people who could travel from the isolated villages to the urban centres were the traders. They travelled either to visit their families in the riverain areas or to bring new goods from bigger urban centres. Licences for the opening of permanent shops were issued and at the same time cotton as a cash crop was introduced in both areas of study. The introduction of lorry transport together with the opening of roads led to the opening of new areas for cultivation and the migration of more riverain pedlars. This process helped in opening-up those previously closed areas. About the mid-1930s traders had already traversed the different parts of the Nuba Mountains resulting in the creation of more cash cropping. More markets were established, previously periodic markets started to provide permanent services, the number of the permanent shops in the already established markets increased steadily. The following table shows the development and increase in business.

FIG.7(1) MARKET CENTRES OF EASTERN GEZIRA & SELECTED VILLAGES

(ABU HARAZ RURAL COUNCIL)

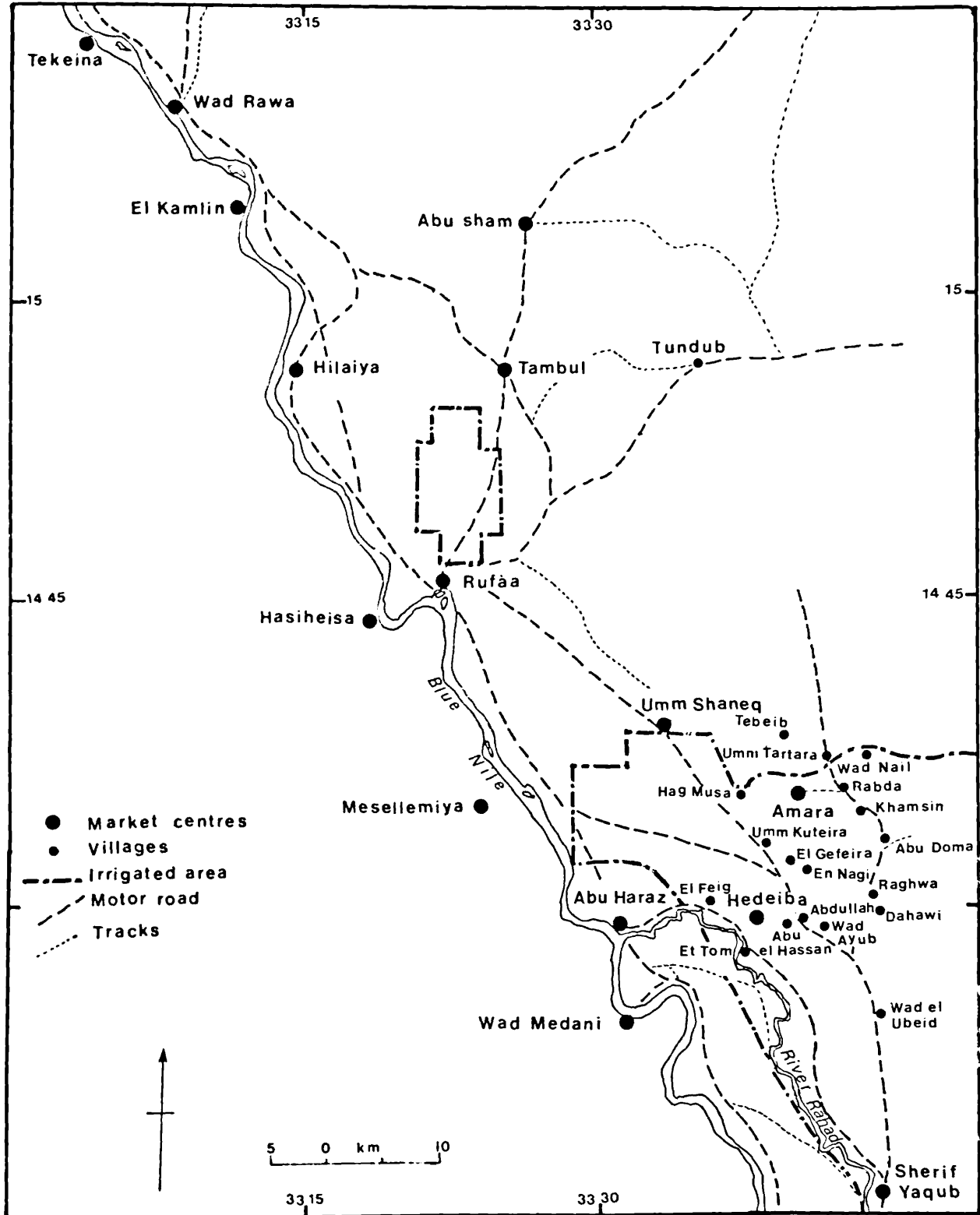


Table 7:3

Number and Historical Development of Business

<u>% of Permanent traders</u>	:	<u>Year of establishment</u>
2.3%	:	1920s
8.1%	:	1930s
19.7%	:	1940 - 1957
26.0%	:	1958 - 1967
43.9%	:	1968 - 1977

Source: Fieldwork results

The increasing settlement of traders had a number of important results for the two areas. Their presence and businesses have spurred the creation of desires for goods which were not previously known in these areas. This indirectly activated the desire for money and helped in the success of cotton as it was introduced by the government. If the markets and newly introduced goods had not been present, there would be little use for the cash obtained from the cotton crop. Adoption of the use of clothes and shoes followed the presence of the traders in the Nuba Mountains. The indigenous who first worked with the traders as errand boys, porters and shop assistants were made to wear clothes. The first indigenous people who worked with the traders adopted the use of household hardware like enamel and aluminum household utensils in place of gourds and earthen pots because the newly introduced articles are practical, more durable and easy to clean.

Vegetable and fruit gardening was first brought to the Nuba Mountains by the British administrators to supply the administrative staff with their needs. Afterwards the settled traders cultivated vegetables and fruits for their use and for marketing. These products were then adopted by the Nuba people and cultivated, together with

tobacco; by the seasonal stream sides where shallow wells provide a constant supply of water. Nowadays tomatoes, limes, spring onions and other vegetables which are alien to the Nuba Mountains together with sugar cane, mangoes and quavas are among the most important goods displayed in the smallest markets of the Nuba Mountains. Besides those there are the wild fruits and roots which are the native product of the area.

The present housebuilding styles are the result of a number of factors but the North Sudanese type of settlement and house building style was introduced by the early traders settling in their new areas. The same observation is applicable to the adoption of the modern wooden and metal furniture as none was known in the Nuba Mountains at the beginning of this century. Even the adoption of Islam as a religion is largely due to the settlement of the Muslim traders where previously no recognized faith was known.

During the fieldwork survey the 173 permanent traders interviewed were asked whether they have plans for the reinvestment of the capital they collected, to add to the development of their business or the areas they live in. The results showed three groups: the first group contains the ambitious members with plans indicating development. They constitute 31% of the whole group. They hope to invest in wholesaling in their areas or in bigger markets, or seek to own big commercial farming lands or big farms for poultry, dairy products and market gardening or to own tractors and commercial lorries. Some hope to invest in industry, others hope to move to the capital to join well-established importing and exporting companies. About 62% of the whole group hoped for comfortable private business conditions, owning their own houses, shops and lorries and improving their present family living conditions. The third group hoped to migrate back to their home villages or to other places within the country where new development

schemes are under construction, because they were not happy where they were. One respondent wanted to go back to farming as his business was not profitable.

The survey generally indicates that permanent trading provided by the presence of markets is a rewarding job. The 31% group of people who earn enough for reinvestment in medium scale mechanized farming or dairying and market gardening and industry reflects the economic importance of trading - the role of those individuals in the advancement of the economy is appreciated. One of the traders who is planning for investment in industry is a permanent trader who had established his business in 1954 in Umm Dorein, a village in the remote south eastern hills located in the mid way between Kadugli and Talodi towns (Fig. 5.2) He came following a brother who had started a business in that village in 1949. They both came from an historically important market town in Eastern Gezira, known as Hilaliya north of Rufaa, the main town of Eastern Gezira. His business specializes in local crop collection for the areas around Umm Dorein and the retailing of daily consumables, clothes and shoes to the local people. He is planning to invest in the Nuba Mountains area itself in Kadugli 'the Provincial Head' which is only 26 km from Umm Dorein. Kadugli is preferred because of the presence of infrastructure and electricity. His plans are for the production of ice, red bricks and oilseed pressing for local consumption within Southern Kordofan Province, as there is no manufacturing at all in the newly born province apart from the cotton ginning.

The creation of such industries in the area would encourage the production of more cash crops and create more jobs for the partially employed wet-season farmers in the area. It could also provide cheaper locally produced manufactured goods as no or less transport cost is involved. The presence of a manufacturing industry of any kind can

attract others through agglomeration effects. This particular traders' house is very well furnished with proper bedrooms and sitting rooms and a kerosene refrigerator. This house together with other traders houses and shops are built of red bricks, stone and cement with corrugated metal roofs. Inside the outer walls they all have a few fruit trees

The semi-permanent traders expenditure was probed during the survey to investigate the role of the markets in their socio-economic life. Every one of the 375 semi-permanent traders interviewed, except four, mentioned buying food and daily necessities with the income they get. Some 26% buy new tools and seeds for agricultural use or buy sophisticated goods such as radios, metal furniture, bicycles or save some of the income for building houses or buying tractors or commercial lorries. This means that part of the semi-permanent trading is used for reasons other than just subsistence. Things of less importance than the above mentioned but deserving of mentioning is the fact that the majority of these traders buy local produce, whether crops or handicrafts or animals to resell in the same market or elsewhere. As a result of this reinvestment one would expect a continuous increase in the capital and saving margins, which is a development in itself. Buying clothes or paying school fees, or supporting children to go to schools are luxuries and represent signs of development in the Nuba Mountains. In this area most of the children could not attend any schools because the parents could not afford to buy them clothes, pens, pencils, notebooks etc. to go to school with, or could not afford them pocket money and the money needed for the self-help projects contribution, for education is free and parents pay contributions either in cash or in kind.

Semi-permanent traders plans were also investigated and two distinct groups were apparent. The first group were those with limited

ambitions. They either plan to get married, go to Mecca, become government employees, migrate elsewhere inside the country or plan to continue as they were at the time of the survey. However, the larger group, (54%) have plans for house building, continuation in semi-permanent trading with a bigger capital, or becoming permanent traders. Some have plans for owning commercial lorries, buses or tractors and owning plots under mechanized commercial crop farming or market gardening. Some are planning to improve family living standards and this could mean many things in a country like Sudan and remote backward areas like the Nuba Mountains of Southern Kordofan, bearing in mind that about 79% of the traders are from within their market villages themselves or from villages around within the same district. This group of traders is less well-off if compared with the permanent traders group. This is why they have aims to become permanent traders, which leads to an increase in income level and a better standard of living. This kind of promotion in this particular kind of livelihood could not be provided by any development plan other than developing markets which are already having the potential of an effective agent of rural change. Any improvement in the efficiency of the local marketing for the locally produced crops and industries could encourage people to produce more and stay in their villages, instead of migrating to the towns leaving behind depopulated rural lands.

The survey showed that 55% of the semi-permanent traders interviewed had family members who had moved to work elsewhere, either to the big urban centres, the capital or to the new settlement and development schemes. Some of these 55% had more than one member of the family who was away at the time of the survey. Some had been working away themselves and came back to the area with some savings to practice

semi-permanent trading. For the 55% group (210 people) the actual number of family members who were away was 350 persons, which means that for every three people asked five people are working away from home. The destination of 29% of the relatives interviewed was the capital. This reveals the main characteristic of the periphery being depopulated while its lost population goes away to work and settles somewhere in the rich core. Another typical characteristic for the migrants is that nearly half (48%) of the 55% respondents relatives were between 11 and 40 years old. Only old people, very young and women are left behind which adds to the rural poverty.

Among the attempts made to examine the role of the markets in the advancement of the life of the market visitors, their pattern of income expenditure was investigated. As mentioned earlier, market visitors are mainly farmers visiting the markets to sell their produce or to buy their daily needs or for both selling and buying. Some visit the markets for entertainment or for other reasons, other than the commercial purposes known. The results showed that 32% of the 385 respondents either did not buy anything with the money they got, or that they visited the market for reasons other than commerce. Every one of the remaining 68% bought either clothes, animals and daily needs alone or altogether. Only 26% of this last group mentioned buying new tools or seeds for farming. This suggests that this group was far less sophisticated than the group of semi-permanent traders. The money they get back is very small. It is destined for simple daily needs; their saving margins are limited, the type of the farming they practice is still small-scale traditional farming.

A little less than three-quarters of the market visitors do not use any modern farming techniques at all. Almost all the 26% left who use tractors and improved seeds together with fertilizers,

are in the Gezira scheme itself but not the rain cultivation areas. The enquiry also showed that about a fifth of the 74% did not use modern techniques and had not seen chemical fertilizers. They are all from the Nuba Mountains where traditional cultivation is dominant, that is to say they live well away from the new machanized schemes. A group of about 27% mentioned the markets and the village shopkeepers as the main source for their knowledge about the modern techniques of farming or as one of their main sources of information. A group of about 11% were informed by government officials but, they were Gezira farmers where mechanization was first introduced by the government. The rest of the market visitors (42%) heard of mechanization and modern techniques of farming either from other farmers or by travelling in areas where these are used, or from the radio and the newspapers. One concludes that the markets and the traders are main sources of information about the outside world. The table below shows the details.

Table 7:4

Sources of Information Diffusion

<u>% of Market visitors</u>	<u>Source of Information</u>
20%	Did not know about modern techniques of farming at all
27%	Knew through the market or shopkeeper
11%	Informed by the government officials
42%	Knew through other farmers or by travelling, or from the radio and newspapers

Source: Fieldwork results

The market visitors' plans for the future reflected the fact that this group is the most stagnant group. More than half the group (53) either do not have any plans at all or have only plans for getting

married and going to Mecca. A small group of 7% have the negative plans of migration to work somewhere else or to own more livestock which means more and more nomadism. The group that hopes to improve their present living conditions in one way or another constitutes two-fifths of the visitors' group. Their plans include becoming traders, or continuing to work in their existing areas but under better conditions. Some are planning to build permanent houses or to collect money to buy lorries, tractors or buses. Others wanted to join the mechanization schemes or to develop their own small vegetable and fruit gardens for selling the produce in the market. This group could not afford to plan more ambitiously. The details are shown in the table below.

Table 7:5

Market Visitors' Plans for the Future

<u>% of Visitors</u>	<u>Plans for the Future</u>
53%	No plans; plan to continue as they are; plan to get married or go on pilgrimage
7%	Negative plans for migration or increase of livestock numbers
40%	Plan to become traders or continue in their areas with better conditions; or buy a lorry, a bus, a tractor; or develop garden; build a house or join mechanized schemes

Source: Fieldwork results

The visitors interviewed also emphasized the fact that migration is very active: half of them answered that either they themselves or relatives had moved to work elsewhere.

Questions were also asked regarding changes in farming and crops in recent years. A ten year period was arbitrarily chosen because the average age of the market participants was assumed to be 25 years old.

The overall results for the two areas were not significant. This is because little change happened in the Gezira area. The only change had been in the introduction of wheat in half the fallow area which is now reduced from 5 feddans to 2½ feddans, and where it was 10 feddans it is now reduced to 5 feddans and wheat is cultivated in the other half. An obvious change took place in the Nuba Mountains. The number of farmers has increased from 112 (55%) of the market visitors to 152 which is 75% of the group. The most interesting result of the investigation is that cotton, which was semi-obligatory for every farmer to cultivate, is decreasing in importance. The reasons seem to be:

1. As the crop is marketed by the government, prices are fixed and remain low whatever the world market prices are.
2. Cotton cultivation is relatively difficult compared with other cash crops like sesame, groundnuts or the one third of the sorghum which reaches the markets.
3. Cotton farming is expensive; particularly it needs initial capital for hiring labour, especially for picking, where family labour is not adequate.
4. Cotton is very sensitive to variable precipitation conditions and rainfall irregularity. In all cases much care is needed for picking clean cotton to get a good grade for the product and thus a good price.
5. Cotton is particularly sensitive to disease and pests.
6. For cotton, marketing farmers have to wait until the markets are officially open, which does not occur before the end of December or early January. Farmers have to transport the product to the collection points and cotton markets. The crop is also bulky which makes transport by self-owned donkeys difficult. Other cash crops are less bulky and can be marketed as early as the beginning of November or stored and

marketed when prices rise and at any time of the year as the market is always there. The prices continue rising as the time approaches immediately before the next wet season when most of the stocks are running short. The supply of crops responds directly to market demand changes which are very quickly transmitted to the producers through the local markets and traders. The survey showed a decrease in cotton cultivation. The number of the market visitors who cultivated cotton dropped from about 21% to about 11%, with a drop of about 10% for the whole group. Another change in cropping which could be of significance to the present study, is that the number of market visitors who are practicing market gardening for the production of vegetables and fruit, has risen from 5% to 8%. Garden crops are very perishable and with the very bad transport conditions and hot weather in the Nuba Mountains, the only direct stimulus for production, and the only market, is the local market. The use of tomatoes in the remote areas of the Nuba Mountains is fairly recent. It is not one of the native products of the area. Also fruits such as guava, lime and mangoes(1) and sugar cane. Farmers in Wali market (a small isolated village market in the remote North Western part of the Nuba Mountains, Fig. 5.2) said that the big tomatoes (a Mediterranean variety), displayed at the time of the survey (end of December 1977), were first cultivated in the area less than ten years ago. Casava, which is not known in this part of the country, was said to be introduced recently by someone from the south. The crop was also displayed in that market and in time it may become popular. Table 7.6 shows the changes in the main crops in the Nuba Mountains.

1 Mango seeds were first brought to Sudan from Congo about 1918 whence it was introduced from East Africa and India, Reining, C.C., 1966, Op cit., p 71

Table 7:6Changes in Farming in the Nuba Mountains

Crop Types	% of visitor farmers in 1977/78	% of visitor farmers in the past	Increase or decrease	Rate of Increase or decrease
Total visitor farmers	75%	55%	20%	50%
Cotton farmers	11%	21%	-10%	-50%
Groundnuts	32%	16%	18%	100%
Commercial gardening	8%	5%	3%	50%
Sesame	49%	26%	23%	100%

Source: Fieldwork results

7.5 Conclusion

In conclusion and to clarify the foregoing points:-

1. Marketing provides one of the main sources of livelihood in the rural parts of the country(1); the second most important occupation for rain cultivators, nomads as well as perennial irrigation cultivators.
2. Rain cultivators are occupied in farming for six months at most. For the rest of the year they obtain their living from petty trading and working as casual labourers.
3. Markets are the only places where they can exchange their own produce for cash and make purchases from other producers.
4. They are the only places where villagers who cannot travel to larger urban centres can obtain their needs of processed foods and manufactured goods such as tea, sugar, soap, clothes, shoes, matches, etc.
5. They are the only places for obtaining regular supplies of vegetables, meat and fruits to improve rural peoples nutrition.
6. Rural markets sell the surplus of rural production of agricultural

1 Good, C.M., 1970, Op Cit., p 90, Bromley, 1976, Op Cit., p 363/364

crops, especially food crops, to support the population of the urban centres.

7. They are the places where services of different types become concentrated.

8. They are the outlets to the wider world and through them there is a diffusion of knowledge and information.

9. Their presence creates part-time as well as full-time jobs.

10. They activate the rural urban migration of young people by the transport and communication services they provide.

11. The resulting negative effect of the migration is in rural depopulation.

12. The positive effect is that the migrants are always part of the disguised unemployment in their villages; when they migrate they may find full-time jobs elsewhere, earn more, learn more and bring money as well as knowledge back to their home villages.

13. The presence of local markets encourages the rural cultivators to produce more for cash; the more they produce the better is their standard of living.

14. Markets are important social as well as commercial institutions, for they are even places for entertainment. People in both areas of study visit markets either for drinking beer, gambling and meeting friends or combine these with their commercial activities at the end of the market day. In the Nuba Mountains, social life is active after the harvest because of the continuous harvest activities. Wrestling is the most exciting event at the end of the market day. Young men and women wear their best clothes because they meet at the market place. Markets become very active after harvest, for new goods enter the markets during this season with the increase in the purchasing power.

A Comparison of Markets in the two Areas of Study8.1 Introduction

As is apparent from the first two chapters of this work, the two areas chosen for the purpose of this study exhibit different stages of development. Part of the present chapter is concerned with an assessment of the contribution of the local markets in the current development process. In order to compare the observations and results reached, the two areas are placed in their appropriate places along the scale of the accepted development ladder. Accordingly, a definition for subsistence and marketed production is needed. The subsistence agriculture is where the production is directly used by the farmer and his family. Marketed production is where the produce is sold or bartered either for domestic consumption or for export. Developing nations may be divided into four groups according to the magnitude of each of these activities. Firstly, areas where production is entirely for subsistence. Such places are very difficult to identify as they are rare in our present-day world. Secondly, where some sales or barter transactions take place for a small surplus of the production. This happens occasionally in years of good rainy seasons. A third stage in the transition from subsistence to market agriculture is when production of a marketable surplus is deliberately aimed at, but the main emphasis is still on subsistence production. This third stage is typical of the present situation in most of the Nuba Mountains, particularly the indigenous Nuba tribes. In the final stage, production for the market predominates over subsistence⁽¹⁾. The situation in the

1 Abercrombie, K.C. "The Transition from Subsistence to Market Agriculture in Africa south of the Sahara", in E.H. Whetham and Jean I. Currie, (ed), Readings in the Applied Economics of Africa, vol. 1 Micro-Economics, Cambridge University Press, 1967, pp 1-11.

Gezira area is more like the fourth stage than the stage before in which the Nuba Mountains fit very well. In the Gezira area export crops occupy a greater area than those for domestic consumption and the production for subsistence counts for less than half the total area cultivated. Tenancies in the Gezira proper are either 40, 20 or 10 feddans. In each case one quarter is cultivated in cotton, one quarter is equally divided between groundnuts (which are increasingly replacing lubia) and sorghum and the rest is left fallow. In 30 feddan holdings 10 feddans are cultivated under cotton, $2\frac{1}{2}$ under groundnuts or lubia, $2\frac{1}{2}$ under sorghum and the rest left fallow. As part of the intensification policy even more groundnuts, wheat and rice are cultivated for cash instead of allowing a long fallow period. In all cases cash crops always formed more than half the cultivated land. Some of the sorghum and vegetables grown for the domestic farmer's consumption are also sold. In eastern Gezira the only crop produced is marketed. Table 8.1. below gives the area under each crop in the irrigated Gezira in 1968/69 season.

Table 8.1

Area under Different Crops in 1968/69

<u>Crop</u>	<u>Feddans</u>
Cotton	592,675
Dura	322,587
Lubia	126,454
Groundnuts	157,588
Wheat	163,880
Vegetable Gardens	38,646
Fodder Crops	10,132

Source: Tony Barnett, 1977, op cit. p 7.

In this particular case about 65 percent of the area cultivated was under cotton, wheat and groundnuts which are all cash crops. The situation in the Nuba Mountains is explained in Table 8.2

Table 8.2

The Nuba Mountains Total Cropped Area, 1975

Crop	Area cultivated in feddans	Purpose of cultivation
Cotton	117,173	All for cash
Pepper	4,036	All for cash
Karkaday	55	All for cash
Sorghum	345,585	One third for cash
Sesame	130,977	Two thirds for cash
Groundnuts	70,286	Two thirds for cash
Millet	35,679	Mainly for domestic use
Maize	18,530	Mainly for domestic use
Lubia	20,086	Mainly for domestic use

Source: Unpublished material from the Nuba Mountains Agricultural Corporation Offices in Kadugli, collected in 1978, Fieldwork

8.2 The Emergent Market Centres and Market Types

Cultivation under perennial irrigation has become the main economic activity for most of the population of the Gezira area. The only area which has not been directly affected by the Gezira Scheme lies east of the Blue Nile. Part of this area is occupied by the Guneid Scheme, established in 1958, converted from cotton to sugar cane production in the early 1960s. Part of it is also within the Tambul Extension (established 1967/8). North

of the confluence of the Blue Nile and the Rahad River lies an area which will be included in the second phase of the Rahad Scheme when water from the Roseires Dam is utilized to cultivate 800,000 feddans between 1978 and 1983. ⁽¹⁾ This would convert the area from traditional agriculture and nomadism into modern farming. The scheme will cover an area of 140 kilometres by 15 to 25 kilometres, see Fig. 7.1. In the new scheme, cotton, sorghum and groundnuts are produced following the same tenancy system as the Gezira and expanding the production of fruits and vegetables. The main local markets in this area are at Hedeiba, Amara, Umm Shaneq, Sherif Yaqub, Wad el Ubeid and Abu Haraz. The first three markets were visited during the fieldwork period. They are all periodic markets meeting twice a week. As they served mainly nomadic and rain cultivation population they have retained their periodic activities for a long time as it is the best way to serve such a low income community. As a result of the new Rahad Scheme, rearrangement is expected to take place in the present alternating market ring system, as well as the importance of market settlements as urban centres. The periodicity pattern followed in the above mentioned area is also applicable as far north as Wad Rawa, including Rufaa, Tambul, Abu Sham and Hilaliya, see Fig. 7.1. In large centres such as Tambul and Rufaa permanent markets and shops and services cater for the permanent local population of the settlements by providing daily services. It is apparent that in Eastern Gezira the area which was directly affected by the presence of the Tambul extension and Guneid Scheme was able to support permanent markets with two large market days each week to serve the mainly nomadic hinterland to the east. In contrast

1 CBI Market Study, The Sudan, Op Cit, 1977, p.17.

to the two above, Hedeiba, Amara and Umm Shaneq are only periodic and are visited by from a few hundreds to some thousands of people on the two market days. Hedeiba market is a good example. The market lies in the middle of a group of villages, within a distance of about two to four kms from the surrounding settlements along the old road between Wad Medani and Gedaref near the eastern borders. The only permanent buildings in the market place are two spare-parts shops, two petrol stations and about three restaurants, the butchery and the court. The immediate population served by the market, (the adjacent villages) is about 8000; a very conservative estimate based on a study prepared in 1975 for the villages that are going to be within the Rahad Scheme at a later phase, see Fig. 7.1. The market also serves villages as far north as Abu Sham, north of Rufaa and as far south as Sherif Yaqub, Fig. 7.1. The permanently built spare-part shops, restaurants and petrol station serve the heavy lorry traffic from Gedaref through Hedeiba market to Wad Medani and then to Khartoum. A few general provision shops are built in the settlements and also flour mills. Itinerant traders function from their houses when they are not visiting any of the markets. During the market days they occupy their semi-permanent stalls in the market place. The newly built metalled road (1977), connecting Wad Medani to Gedaref and passing through the Rahad Scheme, does not pass by Hedeiba market. Past experiences of newly-built metalled roads and government agricultural schemes suggest that they bring about many changes. The market may move to a site near to the road itself, or stay to serve the settlements it now serves but with the loss of some or all of its present importance to the new market which develops by the roadside. A market settlement to attract the present

scattered villages is likely to be moved under the supervision of the Rahad Scheme.

In the Gezira scheme, west of the Blue Nile, none of the markets visited is a permanent market without a periodicity of one kind or another. Periodical activity here is either supplementing the permanent activity as it is the case of Rufaa, Tambul, El-Kamlin, Abu Quta, Ribbi, Meheiriba, Tabat, Futeis, Fureigab and El-Hosh, or solely periodical as it is in the case of Fahl and Aulad Yasin on the southern borders of the scheme, and away from the scheme east of the Blue Nile, Fig. 5.1. In the Gezira area the system has developed to reflect the fact that solely periodic markets are closely associated with rain cultivation and nomadism. These activities are either highly seasonal or involve a great deal of movement and transhumant life. Markets in such areas adopt the periodicity patterns to suit the economic activities forming the mainstay of the people's living.

In the rest of the scheme where agricultural production is all the year round, markets are permanent and daily with their twice weekly big days to meet the rural population needs. The Gezira proper permanent markets reflect a well-defined market centre's hierarchical sub-system in absolute agreement with the settlement sub-system. (1) Empirical evidence from the observation of the Gezira markets determines the fact that the presence of periodic markets does not lessen the importance or the centrality of settlements. On the contrary, most if not all of the permanent markets with two big periodic days are more attractive to the rural

1 Hodder, B.W. and Ukwu, U.I., Markets in West Africa, Ibadan University Press, 1969, p. 154.

population than the permanent markets only.

The different physical, historical and political circumstances of the Nuba Mountains led to different landuse patterns from those known in the Gezira area. In the former area 70 per-cent of the farmers practise traditional farming. The average farm size for the family is about 9 feddans, which is less than half the size of most of the plots, 'hawashas', in the Gezira scheme. The per capita income is Ls 26 to 33 p.a. which is about half the national average (Ls 50).⁽¹⁾ The total Nuba Mountains cropped area in 1975 was 743,407 feddans, (see Table 8.2 for the details). Only 36,032 f. (5%) of the above total area came under modernization schemes- this area rose to 46,930 in 1976/77.⁽²⁾

As was mentioned in Chapter Three, the development of the market centres in this area was government initiated, unlike the case in the Gezira where governmental schemes have contributed to the re-arrangement of the already-found markets. This has also affected the rise and development of some and the decline of others. Market settlements in the Nuba Mountains were recognized by the government as nodes of development. They were deliberately made into service, administrative and educational centres. At present they are the only places which show any signs of urbanization and permanent settlement. They only date back to the first, second or even third decades of this century. According to the periodicity and permanency, and the hierarchical ranking of market centres discussed in Chapters five and six, three types of markets may

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- 1 The Democratic Republic of The Sudan. Agrar-UND Hydrotechnik GMBH. Consulting Engineers, ESSEN, Germany 1977, Nuba Mountains Region Pilot Project for Agricultural Development Feasibility Study, pp.20-25.
 - 2 The Democratic Republic of The Sudan, The World Bank, Regional Mission in East Africa, Nairobi, 1976, South Kordofan Agricultural Development.

now be identified in the Nuba Mountains.

1. Daily markets- these include Kadugli, the largest market in the whole area and the Provincial Headquarters. The rest are Habila, Kortala, Himedaya, Umm Dorein, Buram, Reikha, Shat Safiya and Teis. These are all third order market centres and they represent most of the unvisited markets of the Nuba Mountains. Although they are small even to the local Sudanese standard, they still perform central functions for the tiny villages at the bottom of the settlement scale, Fig. 6.1 and 6.8.

2. The second group is the group of permanent markets with one or two big days a week and these are Dilling, the second largest market and settlement centre in the area and the province as a whole; the others are Farshaya, Berdab, Kaiga Tummero, Demik, Heiban, Hamra, Karko, Delami, Kauda, El-Azrag, Tarogi, Angolo, Abri, Deri and Wali. The last eight are classified in Table 5.1 as an extra group of its own as they have one big day each week instead of the common two days known in the Gezira and the larger markets of the Nuba Mountains except Kadugli.

3. The third group of markets is present in the Nuba Mountains as well as in the Gezira. These markets only meet periodically, whether weekly or twice weekly. They are small markets and include Tombera, Kalkadda, Karandal and Eiri- they were established in 1971. The main contrast between the two areas of study here, is that all the Nuba markets of this group are relatively new and government initiated in the hope that they will become permanent in the future and for such reasons as the creation of a political, urban and administrative nuclei, (the village councils). Those markets meet only once a week. The six markets of the Gezira that belong to

this group all meet twice weekly. The only recent ones are Tekeina and Aulad Yasin and they are at least twelve years old. The first moved from an old site to be near Khartoum Wad Medani metalled road, established in 1968. The second was established in 1957 by a west African community, mainly Hausa, at the south-western fringes of the Gezira scheme. Although there is a great variation of size between the members of this group, they all belong to the same rank of third order market centres (Table 6.3 and Fig. 6.3).

8.3 The Emergent Central Places

The applicability of the centrality concept to the market centres is summarized in Marshall's words

"it is important to note that the concept of centrality refers to the attractiveness of a town from the point of view of consumers who live outside the town."⁽¹⁾

Accordingly, all markets visited, in both areas, show varying degrees of centrality. They all serve the population of settlements smaller than themselves, together with their own population. When the centrality of the market centres was examined by the use of the techniques explained in Chapter six, interesting differences in the present groups became apparent. The Gezira markets showed a complete set of three hierarchies with the smallest settlements - those without markets - as a fourth order at the bottom of the scale (a group which is not included in the study). The hierarchical array in the Nuba Mountains reveals two groups of markets. First order centres are Kadugli and Dilling, and the rest of the centres

1 Marshall, Op Cit., 1969.

could only be classified as third order central places. Then come the rest of the settlements as fourth order centres. The second order group present in the Gezira is completely absent here.

Market centres of the Gezira reveal a comparatively perfect hierarchy, reasonably qualified to be considered as a central place system (Chapter six). This reflects the presence of a well-defined and developed urban system, commanding the spatial organization of the Gezira area through a defined network of inter-relationships. At the top of the hierarchy comes the largest market centre, followed by five smaller ones, then comes a group of eleven market centres to form the third order class. In the Nuba Mountains the hierarchy is a typical reflection of an immature urban system. Kadugli represents the primate city, Dilling is the second close after. All the rest are third order centres and serving scattered population. The present urban system represented by these market settlements is still under development and evolution. This reflects the typical situation in the Nuba Mountains. Until 1974, Dilling was more important than Kadugli. But after the separation of the Southern area to form Southern Kordofan Province, Kadugli was promoted from a former level as Divisional Headquarters, to be the Provincial Headquarters. As more Rural People's Council centres were formed, some of the small commercial centres became more important (Heiban, Buram, Umm Dorein). Still smaller villages became village council heads. Habila came into existence to serve the needs of the mechanized scheme although the settlement is too small to reflect the amount of crops produced, as the crops produced by-pass the small market to larger markets at El-Obeid, Dilling or even outside the boundaries of the

two Kordofan Provinces. There is a positive correlation between the degree of urbanization of areas, and their degree of development. It is also true that in both areas of study, urbanization is closely associated with the market system except for a few of the periodic markets of Eastern Gezira, where the commercial activity and the number of people attending on the market days is far larger than could be reflected by the available permanent buildings in the market place, Plate 9. This confirms the centrality of markets, even if this centrality is not reflected by their importance as urban centres, a fact that makes the picture more complicated. This makes generalized conclusive results about the correlation between centrality and urbanism of market centres even more difficult to reach.

8.4 The Role of the Markets in the Two Areas of Study

The role of the markets in the development of the two areas of study differ to a great extent. In the Gezira area markets serve a more urban population consisting mainly of the administrative staff, the people who are employed by the Gezira Board, the peasants of the scheme and the civilians who are engaged in tertiary activities like service workers, teachers and traders.

The Gezira Board and the private traders share the job of marketing the peasants' produce, so they both provide the peasants with their income. In fact, the Gezira Board markets most of the produce.

The commercial core, as well as the governmental quarters, contribute equally to the development of the urban centres, although the governmental quarters of the towns are widely separated from the civilian residential areas. The latter are usually centred

in the business shops and the market place, surrounded by the related services such as bakeries, flour mills, restaurants, repair shops, warehouses, bus and lorry stops, banks and petrol stations etc. Then come the merchants' houses, the other civilian residential area usually surrounds this core. Expansion of the urban area always happens at this part of the town rather on the side of the governmental quarters. The reason is that normally, most of the services available for the use of the ordinary people lie on this side of the settlement. The markets provide jobs of one sort or another, and distances to the place of work or the amenities needed are convenient for pedestrians. The residents of the governmental quarters always have access to governmental cars to reach the market. Offices are, in most cases, near the residence. Expansion of the urban area on this side of the settlement is always limited.

The newly expanding civilian housing always imitates the North Sudan style of architecture, with flat roofs, square rooms and walled houses with enclosed courtyards. The building material is usually red or sun-baked bricks or mud with wooden or corrugated metal roofs. The whole layout is completely different from the governmental style which is easily distinguishable to any Sudanese eye, with its finer looking houses, more rooms, complete kitchen and sanitary facilities, spacious verandas with fine wire frames to keep insects and mosquitoes away from the residents and with their well-kept and designed gardens.

Both private traders and the presence of the Gezira scheme have an important role in the development of transport and accessibility to the area. The presence of the Gezira and the capital at close proximity also contributed to the development of the area.

When the innovative role played by both the government and the markets is examined, it is clear that the former has the lion's share in the introduction of new crops and modern farming techniques. The production system is completely monopolized by the government. People have no choice in what they cultivate or why they cultivate it. A fair comparison for the role of the two sectors in this respect is not possible.

Other aspects of life, such as social behaviour, how people build their houses, how they furnish them, what they eat and the way they dress are much influenced by the market. The adoption of trade as a means of livelihood is the fashion in Sudan nowadays. Considerable business is now carried on in the Three Towns by people who were originally traders from Eastern Gezira (Rufaa, Tambul, Hilaliya) and North Western Gezira (Meheiriba, Ribi and Abu Quta).

In the Nuba Mountains the role of the local markets in the development is important. The forceful stimulation of production for market was created by the riverine traders' demand for the indigenous Nuba produce. Cash money was introduced by the government by law a few years after the introduction of cotton crop. Few riverain traders penetrated to the Nuba Mountains before it was controlled by the British Government. The first government recognized the important presence of the traders for the area and allowed them the licences for trading and settlement. Until recently people used to grind sorghum into fine flour or paste for food by using manual stone grinders. Mechanical flour mills were first introduced by the merchants after the late 1920s. Now the flour mill is a very important central function visited at

least twice weekly by every household because of the limited carrying capacity of the headloader. It is second only to the water source, whether it is the well, bore-hole or hafir. The general provision shop comes third in importance.

The traders' shops and houses, together with the flour mill formed a core for most of the settlements in the Nuba Mountains. People from their hillside settlements tended to visit the markets more often. Some settled near the market to provide their services in the shops and houses, some started to sell water and firewood and work as domestic workers for cash. Thus, settlements started to expand around this core.

The governmental quarters are smaller here. They are mainly the dispensary, one or two houses for the medical assistant and staff, a school and the teachers' houses. In the middle size and large centres, the administrative staff houses and offices and the cotton ginnyery are part of the governmental quarters. The distance between this and the civilian quarters is shorter as flat sites are somewhat limited by the hilly topography. The government officials here are not always provided with cars for their transport. They also spend a good deal of their time with the traders in their shops or houses, as other means of entertainment are very limited. The market in the Nuba Mountains is an essential innovative force in all aspects of life.

The governmental agricultural extension work is very limited. It is active only in the rainy season and only when the cotton crop is in danger of pests and disease. Transport is very difficult and inflow of people from other parts of the country is very limited. The only outsiders in most cases are the traders

who daily demonstrate new ideas and ways of behavior—in the food they eat, the way they dress, the shop and house furniture they use, and even the religion they follow. The traders group introduced some unknown crops and fruits to the area. The first settlers husbanded small gardens to provide for their domestic needs. After a time they created a demand for more of their produce as their number increased. Soon after the indigenous people responded by producing for those who are too busy in their trade to engage in fruit and vegetable production. At a later stage the growing demand made market gardening a profitable activity.

Motor transport for the use of the public is only provided by the private sector. Although roads were opened by the government for the transport of cotton to the nearest railway station, cotton as well as goods and people are transported by private lorries and a few buses.

Markets in this area are comparatively small. Because of the bad and difficult transport conditions their influence is greatly limited to their immediate vicinity. The fact that they could be used directly or indirectly for further development plans lies in their potential as the only agents for change within the present backwardness of the rural Nuba people. The other active factor in the process of transformation is the out-migration of the indigenous people to comparatively developed regions of the country. Even this factor was initiated by the opening of horizons arising from the presence of the markets.

8.5 Differences between Local Markets of the Two Areas, based on Field Data Results

The results of the survey for both market visitors and

semi-permanent traders groups, showed that the majority of market participants are male with a great difference in the ratios between the two areas (Table 8.3).

Table 8.3

The Percentage of Male and Female Market Participants
in the Two Areas

Area	Market visitors %		Semi-permanent traders %	
	Male	Female	Male	Female
Gezira	95.9	4.1	92.9	7.1
Nuba Mts.	68.0	32.0	60.1	39.9

Source: Fieldwork 1977/78

The presence of more female participants in the Nuba markets suggest affinities with markets in west Africa. Another significant difference between the two areas is reflected in the results of the investigations into the modes of transport used to reach the markets.

Table 8.4

The Percentage of the Mode of Transport taken to the Market

Area	Market visitors %			Semi-permanent traders %		
	Foot	Bus	other	Foot	Bus	other
Gezira	24.0	17.5	58.5	32.0	19.2	48.8
Nuba Mts.	70.0	-	30.0	72.4	1.5	26.1

Source: Fieldwork 1977/78

Motor transport is either very scarce or expensive in the Nuba Mountains. This is obvious as more than 70 percent of the

market participants were pedestrians. Regular bus services were completely absent as none of the Nuba market visitors interviewed used the bus to reach the market.

Eas² of transport and accessibility to the markets help the Gezira people to visit more markets than do the Nuba people.

Table 8.5 below shows the details.

Table 8.5

Percentage of Market Participants and

Number of Markets Visited

Area	Market visitors %		Semi-permanent traders %	
	1 market	2 markets	1 market	2 markets
Gezira	43.9	25.1	36.3	26.9
Nuba Mts.	54.7	35.0	49.8	34.0
	3 markets	4+ markets	3 markets	4+ markets
Gezira	19.3	11.7	25.3	11.5
Nuba Mts.	6.9	3.4	10.8	5.4

Source: Fieldwork 1977/78

Another aspect which reflects the differences between the markets of the two areas is the frequency of visits. One-third of the Nuba market visitors come to the markets once a week, one-quarter every day and one-fifth twice a week. This result emphasizes the fact that the three types of markets identified in the Nuba Mountains are equally important for the people who patronize them. In the Gezira area the emphasis is on the twice weekly rhythm of visits as more than one-half (53.2%) of the market visitors go

to markets twice weekly.

The results of the survey also reveal a great difference between the two areas regarding the use of modern farming techniques. About 96 per cent of the visitors interviewed in the Nuba markets do not use tractors, fertilizers or improved seeds. The equivalent number for the Gezira area forms less than half of the visitors interviewed (48.5%). Even this consists mainly of people from Eastern Gezira and the south-western fringe of the Gezira Scheme.

The role of the markets as a source of information was examined by investigating their role in the diffusion of knowledge regarding the use of modern farming techniques. The results reveal a difference between the two areas. In the Nuba Mountains, nearly two-fifths of the market visitors mentioned the market as the main source of information either alone or with other sources. Government officials and agricultural extension workers, as a source of information about new farming techniques make for 2 per cent only, but they are important for nearly one-quarter of the Gezira people, twice as many as those (11.2%) who mentioned the market as the main source of information. Other farmers are an important source of information for one another and they are at least for one-third of the market visitors of both areas. Radio and newspapers are also among the other sources of information mentioned. See the Table below.

Table 8.6

Source of Information about Modern Farming Techniques

Area	no idea about fertilizers & improved seeds	knew through market & shopkeeper	informed by officials	through public other farmers	media
Gezira	29.2	11.2	22.8	31.0	5.8
Nuba Mts.	12.3	39.9	2.0	39.4	6.4

Source: Fieldwork 1977/78

Out-migration from the Nuba Mountains in search of work is more serious than it is from the Gezira area, a fact learnt from the results of the survey (Table 8.7).

Table 8.7

Market Visitors with Migrant Family Members

Area	have no migrants or did not answer %	have migrants in the capital city %	have migrants in other urban centres, Gezira, development schemes, and abroad %
Gezira	72.5	11.1	16.4
Nuba Mts.	33.0	42.0	25.0

Source: Fieldwork 1977/78

Nearly three-fourths of the market visitors interviewed in the markets of the Gezira denied that they themselves or any member of their families migrated to work out of their home villages. In contrast to this, only one-third of the Nuba Market visitors confirmed that more than two-fifths had family members working in Khartoum and one-fourth in other developmental schemes and other urban centres. The majority of the migrants from both areas are young, between 11 and 50 years in age.

One of the significant results reached by interviewing semi-permanent traders is related to the layout of the periodic market places. Occupation of the semi-permanent stalls in the market places of the Gezira are replaced by positions under shady trees in the Nuba Mountains. However, in both areas, the majority of people trade under no shade from the direct sun.

Table 8.8

Percentage of Semi-permanent Traders According toBuildings Occupied

Area	semi-permanent stall	under a tree	under no building at all
Gezira	43.4	1.1	55.5
Nuba Mts.	28.1	30.5	41.4

Source: Fieldwork 1977/78

It seems that there is some difference in the tasks performed by the semi-permanent traders in the two areas. About 78 percent of the semi-permanent traders of the Nuba Mountains cater directly for the customers from the immediate area of the markets. Only 22 per cent of them supply other traders from the same market or yet smaller traders from smaller villages. The figures for the Gezira are about 72 per cent and 28 per cent.

The Gezira semi-permanent traders plan more ambitiously for the development of their business than those of the Nuba Mountains. Table 8.9 below shows the details.

Table 8.9

A Comparison between Semi-permanent TradersAccording to Business Plans

Area	no plans	continue as ordinary plans, they are	build a house and increase income	ambitious plans to develop business, market gardening, own lorries and larger business
Gezira	10.4	13.2	9.8	66.6
Nuba Mts.	14.3	37.4	5.0	43.3

Source: Fieldwork 1977/78

Trade as a permanent job is very important for the villagers in the Gezira area. Seventy-eight per cent of the permanent traders here practise trading in their village or within the province boundary. This is not the case in the Nuba Mountains as about 45 per cent of the permanent traders interviewed were migrants from relatively developed provinces, such as the Gezira, Khartoum, the Northern Provinces and northern Kordofan Province.

The history of the establishment of business shows that trade is developing gradually in both areas but only 6.2 per cent of the firms in the Nuba Mountains area were established before the 1940s. The number for the Gezira area for the same period was 18.5 per cent of the shops visited. Gradual increase took place afterwards in both areas, with over 40 percent of the shops being established in the last ten years.

Most of the shops in the Nuba Mountains are owned and were first built by the traders themselves (68%). This is only applicable to one-third of the Gezira traders interviewed. The two-thirds remaining occupy rented premises, whereas only 28% of the Nuba market traders do this.

The permanent traders' residence-ownership and building structure also show some differences between the two areas. More than three-quarters (78.3%) of the Gezira markets own their permanently-built houses while only 44.2 percent of the Nuba Mountains merchants do. Nearly half of the permanent traders of the Nuba Mountains occupy houses with conical thatch and sorghum stocks, reflecting a semi-permanent nature.

The prevailing conditions in the Nuba Mountains made it difficult to find easy transport for moving goods in and out of the area. Consequently, about one quarter of the traders own their own lorries. This is not the case in the Gezira where 85 percent of the

traders rely on other peoples' lorries and a few use public transport for the purpose.

Availability of cash for customers to patronize the permanent traders' shops is very seasonal. Both areas are mainly agricultural and they witness severe seasonality in demand during the farming season, a fact confirmed by 87.6 percent and 83.3 percent of the Nuba Mountains and Gezira permanent traders respectively. (See table below.)

Table 8.10

Seasonal Fluctuation in Demand

Area	No fluctuation	Low sales because of limited cash and demand and bad transport	High sales because all roads to other markets close and more seasonal workers and nomads
Gezira	16.7	75.0	8.3
Nuba Mts.	12.4	84.9	2.7

Source: Fieldwork results 1977/78

The Nuba Mountains area is more badly hit by the rainy season when no more crops can be harvested and no money is obtainable. During this farming season the farmers suffer from severe shortage of money. Traders in both of the study areas act as money creditors to farmers. In the Nuba Mountains, the 57 percent of the traders who offer credits are the only source of money when it is needed. In the Gezira area 53.3 percent of the traders interviewed give credits. Here the Gezira scheme helps by paying some credits for some of the farming operations which need hired manual labour, especially for cotton. In both areas repayment to the traders is either in cash or in kind which helps the traders to trade in the local crops they thus collect.

Trade in the Nuba Mountains is more vertical in character as most of the traders, (69 percent) buy local crops from the producers to transport and supply other urban centres or for export, or for the urban population of the three town area and food deficit regions of the country (e.g. the South). Only 31.6 percent of the Gezira traders could do that because most of the commercial crops produced are marketed by the government. Only one third of the sorghum grown could be spared for the market. The main crop which could be smuggled from the Gezira Authorities without being noticed is cotton, which unfortunately is not edible!

In the Nuba Mountains most of the permanent traders, after buying the local produce from the farmers, wait for the prices to rise before they dispose of their goods. The table below explains the details.

Table 8.11

Percentage of traders dealing in local crops

Area	Do not trade in local crops	Dispose of immediately	Wait for prices to rise
Gezira	70.0	10.0	20.0
Nuba Mts.	31.0	23.0	46.0

Source: Fieldwork 1977/78

Almost all the traders who dispose of their supplies of local crops immediately sell to customers from the immediate area with prices slightly higher than the prices they paid for buying the crops directly from the producers. Slightly more than one-fifth of the Gezira traders and two-fifths of the traders of the Nuba Mountains sell their crops mainly in the divisional and provincial head towns and line-of-rail markets (Table 8.12). These figures coincide very

closely with the figures for the group which awaits a rise in prices (detailed in the above table). These are wealthier traders who can afford to keep some of their capital idle for some time. They can also take the risk of waiting for the prices to rise either locally or in world markets. They can also afford the space and the expenses of the storage.

There could be many intermediaries in the marketing chain between the village markets where the produce is first exchanged, and the urban centres when it finally reaches the consumers. The fact is that the increase in price renders the trade still feasible. In Aulad Yasin, a village market in Southern Gezira, 70 to 80 piasters were paid for a measure of sorghum which is usually sold for 120 piasters in the urban markets such as El-Eosh only a few kilometres away (see Figure 5.1). This increase in price is about 112.5 percent.

Table 8.12

Percentage of traders according to areas of local crop selling

<u>Area</u>	<u>No crops bought or not applicable</u>	<u>Selling in the same market and the immediate area around</u>	<u>Some locally, the majority to divisional and provincial head and line-of-rail markets</u>
Gezira	70.0	8.3	21.7
Nuba Mts.	31.0	30.1	38.9

Source: Fieldwork 1977/78

The relatively wide service areas of the market settlements may be indicated by the results which reveal that only 2.1 percent and 13.3 percent (Table 8.13) of the permanent traders interviewed in the Nuba Mountains and in the Gezira area respectively stated that their customers are mainly from the market settlements themselves.

Consequently it is clear that markets serve considerable populations away from their immediate surroundings.

Table 8.13

Percentage of permanent traders according to origin of customers

Area	Customers from the vil- lage only	Customers from the vil- lage and traders from the village, and customers and traders from other villages
Gezira	13.3	86.7
Nuba Mts.	2.1	97.9

Source: Fieldwork survey

One-fifth of the permanent traders of the Gezira and one-third of those of the Nuba Mountains hire shop assistants. In most cases it is a member of the family or a partner who helps in the shopkeeping. Shopkeeping in the Nuba Mountains is a more difficult task than in the Gezira. Journeys made for the replenishment of the imported goods and the collection of the local crops are longer and more difficult because of the bad roads and poor transport. As a good number (45 percent) of the permanent shopkeepers are not indigenous to the Nuba Mountains it is not easy to find relatives to help in shopkeeping. This is why the results showed more hired shop assistants in this area.

Permanent traders in both areas were asked whether they had noticed any long term fluctuations, i.e. since each of them had started his business. The results seem to reflect an interesting difference between the stages of development of the two areas (Table 8.14).

Table 8.14

Percentage of permanent traders
according to rise and fall in demand

Area	Not Applicable	Rise in demand	Fall in demand	Constant demand
Gezira	1.7	45.0	43.3	10.0
Nuba Mts.	0.9	63.7	15.9	19.5

Source: Fieldwork 1977/78

Fall and rise in demand for the Gezira show almost equal percentages. The explanation for this is that most of the small markets of the Gezira tend to lose their customers as the result of the progressive development of the area as a whole. Easy and efficient transport renders the people more mobile and capable of shopping more cheaply with a wider range of choice by making multipurpose trips to larger market centres. The rise and stability of demand in the Nuba Mountains emphasizes the still continuing importance of the small markets for the provision of the local peoples' needs. Here people cannot move easily. It may also explain the fact that there is an increasing desire for the goods provided as well as an increasing purchasing power which create a stimulus.

Permanent traders plan even more ambitiously than the semi-permanent traders group for the development of their business and investment (Table 8.15).

Table 8.15

Percentage of traders by nature of plans

Area	Negative plans for migration or no plans, or termination of business	Ordinary plans to get married, build a house, etc.	Ambitious plans for wholesaling, manufacturing, market gardening, mechanized farm- ing, export
Gezira	8.1	68.4	23.5
Nuba Mts.	5.3	59.9	34.8

Source: Fieldwork 1977/78

The higher percentage of the Nuba Mountains traders with ambitious plans is justified by the fact that they have a wider scope in developing their businesses. Competition is far less as the area is still closed and not much business is taking place in the area. Living conditions are too difficult to be tolerated by outsiders.

Conclusion9.1. The Further Development of Internal Marketing

The study of the local markets of the Gezira and the Nuba Mountains of the Sudan makes it evident that markets play an important role in the socio-economic lives of the rural people as well as in the spatial organization of the two areas. The study also allows reaching some conclusions applicable to the Sudan case, concerning the most controversial questions raised by the studies of rural markets in other parts of the world. According to what had been stated by Bohannan and Dalton, in the introduction for their book Markets in Africa, markets and market-place trade in Africa is declining, and "that the more pervasive the market principle the less the economic importance of the market place"⁽¹⁾. In Sudan even in the Three Towns, the capital of the country, market places are still active and most of the exchange, especially for daily consumables, still takes place in the market. Supermarkets are very few and only in the Three Towns, specialized and general provision shops are growing in number. A sample of the growth in the number of shops for the two areas of study is shown in Table 7.3. On the other hand, there are no departmental stores or mail ordering in the country at all. Away from the capital towns, and in the two areas of the study, most if not all of the exchange is carried out in the markets. The growth in market trade is stimulated by the increasing population numbers, the increasing desire for manufactured goods, the growing amount of money in the hands of the rural people, increasing urbanization and the improved transport and general growth and

1 Bohannan, P. and Dalton, G., Markets in Africa, ed. Evanston 1962, p.25.

modernization of the Sudanese life (1). It must be mentioned here that there is a difference in the degree of dependence of the population of the irrigated Gezira, on the market-place trade for livelihood, and that of the rain-cultivators of the unirrigated Gezira and Nuba Mountains. The latter depend more on itinerant and part-time trading as a source of income, especially during the dry season. The former has little time for the job.

Another controversy is whether markets develop only as a result of local demand or whether the presence of long distance trade is vital for markets to develop. Evidence from Sudan seems to support the idea that long distance trade is vital for the flourishing of markets. The absence of markets from the Nuba Mountains until they were introduced by the British government, as part of their policy for developing the area, in the first and second decades of this century is an evidence. Markets were found well before that time in Northern Sudan. Even if the presence of local demand was one of the reasons for the growth of the markets here, the fact that they were vigorously activated by long distance trade connections with West Africa, Egypt and Arabia is undeniable. Local limited scale exchange was present in the Nuba Mountains but it did not result in market development.

The third controversy is whether the presence of markets supports urban growth or whether urban growth supports markets. First, although there is only one case where a market centre is located in the space between a group of villages but not at one particular village, it is not possible not to associate the presence of markets with settlements of one kind or another. In Northern Sudan, the old market towns (16th to 19th century), such as Shendi (Fig. 3.1) developed mainly as market centres along the caravan routes. In the modern times administrative as well as

1 Most of these factors were also given by Polly Hill, *Markets in Africa, The Journal of Modern African Studies*, vol.4, 1963, pp 441-453, ref. in p 443, to deny the decline of market place trade in West Africa.

commercial functions created the modern urban centres of the Sudan. At present, important urban centres are always important commercial and transport centres and they have always attracted other central services. Secondly, the presence of markets enhanced the provision of more food and other goods for the growing urban population, but the growing urban population made the markets grow and handle more goods to satisfy the increasing demand. So, they are supporting each other.

There is no doubt that the presence of the local markets in the rural parts of the Sudan has helped to increase agricultural production. Markets also provided the rural producers with most if not all of their cash earnings either by the selling of their produce or by working as part-time traders and artisans in the markets, especially when the farming season is over and cash from farming resources is very limited.

The value of rural markets in Sudan as aids to modernization has been demonstrated and various measures might be taken to strengthen markets as a force for such modernization. These measures might be initiated by the government but not in the form of direct interference which could disturb the existing marketing system or upset the farming communities and lead to adverse results.

Lessons learned from existing conditions in the developing countries as a whole, including Sudan, show that subsistence economy always, or in most cases, persists in some degree for a long time. It particularly dominates in closed conservative societies where change is not easily or readily accepted, a fact indicative of discouragement of innovation and the initiation of change. The social system has much responsibility for this: Land is abundant for shifting cultivation and the aim of production is mainly to feed the members of the extended family. There are few incentives to improve and increase production.

Demand from outside the family circle is inelastic whatever is the increase in production. The fact that the family heads are responsible for a large extended family discourages the production for market as the returns must be shared as well. Thus, production will continue low as long as only primitive agricultural techniques are used and incentives are lacking. "This can only be reduced and the level of production substantially raised if domestic and export markets are expanded"(1). It is important to note that emphasis on production for export markets should not take place at the expense of domestic demand. Agricultural production for export is no longer the favourite solution for the problems of underdevelopment and low production. This is because synthetic substitutes may put agricultural products in an unfavourable position. Expansion in production is not always balanced by an increase in demand. Demand for most of the agricultural products, especially food, is inelastic: Therefore,

"It does not seem that there is a certain steady rapid export demand which could act as the principal magnet for draining producers into the money economy. Hence, the transition from a predominantly subsistence agriculture must depend mainly on the growth of the domestic markets"(2).

This market is continually expanding because of increasing urbanization in the Sudan. The processing of agricultural products is another stimulant for the increase in production. The growth of the population itself constitutes an increase in demand. All this could enable a much steadier expansion of the commercialized sector of agriculture than does the fluctuating export market.

The involvement of the traditional communities of the Sudan in production for the market came in stages starting with the production of cotton for export, when it was made obligatory in the Gezira and

1 Abercrombie, K.C., op cit. in Whetham and Currie ed., 1967, Readings in the Applied Economics of Africa, vol.1, Micro-Economics, pp 1-11.

2 Ibid p 8.

to some extent in the Nuba Mountains. The desire for money appears to have been induced mainly by the imposition of direct taxes payable in cash (Poll tax in the Nuba Mountains). The activities of the first traders who had penetrated deep in the Nuba hills also helped in the spread of the use of money and in stimulating production for market. Later, agents of larger exporting companies established themselves in these remote areas and combined the buying of the local produce for export with the provision of imported and internally manufactured goods which the farmers could not produce for themselves. Shortages of imported goods during World War II made their prices high which resulted in increased agricultural production for the internal market. In assessing possible government and private roles in market development of significance are ways in which the government might encourage traders to operate in remote areas that need to be opened up, or at least to remove any unnecessary obstacles to such traders' activities. Nevertheless, the presence of a growing market is the chief precondition for the development of commercial agriculture.

"It is undoubtedly true that a tropical farmer is unlikely to increase his production unless an increased demand is there, is seen to be there, and is easily accessible. Improved seed, fertilizers, and better irrigation facilities: a tropical cultivator is unlikely to use these to increase his total production unless the market for increased production is first seen to exist and is accessible. It is probably always true to say that there is no point in a farmer having a new crop variety or fertilizers, which will enable him to increase his food production very substantially and immediately, if at the same time his form of transport is so costly or the demand for the extra produce is so uncertain or so distant as to make such an increase worthless. From the point of view of the individual farmer who makes the increase, increased production implies increased sales. And increased sales implies an increased demand which the farmer is aware of," (1)

However, the growing market is not the only prerequisite in stimulating the production of marketable surplus to meet the demand. The government

1 Hodder, E.W., Economic Development in The Tropics, London, 1973, p.201

has a role in improving road networks and in opening new feeder roads and communication systems. It is universally noticed that there is a positive relationship between the increase in production for market and the improvement in transport in previously closed areas. The wider the range of goods that are accessible to the producers the more developed is their commercial instinct. After the local producers are firmly drawn into the money economy, they start to demand reasonably rewarding farm produce prices, otherwise they could easily save themselves the additional work and expense and stop the regular production for sale. This has been experienced in the Sudan, one of the reasons for the failure of the Zandi Scheme was that the farmers demanded higher prices for their cotton than the Scheme's authorities could manage to offer. The Nuba people are now more oriented towards cash crops other than cotton as they think that the present prices offered for cotton are not rewarding enough. On the other hand governments also need to keep a close watch on the effects of their policies in stimulating the development of market agriculture. One aspect is attention to soil fertility, for intensive production for the market, particularly under monoculture, has often been a major cause of soil exhaustion (the use of heavy tractors with deep plough shares in the rain-fed mechanized schemes of the Nuba Mountains accelerates the loosening of the heavy clay soils with the danger of creating dust bowl conditions). What has to be watched as well is the fact that commercialization of agriculture may easily be carried too far, so that the food supplies of the farmer and his family are jeopardized. Nevertheless, it seems necessary to recognize more clearly that the transition from subsistence to market economy is one of the most basic aspects of economic development.

Ideally the formation of co-operatives is highly recommended for the organization of fair marketing terms for small local crop producers. Under co-operatives small scale producers can obtain many of the advantages of the large scale producers. For example, a co-operative of small farmers can facilitate the introduction of new techniques in farming and organize collectively what they cannot own or organize individually, thus they can afford storing, transporting and marketing their produce far better. Collectively they can also qualify for reasonably-termed credits and loans, either from the government or from private resources. It should also be the responsibility of the co-operative to keep the traders and producers who sell for the co-operative informed of the market conditions. This would allow farmers to avoid buying their food from the market with inflated prices after they had disposed of their own produce at very low harvest-season prices. For the system to succeed and serve the purpose, the initiative for the formation of co-operatives has to come from the producers themselves and this needs a greater involvement of the local community members. Some experience from within the Sudan, outside the study areas, and from other developing countries (1), shows that co-operatives are normally expensive and bureaucratic, especially when a good deal of official involvement exists. In such cases they are either inflexible or too rigid to introduce appropriate techniques to suit the small producer's needs and conditions. In many cases they are associated with corruption and complete mistrust on the part of the small producers. They are sometimes monopolized by well-off producers who find ways of joining them.

1 Lawson, R.M., "The Markets for Food in Ghana", in Whetham and Currie (eds.), 1967, Op.Cit., p.187, and Bromley, R.J., "Interregional Marketing and Alternative Reform Strategies in Equador", European Journal of Marketing, vol.8, no.3, 1974, p.260.

9.2 An Evaluation of the Marketing System in the Sudan

This study of the local markets of the two areas concerned suggests findings which support the improvement of the present marketing system rather than the need to reform it completely. It is not surprising that other reports on different developmental projects and purposes, concerning southern Darfur and southern Kordofan savanna area, southern Kordofan agricultural development, and specialized reports about the Nuba Mountain region itself, have reached the conclusion that under present conditions, the current marketing and distribution system could be considered as an efficient one (1). However, there are problems within it, especially concerning small traders and local produce suppliers: farmers at the bottom of the crop marketing chain. The first problem arises under conditions of scarcity and shortages of imported goods when larger traders and wholesalers receive preferential treatment in obtaining supplies. They have facilities for storage and they can always gain at the expense of the small traders. The case is complicated in Sudan because most of the consumables, whether imported or locally manufactured, are government controlled by the Ministry of Commerce and Supply and the recently established Ministry of Co-operation. Priority is given to the co-operatives for the distribution of rationed consumables. These consumer co-operatives are formed wherever possible as part of the political system as each village and urban quarter's council could be registered as a co-operative if people qualified to run the consumables provision store can be found. This has created bottlenecks and severe shortages in supplies. Large wholesalers and some of the co-operative officials sell illegally-obtained goods on the black market for incredibly high prices. Not

1 Sudan and UN/FAO, Savanna Development Project Phase II, Economics and Project Evaluation, 1976, p.70, and Sudan and Federal Republic of Germany, "Nuba Mountains Region Pilot Project for Agricultural Development", Op Cit, 1977, and Sudan and The World Bank Regional Mission in East Africa, Nairobi, Op Cit, 1976

all shopkeepers and rural traders can obtain consumables such as sugar, cooking oil and soap. Also those who were made responsible for the co-operatives monopolize the supplies and sell them at high black market prices. The new system is disastrous to both small traders and shopkeepers and consumers.

The second problem of the present marketing system is the exploitation that takes place of local crop producers through the "sheil" system. This involves mortgaging the farmers' produce to the local traders and shopkeepers for a very low price, who are the only source of credit. This happens at the middle of the farming season and before the crop harvest. Most of the local merchants extend short-term credits for their customers who are also small producers, to be repaid at harvest time with an agreed quantity of produce. The credit in most cases is in the form of consumable goods and rarely in cash. Repayment is usually in a cash crop and sometimes Sorghum. The consumables credited are costed at full retail price while the crop repaid is always under-priced. The merchants sometimes make up to a hundred per-cent profit when the crops thus obtained are sold to larger crop traders.

The third problem is also a small producer's problem, for he is always in a very weak bargaining position. Rural and local merchants and shopkeepers collect their stocks of the local produce partly by the method described above and partly by buying crops directly from producers in the local markets or through agents who collect the produce on the merchant's behalf for an agreed commission. So do the big companies' agents. These visit local markets to collect the local produce either from the farmers or from the local merchants. The collected produce is bulked and transported to the nearest railway station where it is graded, taxed and transported to Port Sudan for

export or to larger urban areas to be sold to consumers. The local crop buyers are always in a better bargaining position, whether they are the local merchant, the lorry owners who visit the local markets for the collection of the local crops or the larger traders or company agents who visit the markets for the same purpose. They own the means of transport and the sacks for bulking and transporting the produce. If the farmer is thinking of marketing the produce himself, then that involves greater effort, more expense and experience to travel to larger markets where prices might be better.

A fourth problem is related to the minimum fixed market prices for local crops. This is a well tried and tested way of stabilising production, limiting merchants' margins and securing producers' incomes against world market price fluctuation. The export companies and the Public Cotton Corporation who are responsible for marketing the export crops fix minimum prices for local crops to be offered to the merchants at the line-of-rail markets. These allow the merchants a profit margin of about five per-cent. Usually merchants and large company agents obtain their supplies of local crops from markets where these fixed prices are not applicable (the whole area of the Nuba Mountains is out of the fixed prices line-of-rail markets as they all lie in Northern Kordofan Province at El-Obeid and Umm Rwaba, nor are they applicable in the Gezira, where most of the groundnuts crop is bought from the producers and transported to Port Sudan. The merchants, so as to increase their profit margins, offer the producers very low prices especially when crops are plentiful following a good rainy season. This happens mainly because they are not observing the fixed prices in these remote areas. So, export companies fix the merchants' profit margins between Port Sudan and the line-of-rail markets and the merchants try to expand their margins by squeezing the producers' prices. The sufferer is always the producer in the

remote areas of production where fixed prices are not implemented at all. The merchants adjust their margins at the expense of the unprotected producers. The problem with the cotton crop is even worse as it is only bought by the government and the prices are fixed for years and its cultivation is obligatory in the Gezira.

Nevertheless, the present system is the only possible way of collecting the ridiculously small amounts of produce from a widely dispersed farming population. Most of the areas of production are remote and very difficult of access. Some are widely apart with long distances between the production and the main urban areas of consumption. Export crops, such as groundnuts and sesame are also transported for long distances and on bad roads to reach the railway line and the port. The distribution of imported goods reflects a very complicated seasonality in demand, i.e. when cash is available. When goods reach the mostly low income consumers, they have to be sold in tiny quantities and very small measures. The system as a whole is far too complex and involves many traders within each single chain. Under the present agricultural conditions it requires a mobility and spontaneity of decision and choice which is a skill learned by experience and which could not reliably and efficiently be undertaken by officials not motivated by private profit. The present system is the only one which could operate within the present low capital, low technical know-how pattern, and by the present sector of the population who are in most cases illiterate or insufficiently educated to do other jobs. This system also distributes the probability of risk and operates with the minimum overhead costs possible.

To solve the first problem mentioned above it is necessary to prevent shortages and this mainly is a responsibility of the government to solve the problem of the black market. It is also necessary to devise a tax system which prevents the corrupt trader from making

exorbitant profits. Price control alone is not sufficient, to make it effective imposition of rationing schemes is necessary and this is proving to be disastrous in Sudan at the present time, for it leads to the exploitation of the consumers, as was explained above when the controllers of the co-operatives create artificial shortages and bottlenecks in the rationed goods, and thus a black market. The officials and organizers of the co-operatives in control of the rationed goods exist at economic cost to the community. Ideally consumer co-operatives should provide both consumers and distributors (rural traders) with cheap goods. They should reduce the cost of trading for the rural traders as they save them the effort and cost of travelling to larger markets to replenish their goods. In reality, shortages in supply are still severe and one consequence is an inflation rate of about 20 to 25 per-cent (1). It does not seem realistic to propose a complete replacement of the present marketing system, nevertheless, it is urgent to improve it and to encourage the farmers to produce for the market. Efforts should be made to improve the bargaining position of the producer, who should first be freed from his imprisonment within the sheil system. This could be done by the formation of an intermediate body such as a credit bank to provide short term loans during the hard season and which should seek only nominal interest on the credits offered. Loans could also be in the form of sacks and simple agricultural tools, which could improve production and supply the farmers with some of their needs. Farmers thus could wait for prices to rise before they are compelled to sell or mortgage their crops for urgently needed credits. If only farmers could be helped to wait for a month after the harvest period then they could realize higher farm-gate prices. This could be done and still allow the merchants a reasonable return for the services they

1 CBI, Market Study, The Sudan, 1977, p.14

perform. If transport is improved, the farmer could travel cheaply and quickly to sell his produce in the urban markets and avoid the loss and decay caused by poor storage and the hot climate of the Sudan, which is particularly unfavourable for the production of the perishable market gardening crops.

The minimum price policies should be made to apply beyond the line-of-rail markets, as most of the producers are well away from these price-favoured places. Improvement in conditions for the crop merchants could be helpful. If an intermediate body could provide the merchants with loans, and they were allowed a greater than five per-cent margin, their co-operation could be gained as they would be encouraged to buy crops in minimum price areas. Support for the privately operated marketing system rather than its reform also needs other improvements. First, it is important that government planners and decision-makers should understand the present locational and temporal characteristics, functions and interrelationships of the prevailing commercial system and the market centres and places where most of the exchange takes place. Statistics of the amount of goods handled by these markets should be kept and made available for the purpose of developing and expanding the markets whenever necessary.

Local markets should be encouraged to retain and expand the innovative role they play in the development process. Markets should be established where there are none at present, but where there is sufficient population. At the beginning of the last decade, Johnson realized that

"while the use of an exchange economy consistently widens occupational variety, thus facilitating the utilization of the varied talents of a society's population. But exchange cannot knit a whole economic landscape into a functional entity unless there are markets within reach of producers and consumers." (1)

1 Johnson, E.A.J., The Organization of Space in Developing Countries, 1974, Harvard, p.416

Existing markets should be provided with storage facilities by building wholesale centres to which farmers could bring their produce for sale to company agents or individual merchants at prices consistent with quality and national market conditions. Villages with important markets should be granted higher administrative status and additional central institutions to help them in serving their hinterlands by providing more diversified functions and services. The role of the market as potentially fertile training grounds for emergent indigenous businessmen should be furthered by not impeding by bureaucratic measures the entry of new participants into market place trading. Petty trading can provide employment for a good number of the market village population. The skills of the local itinerant artisans could be improved by the organization of portable workshops and short training courses, during the dry season when little work needs to be done in the farm. This could be especially valuable if any mechanization is going to be introduced in farming. At present, most of the repairs, except for the very simple tools, have to be taken to larger markets to be done.

Markets in the two areas of the study have always been places where most of the population of the immediate areas could be found and contacted, especially during the market day. Government agencies wishing to contact the rural population for agricultural extension works, vaccination and other health teaching purposes, family planning, home economics demonstration, etc., can all utilize the market place and market day as the place and time of contact.

The attractiveness and efficiency of markets could be enhanced through government support for the construction of all-weather stalls to replace the traditional ones, and for hygienic display and storage facilities.

The government or private enterprise should also attempt to devise a method of providing public motor transport on market days for both traders and consumers, offering reduced fares to suit the farmers financial resources, particularly in the Nuba Mountains where motor transport is scarce. The encouragement of the private sector to invest in providing motor transport in the forms of buses and lorries could take place if cheap spare parts and fuel were available. Research is needed covering the whole of the country, to decide how far the system actually requires any government intervention. Certainly in the two areas studied there seems scope for such intervention.

It is difficult to plan for the development and modernization of the marketing system in isolation from the production system. It is high time to recognize the importance of the domestic market for the development of production. More food and other agricultural products should be produced to supply the growing internal market. Sugar, wheat and rice, which could all be grown in the country, are still imported at heavy foreign exchange cost. In 1975, the prices of the imported food products were high while the main export crop was badly hit by low world market prices. Cotton, which formed 60 per-cent of the value of exports, experienced a loss in revenue of nearly 30 per-cent from 1974 to 1975. On the other hand imported sugar prices were 100 per-cent higher and wheat 50 per-cent higher. Foodstuffs, drinks and tobacco form nearly 18 per-cent of the value of imports in 1975, table 8.1 below shows the details of the imports for that year.

Table 9.1
Imports by Commodity and Value in 1975

<u>Commodity</u>	<u>Value (in LS 000,000)</u>
Food stuffs	60.4
Drinks and tobacco	4.2
Raw materials	28.2
Chemicals	40.2
Manufactured goods	60.2
Machinery and equipment	59.1
Transport equipment	64.4
Textiles	43.0
<hr/>	
TOTAL	359.7

Source: CBI, Market Study, The Sudan, 1977, p 23.

The area under cotton could well be reduced and converted into food crop production. An alternative is to plan for self-sufficiency in textiles by manufacturing the locally produced cotton instead of exporting it in the form of raw lint. The internal market of about seventeen million should be sufficient to support an internal textile industry. Textiles might even be produced for export in the future.

Food products which could not be grown locally should then be imported. The state should help its citizens to get reasonably cheap and adequate food for in the Sudan at present people spend much of their time in a search for essential provisions. They have to queue for every single necessity. They queue for hours to get petrol, bread, sugar and many other things and when their turn comes often

the quota has already been sold. The only alternative is to look for these provisions for high prices in the black market.

Up-to-date statistics are needed for the rationalization of imports and exports and the increase in local production to meet the internal and external demands. At the moment no reliable figures for the provision and consumption of goods are obtainable. Intensive research is needed for development of appropriate technology for the increase of agricultural production as well as handicrafts. Traders who show interest in investment in small-scale as well as large-scale industries should be particularly encouraged. It is important to make use of their role as innovators and their readiness to accept and adopt new ideas and technologies as a means of profit-making. They could play a major role in the development and modernization of the traditional sector of the economy.

9:3 Suggestions for the use of markets and market areas as
planning units

The analysis of the hierarchies of market centres in the two areas of study showed that the Nuba Mountains area in contrast to the Gezira was most deficient in the second order market centres (Chapter Six), and that the third order markets provide very limited services. Bearing in mind that spatial planning should seek the creation of an efficient spatial structure which would facilitate the growth and transformation of traditional economy, the Nuba Mountains urgently need the deliberate promotion of some of the third order markets to provide more services. The lack of adequate urban and rural service centres in the area is closely associated with its peripheral character. Dilling, which proved to be more important in its area than Ruffa, of

the Eastern Gezira, lacks electricity which is a vital amenity needed for every development. Dilling could have been an industrial centre for textile and oil seed manufacturing, which could in turn increase the production of the raw materials in the whole of the Nuba Mountains. At present the raw materials are carried from the area for hundreds of miles to be manufactured elsewhere. Well developed market systems could replace the central places of the tertiary activity areas, in the rural agricultural communities to work as small-scale service centres or growth points. From them modernization and development could trickle down to their complementary regions. They could market more rural produce and the communication networks connecting them could open-up new areas for market production. It has been revealed by the study that the Gezira scheme has been beneficial in organizing the settlement system and in providing services. There is a clear difference between Eastern Gezira (out of the scheme) and the market centres of the Gezira proper in this aspect. For the Nuba Mountains more decentralization for the services such as hospitals, lower secondary schools for both girls and boys, wholesale shops, and provision of tap water should be established or encouraged to develop in a newly created group of second order service/market centres (there is no tap water in the whole of the Nuba Mountains except for Kadugli and Dilling). Elementary schools, general provision shops, dressing stations and dispensaries, minor motorable roads, pure water provision and flour mills which should be in all villages are not found except in large villages and all third order market centres, a fact which caused them to be considered in this study as central functions of a lower order. However, it seems appropriate to support Johnson's suggestion that

"Every rural producer should be within convenient travel time of some adequately competitive selling place for his produce, some adequately diversified service centre

unless there is a graduated, interlinked, and functionally integrated market system which covers all of a nation's space, three serious handicaps inevitably result. There will be only fractional production; consequently, there can be only fractional consumption; and, even more unfortunately, there can be only fractional social and intellectual development of a nation's human resources" (1).

From the experience of the fieldwork in the two areas of study, it has been noted that market hinterlands could form ideal planning areas for rural development. This is because they are bound by the actual interdependence between market centres and the areas they serve. Through their provision of vital economic and social services needed in the daily lives of the people. The market service areas are usually connected to the market centres by road, foot and animal track networks in an integrated system. The market area boundary will define a proper planning area only if it is demarcated in a manner which takes into account the actual spatial interdependences among the centres. The differences in the provision of commercial, social and administrative functions between different order market centres could create major and minor planning units, suiting the populations of major urban centres as well as small villages. Where periodic markets are in operation, the whole group of the alternating markets could form a larger planning unit. Each market area could form the smallest unit of all with a disregard of minor-overlap. They could be used for the planned provision of both social and commercial services.

Different methods are used to delimit the area of influence of towns and market centres (2). This study prefers the use of the market analysis technique (explained in Chapter Six) for the purpose of the delimitation of the area of influence of the market centres visited.

1 Johnson, op cit., 1974, p 418.

2 Reilly, W.J., The law of Retail Gravitation, New York, 1931 and Green, F.H.W., "Urban Hinterlands of England and Wales, An Analysis of Bus Services", Geographical Journal, vol. 116, 1950, pp 64-81 and Park, R.E., "Urbanization as measured by Newspaper Circulation", American Journal of Sociology, vol. 35, 1929, pp 60-79.

The technique reveals the existing integration and interdependence of markets within their areas. The information about their villages, origin and sources of their customers and goods, was given by market visitors, semi-permanent traders and shopkeepers. The results of the study are summarized in Figs. 6.7 and 6.8 which display an actual spatial relationship. Some problems had to be faced while mapping the collected data, notably where periodic market meetings are dominant there is great overlap as the markets operate on alternating days. Most villagers visit at least two markets a week. The problem lies in the overlap of market service areas which might make for difficulties in rural development planning. Rural development planners meeting this problem might be helped by the suggestion above that each periodic market area should form the smallest/a minor planning unit. The other problem, which was mentioned before, is that although one is confident that the village and place names mentioned by the respondents are true existing entities in the form of villages, hamlets or nomad camps, some of them do not appear on the present maps available. Nevertheless, it is essential if the market area concept is to be used for planning purposes, that settlement details are updated and recorded on correct maps.

The idea of the use of hierarchies of markets and central place systems for development and the provision of services has long been implemented in new settlement schemes. In countries like Israel, Holland and Ghana, three, four and five tiered hierarchies of settlements were formed to distribute the services. By the location of services at the correct scales of hierarchies, duplication and the waste of limited resources is avoided. That also helps in the even distribution of services for the convenience and reach of almost every member of the society (1).

1 Berry, B.J.L., Geography of Market Centres and Retail Distribution, 1967, Prentice-Hall Inc., pp 131-132.

* * * *

It is hoped that this pioneer study will lead to more studies of the peripheral areas, that is those away from the economic and social core of Sudan. The stagnation of the periphery is well advanced and it is urgent that action should be taken at government level for the rehabilitation of these peripheral areas. It is a modest hope that this pioneer study, by collecting and analysing in detail information about local markets, will reveal insights into the functioning of a most important social and economic factor in the lives of rural Sudanese and will indicate paths for further rural development planning to follow. In this context it is clear that many more such studies need to be carried out in different parts of this vast country, particularly where development through large schemes is not possible, and where the majority of the population remains at the insecure stage of production only for subsistence.

APPENDIX 1QUESTIONNAIRE FOR PERMANENT TRADERS

1. Where are you originally from? (Name of village or town)
2. What was your previous job?
3. When did you start your business?
4. Where did you start your business? (Name of place)
5. Do you own your own shop?
6. Do you have a permanent built house?
7. Do you have a lorry?
8. What commodities do you sell?
9. From where do you get your goods?
10. What do you use for transporting your goods?
 - 1) Your own lorry
 - 2) Your relatives lorry
 - 3) The wholesaler lorry
 - 4) Other lorries
 - 5) Railway
 - 6) Or other means of transport
11. How often do you bring new goods?

PeriodsTypes of goods

12. Is there any fluctuation in demand for your goods?

Types of goodsCondition and season

13. What are the reasons for fluctuation in demand?
14. Do you lend money to farmers in the rainy season? If 'yes'

What are the methods of repayment cash or kind?

With or without credit?

What are the periods of payment?

15. Do you buy local agricultural produce?

1) Yes or 2) No

a) When do you sell it?

b) Where do you sell it? (Name of town or village)

16. Do you supply small traders with goods?

If 'yes'

Where are those traders?

When do you supply them? Rainy or peak seasons.

17. Who are your customers?

1) Farmers from the village

2) Farmers from other villages (names)

3) Other traders from the village

4) Other traders from other villages (names)

5) Government officials

6) Others

18. Do you employ paid shop assistants?

Number

Period of employment

19. Since you established your business do the sales of radios, bicycles, metal furniture and clothes (or the goods you sell)

Rise

Fall

Or constant

20. What are your plans for the future?

APPENDIX 2QUESTIONNAIRE FOR TRADERS OCCUPYING SEMI-PERMANENTOR NO BUILDING AT ALL

1. Village or market name
2. Where are you originally from?
 - 1) This village
 - 2) This district
 - 3) This province
 - 4) Other places - where
3. Where did you come from for the market?
Name:
4. How long have you been travelling (time if possible)?
 - 1) 0 - 5 km
 - 2) 6 - 10 km
 - 3) 11 - 15 km
 - 4) 16+ km
5. How did you travel to the market?
 - 1) On foot
 - 2) On animal
 - 3) By bicycle
 - 4) By lorry
 - 5) By bus
 - 6) Other means
6. How many times did you visit this market last month?
 - 1) 1 - 2
 - 2) 3 - 4
 - 3) 5 - 6
 - 4) 6 - 7
 - 5) 8 - 9
 - 6) 10 - 11+
7. How many other markets do you usually visit?
 - 1) 0
 - 2) 1 - 2
 - 3) 3 - 4
8. What do you usually do on
 - 1) Saturday
 - 2) Sunday
 - 3) Monday
 - 4) Tuesday
 - 5) Wednesday
 - 6) Thursday
 - 7) Friday

9. What is your original occupation?

- | | |
|------------------------|---------------------|
| 1) Farmer | 2) Full-time trader |
| 3) Farmer's wife | 4) Part-time trader |
| 5) Government official | 6) Sababi |
| 7) Other jobs | |

10. Do you employ any paid labour in your shop?

- | | |
|--------|-------|
| 1) Yes | 2) No |
|--------|-------|

11. If 'yes' : No. of people Periods

12. What do you do in the rainy season?

- | | |
|----|----|
| 1) | 2) |
| 3) | 4) |
| 5) | 6) |

13. What other jobs are you doing?

- | | |
|----|----|
| 1) | 2) |
| 3) | 4) |

14. What do you do with the money you earn? -

- 1) Buy daily necessities
- 2) Pay school fees for children
- 3) Buy clothes
- 4) Buy new agricultural tools
- 5) Save it to buy

a radio

a bicycle

metal furniture

build a house

a mud house

red brick house

- 6) or buy

a lorry

a bus

a private car

- 7) buy other things

- 8) buy agricultural products, animals or handicrafts and sell elsewhere

APPENDIX 3QUESTIONNAIRE FOR MARKET VISITORS

1. Where are you from? (village)
2. How do you travel to the market?
 - 1) On foot
 - 2) On animals
 - 3) By bicycle
 - 4) By lorry
 - 5) By bus
 - 6) Other means
3. How long did you travel (time if distance not possible)?
4. How often do you visit this market?
 - 1) Everyday
 - 2) Every market day
 - 3) Once a week
 - 4) Twice a week
 - 5) Never before
 - 6) Other
5. What other markets did you visit last month?

NameNo. of visits

1)

2)

3)

4)

5)

6)

6. Why do you come to this market?
 - 1) To sell agricultural produce
 - 2) To buy agricultural produce
 - 3) To sell domestic goods
 - 4) To buy domestic necessities
 - 5) To buy animals
 - 6) To sell animals
 - 7) To meet friends
 - 8) Other reasons

17. How did you know about the above mentioned things?

- 1) From other farmers
- 2) From the village shopkeeper
- 3) At the markets
- 4) From the Government officials
- 5) From the radio
- 6) From the newspapers
- 7) Other means

18. What are your plans for the future?

- 1)
- 2)
- 3)
- 4)

19. Do you or any member of your family travel to work in

- | | |
|-----------------------------|------------------------|
| 1) Khartoum | 2) Gezira |
| 3) New development projects | 4) Other urban centres |

20. If 'yes' mention

Relationship

Age

Place of present stay

APPENDIX 4

Central Functions according to Gana, J. A., 1973, "Market Centres in Zeria Division, Nigeria, An Analysis of their Evolution and Locational Structure", Ph.D. Thesis, Aberdeen University, p.292:-

1 Tailoring	35 Postal Agency
2 Petty Trading	36 Agricultural Extension Office
3 Bicycle Repair	37 Building Material Store
4 General Shop	38 Bicycle Assembly and Sale
5 Grain Milling	39 Printing Press
6 Blacksmith	40 Bookshop
7 Provisions Store	41 (Niger Pools Agency)
8 Textile Shop	42 Bakery
9 Primary School	43 District Office
10 Butchery	44 District Court
11 Food (Hotel)	45 Police Post
12 Barber's Studio	46 District Head
13 Carpentry	47 Bank
14 Motor Repair	48 Cinema Hall
15 Periodic Market Place	49 Motorcycle Sales
16 Perfume and Cosmetics Shop	50 Automobile Sales
17 Rural Friday Mosque	51 Newspaper Office
18 Motor Spare-parts Store	52 Sewing Institute
19 'Medicine' Store	53 Daily Market Place
20 Licensed Bar	54 Urban Friday Mosque
21 Cobbler	55 Sub-Post Office
22 Petrol Station	56 Record Shop
23 Dispensary	57 Sub-treasury
24 Photography Studio	58 Hospital
25 Cotton Market	59 Dental Clinic
26 Radio Repair	60 Footwear Company Store
27 Electrical Goods Store	61 Divisional Office (Agricultural)
28 Watch repair	62 Office Machinery Services
29 Dry Cleaning Service	63 Lawyer's Office
30 Insurance Agency	64 Chief Alkadi Court
31 Departmental Store	65 Magistrate Court
32 Goldsmith	66 Provincial Police Headquarters
33 Secondary School/Training College	67 General Post Office
34 Furniture Shop	68 Provincial Office

APPENDIX 5

The Central functions in Northern India according to R. C. Mayfield, "A Central-Place Hierarchy in Northern India" in W. L. Garrison and D. F. Marble (eds.), *Quantitative Geography, Part 1: Economic and Cultural Topics*, 1967, pp.124-128. The 129 entries are arranged in descending order of frequency of occurrence in the centres.

- 1 Primary schools (ordinarily grades 1-6)
- 2 Gurdwaras (the "temples" of the Sikh religion)
- 3 Co-operative societies (includes both marketing and financing groups, the two most common types)
- 4 General provisions (a grocery without fresh produce or meat, but with emphasis on edible grains, pulses, and cooking oils. Spices, tea, soaps, etc. are also carried)
- 5 Burning ghats (special crematory grounds)
- 6 Grain mills
- 7 Post offices
- 8 Tailors
- 9 Blacksmiths
- 10 Clay pottery sales
- 11 Vaid-hakims (practitioners of indigenous medical systems, the Ayurvedic and Unani, respectively)
- 12 Cobblers
- 13 Carpenters
- 14 Goldsmiths
- 15 Midwives
- 16 Barbers
- 17 Medium-low quality cotton cloth sales
- 18 Middle schools (ordinarily grades 7-9)
- 19 Banks
- 20 Physicians (allopathic)

- 21 Vegetables-fruits (combination sales)
- 22 Hindu temples
- 23 Haswaies (special "sweet shops")
- 24 Bicycle repair shops
- 25 Brick kilns (producing for local markets)
- 26 Alcoholic beverage sales (limited by government licensing)
- 27 General stores (miscellaneous manufactured goods, including clothing, foods, toiletries, and small appliances)
- 28 High schools (ordinarily grades 10-12)
- 29 Weavers (retailing locally in part of fully)
- 30 Soda-water shops
- 31 Dye shops (cloth dyeing)
- 32 Opium sales (limited by government licensing)
- 33 Hardware
- 34 Public resting houses (community-owned inns for travellers, but may be used for other purposes, such as weddings)
- 35 Public secretaries (chiefly letter writers and readers)
- 36 Timber sawyers (prepare finished lumber)
- 37 Cotton gins
- 38 Common fuel (wood, coal sales chiefly for crematory purposes)
- 39 Astrologers and fortune tellers
- 40 City-employed bazaar sweepers
- 41 Tea shops
- 42 Laundry (dhobis)
- 43 Meat shops
- 44 Books and stationery
- 45 Rope and miscellaneous bedding supplies (the common bed is woven from rope)
- 46 Vegetable-oil presser
- 47 Confectioneries (chiefly candy)
- 48 Veterinarians

- 49 Hospitals (allopathic)
50. Basket makers
- 51 Shoes (retail sales only)
- 52 Parks and playgrounds
- 53 Household utensils (chiefly tin and aluminum)
- 54 Dispensaries (all types)
- 55 Tobacco
- 56 Khaddar (cloth, hand-woven from hand-spun thread)
- 57 Special fairs ((melas), not common to other central places)
- 58 Vegetables only
- 59 Pan-biri shops (pan, which is chewed, is composed of betel nut and leaf, lime, and spices; biris are crudely-made "country" cigarettes)
- 60 Watch repair
- 61 Homeopaths (practitioners of the homeopathic medical system)
- 62 Restaurants
- 63 Special education facilities (midwife training, teacher training, etc.)
- 64 Police stations
- 65 Insurance agents
- 66 Cattle food sales
- 67 Miscellaneous electrical goods (retail sales)
- 68 Furniture (Western style)
- 69 Grains and pulses
- 70 Dentists
- 71 Special health facilities (vaccination centres, etc.)
- 72 Sewing machines (retail sales)
- 73 Rickshaws (actually, the "trishaw" of bicycle-parts origin)
- 74 Glass-cutting and picture-framing
- 75 Chemists (druggists)

- 76 Jewelry (all types, including gold)
- 77 Metal trunks, boxes and tubes
- 78 Fancy, medium-quality cotton cloth sales
- 79 New bicycles
- 80 Food wholesale
- 81 Wholesale of non-food goods
- 82 Radio and electrical repair
- 83 Copper and brassware
- 84 Crockery and glassware
- 85 Skins and hides
- 86 Pens, ink, pencils
- 87 Pure ghee (clarified butter)
- 88 Fruit only
- 89 Bookbinders
- 90 Octroi posts
- 91 Photographers
- 92 Watches (new, retail only)
- 93 Paints and varnishes
- 94 Gasoline and motor oil
- 95 Timber (retail only)
- 96 Machine shops (metal-working)
- 97 Dry cleaners
- 98 Civil administrative offices (other than courts)
- 99 Lawyers
- 100 Construction materials other than brick or wood (cement, steel, bamboo, etc.)
- 101 Toys
- 102 Tenthouses (tents, furniture, and crockery for hire)
- 103 Motor repair
- 104 Second-hand goods

- 105 Soaps, toiletries
- 106 Embroidery
- 107 Sewing machine repair
- 108 Eye specialists
- 109 Courts
- 110 Commerical artists
- 111 Printing shops
- 112 Pressed oil (retail only)
- 113 Photographic supplies
- 114 Theaters
- 115 Fresh dairy products
- 116 Transport companies (truck service)
- 117 Tubewell drilling
- 118 Welding
- 119 Lock repair and sales
- 120 Loudspeaker service
- 121 New radio sales
- 122 Auto and tractor parts
- 123 Cold-storage plant
- 124 Battery-charging service
- 125 Cotton yarn sales
- 126 Straw mats
- 127 Swords and knives
- 128 Seal-making and sales
- 129 Ice-making and sales

APPENDIX 6

Central functions in Dar-Hamid Sub-Regional System (Northern Kordofan Province) according to Ywsif Mohamed Abdel Malik, "The Application of some Aspects of Central Place Models to the Planning of Service Networks in a Rural Area in Sudan".

M.Phil., Edinburgh, 1974, p 114

Type of Central Function	No. of Centres in which it occurs
Water Station	60
General Shop	52
Tailor	37
Butcher	31
Omodia Court (1)	29
Crop Market	24
Boys Primary School	24
Tribal Court	20
Dispensary	19
Transport Lorry	18
Flour Mill	17
Livestock Market	16
Restaurant and Cafe	13
Carpenter	13
Retail Bakery	12
Barber	9
Girls Primary School	9
Health Centre	8
Police Station	8
Rest House	5
Public Health Office	4
Boys Secondary School	3
Consumers' Co-operative	3
Sub-Post Office	3
Slaughter House	3
R.C. Sub	2
Veterinary Dressing Station	2
Girls Secondary School	1
Bank	1
Market and Credit Society	1
Extension Office	1
Veterinary Dispensary	1
Rural Hospital	1
Rural Council Seat	1
Post and Telegraph	1
Civil Court	1
Police Station	1

1 Omodia Court is a local court headed by a sub-tribal chief.

APPENDIX 7

The central services used by D. Grove and L. Huszar, The Towns of Ghana, the role of service centres in regional planning, Ghana University Press, Accra, 1964, pp 16-19, to define the centrality of Ghanian towns.

Adminstrative:

1 Political

Regional Commissioner

District Commissioner

2 Local Court

3 Government Treasury

4 Police

District Headquarters

Station

Post (subsidiary)

Communications

5 Posts and Telecommunications

Telephone Exchange

Post Office

Postal Agency (subsidiary)

6 Transport Maintenance

Service Station

Petrol Station (subsidiary)

7 Main Road Junction

8 Muncipal Bus Station

9 Railway Station (subsidiary)

Communications (continued)

10 Air Transport

Airport

Airstrip (subsidiary)

11 Catering Services

Hotel or Catering Resthouse

Resthouse (subsidiary)

Sea or River Port

Commerce

12 United Africa Company

District or Branch Office

Wholesale outlet

13 Banking

Ghana Commercial Bank

Barclays Bank D.C.O.

Bank of West Africa

Social Services

14 Health Services

Specialist Hospital

General Hospital

Health Centre (subsidiary)

15 Education

University or University College

Secondary School or Teacher Training College

16 Public Library

Industry and Power

17 Road Maintenance

Ghana National Construction Corporation Main Yard

Ghana National Construction Corporation Road Camp (subsidiary)

18 Manufacturing

More than 1,000 employees

200 - 1,000 employees

19 Electricity

20 Mining

More than 1,000 employees

10 - 1,000 employees

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