

THE SUDAN : A STUDY IN ECONOMIC DUALISM

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## PREFACE

This is yet another attempt in the recent spate of development economics literature. The present study, however, has two important points of departure. Firstly, it deals with the problems of a developing, rather than a stagnant, underdeveloped economy. Hence, it is concerned with the repercussions and imbalances that follow the first spurts of economic development. Secondly, the study is devoted to the analysis of the economic structure of a newly born state about which very little was written.

I should like to express my gratitude to a number of professors and colleagues who have taken a kindly interest in this study and given me assistance in various ways. I am particularly obliged to Professor David McCord Wright, William Dow, Professor of Economics at McGill University, for his encouragement, constructive criticism and advice throughout the work. Professor H.D. Woods, Director of McGill Industrial Relations Centre, read and criticized the whole manuscript and offered valuable advice. To Dr. K.J. Charles, I owe the gratitude due to a teacher, colleague and a friend. His vast knowledge of development economics, which he generously put at my disposal, saved me from many mistakes and pitfalls. My colleagues in the Ministry of Finance and Economics in the Sudan were extremely helpful in providing me with information and statistical data on a number of occasions. It seems fair to point out, however, that the persons mentioned above are in no way responsible for the views or errors of fact or opinion expressed in this study. The responsibility is solely mine.

Without the generous help from the World University Service of Canada and Earhart Foundation, my coming and staying in Canada and hence

writing the present thesis would have been impossible. I should like to record my grateful acknowledgement to those two institutions. In deciphering and typing the manuscript, Mrs. J. Y. Sharpe, displayed remarkable patience, judgement and skill which deserve special thanks.



NASRELDIN MUBARAK

THE SUDAN : A STUDY IN ECONOMIC  
DUALISM

Recent economic studies have shown that after the first spurt of economic growth in an underdeveloped economy, it is no longer certain what course development takes. It is obvious that economic growth is unlikely to start at all regions and sectors at the same time and proceed at the same speed. There are, however, reasons to believe that the split of some of the now underdeveloped economies into advanced and traditional sectors may be of considerable width and duration and this split may turn them into "dual economies". Under such conditions which are fairly typical of such countries as Brazil, Colombia, Italy and the Sudan, to name only a few, the split of the country into a progressive and a depressed area could persist for a long time. The present study is a descriptive analysis inquiring into the causes of this split, how it came to exist in the Sudan, why it persists and why it tends to increase. The study concludes with some policy considerations.

## CONVERSIONS, ABBREVIATIONS & SYMBOLS

### CONVERSIONS:

- £s1 = One Sudanese Pound = 100 Piastres = 1000 Milliemes
- = £E1 One Egyptian Pound
- = £1 = 6.15 d. Sterling
- = US \$ 2.87156

Ardab : A measure of capacity for Agricultural Produce Equalling 194 Litres

Feddan : Unit of Area Equal to 1.032 Acres

Kantar : A Measure of Weight, usually 100 'rotls'.

Rotl : A Unit of Weight Equal to .99 lbs. or 449.28 grammes.

### ABBREVIATIONS:

- Km : Kilometre
- Mm : Millimetre
- P.T. : Piastre
- M/M : Millieme
- S.D.I.T. : Southern Development Investigation Team
- S.G.B. : Sudan Gezira Board

### SYMBOLS:

- (.....) : Indicates that data is not available or not separately reported.
- ( - ) : Indicates that the amount is nil or negligible.
- ( / ) : Between dates, e.g. 1957/58 - indicates a crop year or a fiscal year.
- ( - ) : Between dates e.g. 1954 - 1956 signifies the full period involved including the beginning and end years.

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## CHAPTER ONE

### THE THEORY OF ECONOMIC DUALISM

#### I. What is a Dual Economic System?

The object of economic life is to satisfy human wants. One of human wants, however, is "congenial activity". So sometimes the satisfaction produced is not the final product but the activity needed to produce it. Indeed, as Schumpeter put it, "economic activity may have any motive, even a spiritual one, but its meaning is always the satisfaction of wants".<sup>1</sup> Usually some preparatory activity is involved in supplying the necessary means, or, where this is not the case, the labour of third persons is necessary to enable the satisfaction of one's own wants. An economic system is nothing more or less than the sum of actions making the satisfaction of wants possible. "Crusoe economics", the economics of an isolated man, is conceivable, but is bound to be a poor system, and is very exceptional in real life.

As a rule an economic system pre-supposes the co-operation of several individuals for the mutual satisfaction of their wants. Such co-operation naturally implies some degree of conscious organization. As soon as an economic system includes more than one person, it implies, therefore, organized economic activity. These two features - namely, activity directed to the satisfaction of future wants and organization, become more important as economic development proceeds.

It is possible to characterize an economic system by its ideology, the organizational form or the technology dominating it. The three aspects are interdependent and typify the system. Nevertheless it is not necessary

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<sup>1</sup> J.A. Schumpeter: The Theory of Economic Development. Translated from the German by R. Opie, Harvard Univ. Press, Cambridge, Mass. 5th Printing, 1955, p.10.

that a society may be dominated by one economic system alone. Where one economic system prevails, the society in question may be called homogeneous. Very few such homogeneous societies exist in the real world. Where on the contrary two or more economic systems appear clearly distinct, the one from the other, and each dominates a part of the society, there we have to deal with a dual or a "plural society".<sup>2</sup>

To make the term dual society or dual economy more distinct, it is advisable to reserve it for societies or economies showing a cleavage of two different economic systems which, in the normal evolution of a homogeneous society, are separated by a transitional form as for instance, pre-capitalism by early capitalism. There are many dissenting voices against this idea and they hold that "no stage of economic evolution is sharply separated from preceding stages, and a continuous thread of development may be traced from age to age".<sup>3</sup> Facts collected from empirical studies, however, proved that such a cleavage can exist.

So, in a dual economy it is possible to discern two major sectors, one which is largely indigenous in which levels of technique and levels of economic and social welfare are relatively low. The other sector, usually under "Western" leadership and influence and in which technological

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<sup>2</sup> A plural society was defined by the writer who coined the term as a "society comprising two or more elements or social orders which live side by side, yet without mingling, in one political unit." J.S. Furnivall, Netherlands India, Cambridge Univ. Press, 1939, p. 446.

<sup>3</sup> G.M. Modlin: Development of Economic Society, Little, Brown & Co., Boston, 1937, p.3. Also see B. Higgins : "The Dualistic Theory of Underdeveloped Areas", in Ec. Development and Cultural Change, Vol. IV, No. 2, Chicago, Jan. 1956, p. 104.

advance and the average levels of economic and social welfare are relatively high. The advanced sector of the system has gained its existence in the new environment without being able to oust or to assimilate the divergent economic system which has grown up there. The advanced sector became an "island for itself" with the result that neither it nor the less advanced sector can be considered as characteristic of the economy as a whole. This dualistic character is to be noted not only with respect to methods of production and distribution; it exists also in attitudes as in ways of living and doing business. Lewis describes it well:

"We find a few industries highly capitalised, such as mining or electric power, side by side with most primitive techniques; a few high class shops, surrounded by old style traders; a few highly capitalized plantations, surrounded by a sea of peasants. But we find the same contrasts outside economic life. There are one or two modern towns with the finest architecture, water supplies, communications and the like, into which people drift from other towns and villages which might almost belong to another planet. There is the same contrast even between people; between the few highly westernized, trousered natives, educated in western universities, speaking western languages, and glorying in Beethoven, Mill Marx or Einstein, and the great mass of their countrymen who live in quite other worlds".<sup>4</sup>

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<sup>4</sup> "Economic Development with Unlimited Supplies of Labour", Manchester School of Ec. & Soc. Studies, May, 1954, p. 147.

There is no doubt that the most frequent form of economic dualism is to be found in underdeveloped countries where an imported Western capitalist system has penetrated into a pre-capitalist, indigenous, agrarian community and where the original economic system has been able to hold its own or, expressed in other words, has not been able to adopt the capitalist principles and put them into full practice. When stated in these terms, the case for economic dualism is widespread and it may be found to exist in the largest part of the world.

One may go further to argue, as does Professor Higgins, that some degree of dualism exists in virtually every economy. Even the most advanced countries such as the United States and Canada have areas in which techniques lag behind those of the most advanced sector, and in which standards of economic and social welfare are correspondingly low. "Notable examples are the rural sectors of the Province of Quebec, rural areas in the Southern Hills and Northern New England, and Mexican counties in Texas, Arizona and New Mexico".<sup>5</sup> Professor Higgins is, no doubt, confusing the concept of dual society with the dual features of an economically advanced society, which arise from a change of vital unity of a society from the territorial community to vocational and industrial groups, or in other words due to "organic growth". Everywhere, the working of economic forces makes for group tensions; town against country, industry against agriculture, labour against capital, "haves" against "have nots". But in a relatively homogenous society, these tensions are alleviated by a feeling of common citizenship, common basic loyalties, social habits and national consciousness.

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<sup>5</sup> B. Higgins: "The Dualistic Theory of Underdeveloped Areas", Ec. Dev. & Cultural Change, Vol. IV, No. 2, Chicago, Jan. 1956, p. 106.

In a dual society on the other hand, these factions are intensified by racial or quasi-racial cleavage and/or by differential westernization of society.<sup>6</sup> In his recently published book, Professor Higgins clarified his position by distinguishing between "Social Dualism" which he condemns and "Technological Dualism", which he believes to exist.

On the basis of the foregoing analysis and for the purposes of this thesis we will define a dualistic economy as one in which an imported economic system clashes with the indigenous system or where the imported system is not absorbed by the economy as a whole. Most frequently the imported economic system is capitalism but not necessarily industrial capitalism. The present thesis will endeavour to show that a similar cleavage exists between the age-old subsistence sector and the modern irrigation economy of the Republic of the Sudan. "Dualism", says Dr. J. H. Boeke, "is a form of disintegration (which)... came into existence with the appearance of capitalism in pre-capitalist countries. The invading force is capitalism but is not colonialism; both it and the anti-thesis 'native-foreign' are objectionable". It is to be hoped, Dr. Boeke continues, "that with the obtaining of national sovereignty the true character of economic dualism will be acknowledged sincerely and logically, for its negation is decidedly not to the interest of the small man".<sup>7</sup>

We may distinguish at least three types of dualism. Economic dualism which prevails when only a portion of the economy has been transferred by western penetration; the rest continuing in more or less traditional way. It may be caused more specifically by Western plantations and

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<sup>6</sup> See J. S. Furnivall, Colonial Policy and Practice, Institute of Pacific Relations, Cambridge, 1948, pp.304-312.

<sup>7</sup> J.H. Boeke: "Economics and Economic Policy of Dual Societies", Institute of Pacific Relations, New York, 1953, p.20. Hereinafter referred to as Boeke, Economics...



mines located at the periphery, or alternatively, by differences within the native economic structure; a portion taking to commercial production, and another continuing on a more or less subsistence level. Geographical dualism exists, whenever, due to the intractability of the natural resources or the history of economic penetration, or uneven regional development, two major parts of the country are at a markedly different levels of development. Thirdly cultural dualism, which may be a corollary of the other forms, is more specifically a devotement of a state of affairs where a wide cultural gulf exists between the different races within one society. The three types of dualism are to a certain extent complementary and cannot be easily identified separately as we shall see in the case of the Sudan.

## II. Dualism in Economic Thought:

The first rudiments of a dualistic approach to economics appeared in India and especially in the philosophy of Mahatma Ghandi. He did not postulate a pure dualistic economic theory but he made the pre-capitalist structure of society his conception of life and preached it as the only road to salvation. Ghandi did not ignore capitalism, but he advocated its abrogation to pre-capitalism.. What he advocated was moral reform, then the manifestations of Western capitalism will disappear automatically and with them the "greed for profit" and the "domination of the machine".<sup>8</sup>

An Indian economic theorist, Radhakamal Muskerejee, has tried to work up the Indian data into a theoretical system - a rural communal economic theory.<sup>9</sup> His books, from "The Principles of Comparative Economics"

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<sup>8</sup> What Ghandi objected to was, "the craze for machinery, not machinery as such. The craze is for what they call labour saving machinery. Men go on saving labour till thousands are without work and thrown to the streets to die of starvation," Quoted by D.P. Mukerji, "Mahatma Ghandi's Views on Machines and Technology", International Social Science Bulletin, vol.VI, No.3, 1954, p. 413.

<sup>9</sup> In his "Institutional Theory of Economics", 1942, Ch.IX on "Typology of Contrasted Economic Systems".

onwards, give an idealization and a glorification of the pre-capitalist foundations of the family and the rural society in his country. He points out how all capacities, riches, enterprise, knowledge, have left the countryside for the towns; he explains how life and development in the urban centres means the stagnation and decline of villages. He does not come to a dualistic economic theory for the simple reason that he eliminates the Western capitalistic centres from his social vision. He pictures the future of India as a federation of rural communities and village institutions with a distinct communistic undertone.

The Netherlands contribution to the theory of economic dualism began when in 1908-9 a two-volume study appeared: the "Specimen of an Introduction to Colonial Economy", by Dr. J. C. Kulstra. It was possibly the first book that promised an independent, systematic treatment of dualistic economies, although it mistakenly based dualism on racial discrimination. The book however drew attention to the problem and helped to give it actuality.

Another Dutch scholar, the late Dr. J. H. Boeke, began his work on the subject in 1910 when he submitted a thesis at the University of Leiden entitled "The Problems of a Tropical Colonial Economy". He tried to sum up and to analyse the distinct contrasts between the European and the Far Eastern economies. He concluded his discussion by stating that a distinctive Eastern economic theory is justified and that on the strength of this, a different Eastern economic policy was needed. The thesis was the starting point and the principles on which it was based maintained themselves in the course of long experience and reflection of Dr. Boeke as Professor of Eastern Economics at Leiden University.

Since then Dr. Boeke wrote two studies on Indonesian experience in economic dualism.<sup>10</sup> These two studies were amalgamated into one book published in 1954 with the title "Economics and Economic Policy of Dual Societies: As Exemplified by Indonesia". While his theory is based on Indonesian experience, Dr. Boeke believes that it has a general application because of "the conviction that the economic problems of Indonesia are typical for a large and important part of the world. Therefore the analysis of these problems may be illuminating for many similar countries and that the experience gained in several decades of economic colonial policy may serve as a guide to the host of inexperienced planners for the well-being of that part of the world that has not yet been assimilated to their Western ideals."<sup>11</sup>

Dualism for Dr. Boeke is synonymous with Eastern: it arises from the clash between East and West. While cautioning that the only true and really cogent antithesis is represented by the words capitalistic and non- or pre-capitalistic, Dr. Boeke contends that we may use the term Eastern Economy instead of Dualistic Economy, because both terms cover the same situation.

The pre-capitalist sectors of dualistic economies have several characteristics in common. One of these is the limited needs, in sharp

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<sup>10</sup> (1) The Structure of the Netherlands Indian Economy, International Secretariat, Institute of Pacific Relations, New York, 1942.

(2) The Evolution of the Netherlands Indies Economy, Institute of Pacific Relations, New York, 1946.

Dr. Boeke restated and elaborated his special theory a few years before his death, see his Three Forms of Disintegration in Dual Societies, Indonesia, vol. VII, No. 4, 1954, and Western Influence on the Growth of Eastern Population, Economia Internazionale, vol. VII, No. 2, May, 1954.

<sup>11</sup> Boeke, Economics.....p.6.

contrast to the unlimited needs of a western society. Accordingly anyone expecting Western reactions in the Eastern sector will meet with frequent surprises: "When the price of coconuts is high, the chances are that less of the commodity will be offered for sale; when wages are raised the manager of the estate risks that less work will be done; if three acres are enough to satisfy the needs of the household, the cultivator will not till six; examples might be multiplied indefinitely. This inverse elasticity of supply should be noted as one of the essential differences between Western and Eastern economies".<sup>12</sup> In short, in the familiar terminology of Western economics, the pre-capitalist eastern sector of the dualistic economy, in contrast with the western homogeneous economy, is characterized by a backward sloping supply curve of effort and risk-bearing.

Such needs as there are in the Eastern sector are social rather than economic. It is what the community thinks of commodities that gives them their value.<sup>13</sup> It is a matter of secondary importance whether the land produces reasonable profit in proportion to the money paid for it, whether the cattle can be made reasonably useful to their owner in his own business. For it is not the use of these objects to the subject himself that gives them their worth in his eyes; it is what the community thinks of them that sets the standard. "If the Mandrese values his bull ten times as much as his cow, it is not because the former is ten times as useful to him as the latter, but because the bull increases his prestige

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<sup>12</sup> Boeke, Economics ... p.40

<sup>13</sup> In the words of a Laplander reindeer owner, "the reindeer wander around and I look at them. Money I have to hide, I cannot see it.". Quoted by Franz Steiner in his "Notes on Comparative Economics", The British Journal of Sociology, Vol. V, London, 1954, p. 118.

at the bull races.<sup>14</sup>

A closely related feature in Dr. Boeke's view is the almost complete absence of profit seeking motive in the Eastern sector of the dualistic economy. Speculative profits are attractive here, but they lack every element of that regularity and continuity which characterizes the idea of income. Eastern industry is characterized by aversion from capital investment in the sense of conscious dislike of investing capital and of risks attending it. Not only the inelasticity of supply but also the slight interest even in the minimum requirements of standard, lack of organization and of discipline and local specialization; all these features are in sharp contrast to the westernized, capitalistic sector of the dual economy.

Because of these differences, Dr. Boeke concludes, the homogeneous Western "general" economic theories are inapplicable to dual economies. He goes on to suggest "tailor-made" policy measures based on two observations. First as a rule one policy for the whole dual economy is not possible, and secondly what is beneficial for one sector of the economy may actually be harmful for the other sector. In his policy measures Dr. Boeke deplores the technical-capital-assistance approach and stresses the need for village restoration through the revival of rural gentry by more democratic measures.

One of the most vehement critics of Dr. Boeke's dualistic theory is Professor B. Higgins.<sup>15</sup> He accepts that some degree of dualism exists

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<sup>14</sup> Boeke, Economics... pp.37-38

<sup>15</sup> Especially in his "Dualistic Theory in Underdeveloped Areas". First published in Economidan Kenangan, Indonesia, Feb. 1955. A revised and condensed version was published in Economic Development & Cultural Change, Chicago, Jan.1956, Vol. IV, No.2. (Hereinafter referred to as Higgins, "Dualistic Theory"). Professor Higgins has recently restated and elaborated his criticism of Boeke's dualism in his newly published book, Economic Development, Principles, Problems and Policies, W.W. Norton & Co., New York, 1959, esp. Chs. XII, XIII and XIV.

in underdeveloped areas, although it is perhaps less sharp than Dr. Boeke suggested and seems to be becoming still less sharp. Dualism, Professor Higgins argues, is not a special feature of underdeveloped areas. Most economies, if not all, can be divided into regions with different degrees of technological advance. What Professor Higgins questions is the existence of "full-grown capitalism" side by side with a full-grown pre-capitalist sector with nothing in between.

Many of the specific characteristics of the Eastern economy described by Dr. Boeke seem to Professor Higgins to be attributed to Western economies as well. The preference for speculative profit over long-term investment in productive enterprise appears whenever chronic inflation exists or threatens. The conscious dislike of investing capital and of the risk attending it prevails everywhere. "Only the prospect of large and fairly safe profits has called forth the large volume of investment that has resulted in the rapid development of the now advanced countries."<sup>16</sup>

Professor Higgins continues to argue that Western economists have developed a whole field of analysis relating to liquidity preference to take account of the reluctance of investors the world over to accept risk or illiquidity and their strong preference for keeping their capital safe. As for valuing goods according to prestige conferred rather than direct use value, Western society is not free from such behaviour. Veblen made such behaviour a vital aspect of his analysis of the American society and gave it his famous label "conspicuous consumption". But there remains a distinction of degree, as Dr. Boeke's students asserted.

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<sup>16</sup> Higgins, "Dualistic Theory....", p. 106.

Also the backward sloping curve is not exclusively a feature of Eastern societies. It appears in any society which stagnates or slows down long enough to weaken the "demonstration effect" produced by people moving from one standard of living to another as a result of their own extra effort directed specifically towards earning additional income. "The backward sloping supply curve of effort was all too evident in Australia during the post war period and it began to appear in certain industries such as coal mining, in the United States in recent years."<sup>17</sup>

Similarly, Dr. Boeke's contrast between urban growth in Western and Eastern societies does not ring true in the ears of Professor Higgins. In dual societies, Boeke contends, urban development proceeds at the cost of rural life. Higgins believes that as far as one can judge from available data, urbanization is everywhere accompanied by an absolute growth but relative decline in rural population and prosperity; although in countries where the birth rate has not fallen the relative fall in rural population and income may not stick.

In sum it seems to Professor Higgins that Dr. Boeke exaggerates the degree of dualism in such countries as Indonesia. The contrast between the advanced and the underdeveloped sectors appears to be less sharp than

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<sup>17</sup> Higgins, "Dualistic Theory..." p. 107. Professor Higgins recently elaborated this point. He admitted that in a static world, supply curves of effort and risk taking are normally backward sloping. "Where no other changes are taking place most people would probably like some additional leisure or some additional safety or liquidity, when rates of pay for effort and risk taking are increased, so that extra leisure, safety, and liquidity can be had without a reduction in material standing of living. Can anyone doubt that most academicians would offer fewer man-hours for sale each year if basic university salaries were doubled and nothing else charged?...In dynamic societies the illusion of upward-sloping supply curves has been created by continuous shifts to the right of both demand curves and supply curves, in response to population growth, resource discoveries and technological progress." Economic Development, p. 287.

Boeke contends. Nor can Higgins see that such dualism is typically Eastern. Contrasts between the levels of technique and of economic and social welfare and even contrasts in economic and social behaviour can be found among different sectors of many western economies, he says.<sup>18</sup> "To my mind," Higgins concludes, "it is Boeke's homogeneous societies that are rare."<sup>19</sup>

Although Dr. Boeke stresses the need for a distinct economic and social theory for dual economies, in Higgins view he does not really provide one. Boeke's theory consists of a description of an Eastern society and demonstrates that it lacks those features of Western societies which have caused the economic and social development of the West. Since Eastern development is so different, it follows in Dr. Boeke's mind that such economic and social development on Western lines is impossible for the East. Professor Higgins believes, on the contrary, that an explanation of the relative stagnation of the underdeveloped areas can be found by applying the familiar tools of economic and social analysis within a model defined by appropriate institutional assumptions. It is his further belief that, given such an explanation, the solution of the problem will suggest itself.

The alternative explanation of dualism which Professor Higgins suggests provides a more hopeful outlook of underdeveloped areas along

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<sup>18</sup> Belshaw makes a pertinent point in this connection: "Disintegration or incompatibility of objectives is important not as implying absolute division but degree of division. There are group differentiations in Western society which indicate that the concept of a unitary society, as opposed to a plural society, is a classificatory tool which, like others, must be considered in terms of greater or less." Changing Malensia, Oxford Univ. Press, 1954, pp.26-27.

<sup>19</sup> Higgins, "Dualistic Theory....", p. 108.



Western lines than does Dr. Boeke's analysis with its "back to the village" policy conclusions. The policy conclusion to Professor Higgins' analysis is that development requires large amounts of capital investment, especially in the underdeveloped sector. This investment must be in a sizeable lump and not through the "marginal increments that result from a set of unrelated individual decisions."<sup>20</sup> In other words it needs capital investment on a scale and of a type that will only be possible through joint efforts of underdeveloped countries and those of the advanced countries to provide large scale capital assistance. In so far as possible this investment should be accompanied by improvements in techniques that are labour-absorbing rather than labour-saving.

To Professor D.M. Wright the sizeable sudden lump of capital does not necessarily provide the solution. "It will be wasted", he says, "if there is not an ideological, grass roots transformation too", and he draws the example of the "half empty Roman towns of Britain".

The modern economic analysis however recognizes that the chief cause for dualism in underdeveloped areas is the inter-relationship between factor endowment and the techniques of production. This inter-relationship can be analysed with tools familiar to Western economists. Considerable progress had been made at the Center for International Studies of Massachusetts Institute of Technology, especially in the work of Mr. R.S. Eckaus.<sup>21</sup>

The conclusions of Mr. Eckaus can be summarized as follows: With a high labour capital ratio, structural unemployment of labour in the labour

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<sup>20</sup> Higgins, "Dualistic Theory....", p. 113.

<sup>21</sup> His "Factor Proportion Problem In Underdeveloped Countries", American Economic Review, Vol. 47, Sept. 1955, pp.539-565. For other dualistic economic models, see Robert Salow, "A contribution to the Theory of Economic Growth", Quarterly Journal of Economics, February 1956, and Hla Myint, An Interpretation of Economic Backwardness, Oxford Economic Papers, vol. VI, No. 2, June, 1954.

intensive, variable coefficient sector is certain always to appear, and cannot be removed by price adjustments alone. The model constructed by Mr. Eckaus is very simple as compared to the real world, but he suggests that it has "most of the characteristics of the many-good, many-factor case". First attempts at complicating the model suggest that the conclusions are not altered.

Mr. Eckaus demonstrates that structural unemployment will be aggravated under any of the conditions:

1. If wages are kept artificially high by trade union activity or by government policy of legislating modern standards of social security without first building up productivity to sustain them.
2. If technological progress takes a form favouring the capital intensive sector.
3. If the rate of population growth exceeds the rate of capital accumulation in the labour intensive sector.

Most of the underdeveloped dual economies would fit in Eckaus' model. The westernized sector is capital intensive and the technological coefficients are relatively fixed. Capital has been poured into this sector alone. The other "eastern" sector is technically variable ~~proper-~~ ~~tion~~, but since little capital and much labour was available in this sector, actual techniques are labour intensive. In the economy as a whole, the ratio of available labour to capital is very high. Consequently - applying Eckaus' analysis - structural (disguised) unemployment in the "eastern" sector is inevitable, unless techniques or factor endowments are changed.

Under these conditions, Eckaus concludes, there is no incentive for

groups or individuals to make marginal or unrelated investments of capital in the labour intensive sector or to introduce labour saving innovations. Nor is there any incentive for labour as a group to increase its effort, since labour supply is already redundant. Thus methods remain labour intensive and levels of technique, man-hour productivity, and economic and social welfare remain low. Hence "dualism".

Another dual economy model was constructed by Dr. S.P. Schatz in what he called "A modest broadening of the theory of underdeveloped economics by including within the framework a partial discussion of the supplies of factors in the market sector of the economy."<sup>22</sup> He divides the national economy of an underdeveloped country into two major economies or sectors, the market sector and the subsistence sector. These two sections are abstractions: they correspond only in a very rough way to the real social systems found in most underdeveloped countries. In real life one finds a western orientated, more or less modern, city-centred capitalistic society existing side by side with an indigenous primitive, village-centred, pre-capitalist society.

In the model of Dr. Schatz the division of the national economy into market and subsistence sectors rests on functional rather than on spatial or cultural distinction. The distinguishing criterion is the use or the non-use of a modern monetary system. The market economy employs a modern economic system, and it embraces all factors of production (regardless of their geographical location or the possible primitive nature of their social setting) whose services are sold for the market economy

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<sup>22</sup> S.P. Schatz: "A Dual Economy Model of an Underdeveloped Country", Social Research, Vol. XXXIII, Winter 1956, p. 419.

or which produce goods that are sold for money. The subsistence economy encompasses only that portion of the economic activity of the indigenous inhabitants which is for self consumption or for limited exchange within the indigenous social sphere.

Given these definitions, Dr. Schatz goes on to show how factors of production but not products migrate between the two sectors.<sup>23</sup> The entrance of the subsistence sector resources into the market sector, Dr. Schatz calls "marketization". To the degree that the peasant engages in subsistence production he remains in the subsistence sphere. Similarly the indigenous inhabitants who may sell their labour to a plantation or a factory for a number of weeks or months in the year and then return to the village subsistence economy, may be considered partially in each domain. As Dr. Schatz mentioned, his analysis is limited to the market sector and touches on the subsistence sector only in so far as marketization of resources affect the market sector, it fails to give a full and clear picture of the dual economy.

In a recent article<sup>24</sup> Professor Albert O. Hirschman made an outstanding contribution to the dualistic economy theory. He began with the hypothesis that economic growth is unlikely to start everywhere at the same time and proceed everywhere at the same speed within an economy. Once some areas and sectors have pulled ahead of others, they exert a

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<sup>23</sup> An example will help to clarify this distinction. In most undeveloped countries, flows of primary products from the peasants to the towns and cities are common. They are not conceived in Schatz's analysis as flows from the subsistence to the market economy. This is conceived only as a transfer of resources from one sector of the economy to the other; the peasants labour power, land and implements partially enter the market economy, i.e. marketized. Schatz, *A Dual Economy Model...* op. cit., p. 421.

<sup>24</sup> "Investment Policies and 'Dualism' in Underdeveloped Countries", *American Economic Review*, Vol. XLVII, Sept. 1957, No. 5, pp. 550-570. See also his newly published book, *The Strategy of Economic Development*, Yale Univ. Press, New Haven, 1958, especially Chapter 7.

powerful attraction not only for the simple reason that "nothing succeeds like success", but also because external economies are coming into being at these "growing points". The resulting split of a developing nation into advanced and traditional sectors may be of considerable width and duration and this split may in turn affect the nature and direction of subsequent development.

To simplify the exposition, Professor Hirschman calls "North" the region or regions of the country which are experiencing growth, and "South" the region or regions that have fallen behind. This terminology is suggested by the fact that a large number of backward areas appear to be located in the south of the country to which they belong. The term South does not include undeveloped, i.e. unsettled areas.

The North-South split of Professor Hirschman is a special aspect of the dual character of underdeveloped countries where the hyper-modern exists side by side with the traditional, not only in technique of production and distribution but also in attitudes and in the way of living and doing business. Dualism, to him, results from the sudden eruption of twentieth-century techniques into primitive societies which can adapt only gradually. But there is reason to believe that certain pre-industrial economic activities have today a far better chance to survive than was the case during the rise of industry in Western Europe. "In other words the forces of industrialization tend at present, far more than formerly, to leave the pre-industrial sectors alone for a prolonged period rather than attaching them frontally".<sup>25</sup> The reasons for this tendency, Professor Hirschman explains, are among other things, the existence of two distinct wage levels; one applicable to the industrial sector and the other to the

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<sup>25</sup> A.O. Hirschman, The Strategy of Economic Development, op. cit., p. 127.

pre-industrial sectors. With mobility far from perfect, the dual wage level reflects different marginal productivities of labour in the modern and pre-industrial sectors of the economy but it is also explained by social security and minimum wage legislation in the larger industrial units and by persistent preferences for the traditional and more independent pursuits in agriculture, small trade and small industry.

In Professor Hirschman's system, after the first spurts of growth in the North it is no longer certain what course development will take. Normally one might expect that little by little the higher incomes of the North will trickle down to the Southerners, either as a result of purchases and investments by the North in the South, or because of migrations of Southerners to the North. But there are important instances of countries where the internal advance of a region has resulted in a South-North split which has shown considerable durability.

Under such conditions - which are fairly typical of such backward regions as Brazil's Nordeste, Colombia's Oriente, Italy's Mezzogiorno (and the Sudan's Southern Provinces) the split of the country into a progressive and a depressed area could persist for a long time. Economic, as distinct from political, pressure to remedy the situation will arise only at a relatively late stage, usually when the expansion of the Northern industries is hampered by the insufficient size of the local market or when balance of payments problems make the country realize that it would save some foreign exchange by an improved use of Southern resources. Whenever such economic arguments can be combined with political forces working in the same direction, a determined effort to pull the South out of its stagnation is likely to be made.

In conclusion to his article, Professor Hirschman suggests investment policies which are likely to yield the best results in the South. With the considerable advance of the North in manufacturing, he says, the best chance for the South to break into a pattern of self-sufficient growth of the North lies probably in a major effort to improve its agriculture, so as to become a supplier of agricultural raw materials and foodstuffs to the North. Agricultural settlement, irrigation and drainage schemes and the establishment of extension services are likely to be of particular importance in this endeavour to move away from subsistence agriculture. Other investments in North-South integration, e.g. education, irrigation and transport links are also likely to be highly beneficial.

Another aspect of economic dualism, namely dualism in international trade and investment, has recently drawn the attention of many economists, e.g. Prebisch, Singer, Myint, Lewis and Myrdal.<sup>26</sup> They hold that after being opened up to world markets, many poor countries became "dual economies": the export sector became an island of development but the rest of the economy made little advance. So the export sector remained surrounded by subsistence conditions and inferior methods of production.

An outstanding result of foreign borrowing by poorer countries has been a substantial increase in their exports. Production for export has grown generally at an increasing rate and at a rate greater than population growth. Although exports increased, it is argued that this did not contribute much to the development of the rest of the economy; the economy merely

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<sup>26</sup> For a detailed study see: The United Nations Commission for Latin America (R. Prebisch): The Economic Development of Latin America, and Its Special Problems, N.Y. 1950; H.W. Singer, "Distribution of Gains Between Investing and Borrowing Countries", Am. Ec. Rev. (P & P), Vol. XL, No.2, May 1950; H. Myint, "The Gains From International Trade and Backward Countries", Review of Econ. and Statistics, Vol. XVII, No. 58, 1954-55; W.A. Lewis, Theory of Economic Growth, and G. Myrdal, An International Economy, Harper & Bros., New York, 1956, chapters VIII and XIII.

became biased towards export production to the neglect of other requirements for development.

On the one hand, it is contended that the export sector "short-circuited" the rest of the economy. On the other, it is argued that the poor countries' high foreign trade ratio is not a healthy sign of their exploiting the economic advantage of an international division of labour. It was rather one of the indications of their underdeveloped status and poverty. "Only a small part of the raw materials that were exported were also consumed at home: in the rest of the economy there was not much imitation of techniques used in the export sector; the increase in exports had little educative effect elsewhere in the economy and there was not much contribution to the domestic supply of entrepreneurship."<sup>27</sup>

The United Nations Economic and Social Council in its different publications recognized the problem of dualism that exists in underdeveloped countries. Speaking of this division of the national economies into two sectors in Asia, the authors of the United Nations Bulletin for Asia and the Far East, described it as: "Not a differentiation merely between two sectors of an integrated economy as would be the case if a similar distinction were made in the West. It is a distinction between two different economies, with limited points of contact between them."<sup>28</sup>

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<sup>27</sup> Myrdal, op. cit., 225-226

<sup>28</sup> The United Nations Bulletin for Asia and the Far East, First Quarter, 1951, p. 20. See also the United Nations, Enlargement of the Exchange Economy in Tropical Africa, New York, 1954, and Scope and Structure of Money Economies in Tropical Africa, New York, 1955. And Structure and Growth of Selected African Economies, New York 1958.



### III. The Relevance of Western Economic Theories to Dual Societies:

The question whether the Western general economic theory is applicable to a dualistic economy or not is an old topic for debate among economists. Certain writers have sought to impose restriction on the scope of economic theory. They have urged that the behaviour with which economics is concerned is essentially a certain type of social behaviour implied by the institutions of the individualist exchange economy.

Now it may be freely admitted that the attention of economics is focused chiefly on the complications of the exchange economy. "The reason for this is one of interest .... But it is one thing to contend that economic analysis has more interest and utility in an exchange economy. It is another to contend that its subject matter is limited to such phenomena."<sup>29</sup> Other economists contend that: "Since there is as yet no comprehensive general theory of economic growth which would account for the unique phenomena of western economic development, we can hardly expect a complete and satisfactory theory of economic development for underdeveloped countries. Still this should not prevent us from attempting to construct such a theory with the aid of the building stones at present available."<sup>30</sup>

Dr. Boeke goes to the extreme of declaring that every social system has its own economic theory. Even if the Western economic theory declared itself as a general theory, still it is historically determined. "Therefore the economic theory of a dualistic heterogeneous society is itself dualistic", he says. "It has to describe and to explain the economic

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<sup>29</sup> F. Zweig: Economic Ideas: A Study of Historical Perspective, Prentice-Hall, N.Y., 1950, p. 19.

<sup>30</sup> A. Bonne : "Towards a Theory of <sup>Plant</sup> Impeded Development in Underdeveloped Countries," Kyklos (Basel), Vol. 9, 1956, p.2.

interaction of two clashing social systems ..... it will have to be three economic theories combined into one; the economic theory of a pre-capitalistic society, the economic theory of a developed capitalistic society, usually called the general theory, and the economic theory of the interaction of two distinct social systems within the border of one society, which might be called dualistic economics."<sup>31</sup>

In evidence to Dr. Boeke's above argument, Dr. Van Der Kroef draws the example of the economies of South East Asia where each country is still to a large extent a nation of nations, "a more or less effective union of incredibly diverse societies, ethnic and religious groups each with its structure and dynamics, which by their complexity and multiplicity defy uniform programs of directed economic change..... it therefore may well seem on occasion if each region, each society, each cultural group requires a separate methodology and approach methods that must of necessity vary from area to area." <sup>32</sup>

The Dutch school of economic dualism does not even accept the postulate that the dualistic economic theory can be regarded as a branch of the general economic theory. The pure economic theory they say is based on certain fundamental principles: (a) Unlimited wants on the part of the economic subject; (b) Money economies; (c) Many-sided corporative organizations, on which the individuals base their economic activities. In all these respects Eastern economics is different from Western economics and hence Western economic doctrines are not, or are only partly, applicable in dualistic economies. Dualistic economics in general is not only

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<sup>31</sup> Boeke, Economics.....pp.4-5.

<sup>32</sup> J.M. Van Der Kroef: "Social Structure and Economic Development in Indonesia", Social Research, N.Y., Winter 1956, p. 395.

different from Western economics but <sup>it</sup> is also more complicated because we are dealing with groups that touch and influence each other. Two social systems, one which answers to Western economic premises, while the other does not". The study of economic dualism thus involves an acquaintance with comparative cultural anthropology, primitive, economic sociology, etc. <sup>34</sup>

The fault with Dr. Boeke's above analysis according to Professor Higgins is that it is uncertain whether Dr. Boeke has tried the contemporary economic theory in the Eastern context and found it wanting or whether he depended on the neo-classical economics he learned forty years ago. It is true that Dr. Boeke refers to no non-Dutch economist more recent than Schumpeter; but even in the recent economic literature one finds some writers who doubt the ability of the modern economic theory to cope with the problems of dual societies.

Since the main concern of Keynesian and post-Keynesian economics has been with problems of the mature capitalist economy, they have no direct applicability to the problems of underdeveloped countries. It has often been said that the two situations have nothing in common and demand therefore totally different cures. In a typical depression in a developed country unemployed labour exists side by side with unutilized plant and equipment and all that needs to be done is to reunite what should have never been parted, whereas, so it is pointed out, in an underdeveloped

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<sup>34</sup> Dr. K.J. Charles warns us, quite rightly, against anthropologists presenting romantic views of the value systems of underdeveloped societies specially their preference for leisure. He cites the experience he had while directing a research project at Madurai village in south India. After supplying free milk to all the villagers for three months many of them suddenly became conscious that they were unemployed or underemployed. "The backward sloping curve of labour on examination turned out to be a sophisticated terminology for malnutrition and ill health". See his Indian Economic Development: A Study of Economic History and Theory, a McGill University Ph.D. Thesis, Montreal, 1958, p.43.

country we have at best disguised unemployment but no other unutilized factors of production so that the problem is "structural" rather than "cyclical".<sup>35</sup> The fact that Keynesian theory is sometimes unintelligently applied to solve the problems of underdeveloped countries, is not the fault of Lord Keynes. The fault is with, what Professor Wright calls, "streamlined Keynesianism". It is only recently that economists in the Orient woke to the fact that the blind application of Keynesian formulae to the problems of economic development have inflicted considerable injury on the economies of underdeveloped countries.<sup>36</sup>

Some writers even question the applicability of the whole modern marginal analysis to underdeveloped economies. They suggest that Western economic doctrines are assumed to have cross cultural validity which is not supported by empirical evidence. In the complex cultures of some countries one cannot gain recognition by producing wealth, they assert. "Our concept of wealth is meaningless to the nomadic Negritos of the Sumatran swamps. In their peregrinations almost all tangible property is an unnecessary burden. Most of our economic principles of marginal utility are inoperative even to the potlatching Indians of the Northwest Coast. Indeed, our economic passwords, like a mariner's compass point to true north, and their error changes from place to place."<sup>37</sup>

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<sup>35</sup> See R.S. Eckaus, "Factor Proportion Problem in Underdeveloped Countries", American Economic Review, Vol. 45, Sept. 1955, pp. 539-565, and A.D. Sharma, "The Problem of Factor Proportion in Underdeveloped Countries", Indian Journal of Economics, July, 1957, p. 8.

<sup>36</sup> Schumpeter's warning came true, "If only people could be made to understand.... that practical Keynesianism is a seedling which cannot be transplanted into foreign soil; it dies there, and becomes poisonous before it dies". Ten Great Economists, Oxford Univ. Press, 1951, p. 275. Also see K.S. Gill, "Keynesian Economics in Underdeveloped Countries", Indian Economic Journal, vol. 2, 1954.

<sup>37</sup> Alfred G. Smith, "Semantic Traps", in J.W. Wiggins and Helmut Schoeck, Foreign Aid Re-examined, Public Affairs Press, Washington, D.C., 1958, p. 172.

The classical theory, some people believe, is perhaps more appropriate for tackling the problems of underdeveloped economies. "The vigorously circumscribed economic analysis of the neo-classical theory is inappropriate for examining economic growth", writes Adolph Lowe, "We are advancing in the direction of the integrated social analysis which characterized the classical economics; the latter delineated a theory of economic growth which included as dependent variables explainable by the overall system of thought, the supply of the factors of production, the rate of technological progress, and many other factors now considered independent variables beyond the scope and ken of economics. Thus in studying economic growth, at least as it develops under capitalism, the conceptual range of the classical theory seems more appropriate than the delimitations of the modern theory."<sup>38</sup> Economic growth, as the classical writers appreciated it, is a unique historical process; it is usually erratic and imbalanced. Technically the essence of the problem of growth is that all parameters become variables. Any theory of growth which places great reliance on a few simple relationships does not deserve serious consideration as an explanation of so vastly interdependent a phenomenon. The classical view that economic growth would be endangered "if only" restraints were removed, and the contemporary view "if only" several pre-requisites were met, are oversimplifications which are not applicable to newly developing countries."<sup>39</sup>

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<sup>38</sup> Adolph Lowe, "The classical theory of Economic Growth", Social Research, Summer 1954, pp.127-131. See also E.S. Kirby, "The Reception of Western Economics in the Orient," The Quarterly Journal of Economics, vol. LXVI, No.3, Aug. 1952, pp.409-417. And B.S. Keirstead, The Theory of Economic Change, Toronto, 1948, pp.63-104.

<sup>39</sup> J.M. Letiche, "The Relevance of Classical and Contemporary Theories of Growth to Economic Development". American Economic Review: Papers & Proceedings, vol. XLIX, No.2, May 1959, p.492.

One cannot go to the extreme of saying that attempting to do without a theory would seem to be a safer course for the underdeveloped countries than using one that is faulty. But if a worthwhile theory of development can ever be formulated, it should follow, what Eckaus christened, the "principle of alternatives".<sup>40</sup> This is briefly that there are many paths to economic development and there will continue to be a considerable variety in the forms of organization and the process of development in different countries. Eckaus does not argue that the theoretical analysis of economic growth is fruitless, rather he believes that in the construction and application of economic theories as a basis for interpretation and advice in actual situations, there must be a recognition of the unique character of each area's economic processes. The idea is not, as sometimes assumed, the simple one of filling "empty boxes" of theory with the content of empirical knowledge about reality, for the theoretical boxes are not built in such a way to hold any type of reality. Before any theory of economic development can be attempted a large number of unbiased and competent case studies should be undertaken using the enlightened tools of analysis of economics and other social sciences. The task is great and terribly complex; but it is not greater than the need.

#### IV. Methodology and Layout:

From the confusion of the above discussion one conclusion is eminent and that is that the facts regarding social behaviour in underdeveloped countries in general, and dual economies in particular, are not clear. Nevertheless, with a proper selection of institutional and

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<sup>40</sup> R.S.Eckaus, The Role and Character of Foreign Aid: Discussion, Paper and Proceedings of the American Economic Review: vol. XLIX, No.2, May, 1959, p. 249.

behavioural assumptions western economic theories can be useful tools for analysing the structure of these economies and suggesting policy measures relevant to the solution of their problems. The present thesis is a humble effort to add to the scanty empirical case studies concerning the underdeveloped countries especially those showing clear dualistic tendencies. Use will be made, wherever appropriate, of the western economic tools of analysis thus in effect rejecting Dr. Boeke's thesis about the complete inefficacy of these tools for dual economies, and his plea for a special dualistic theory of economics.

Dualism in the Sudan economy, about which the study is concerned, although connected with attitudes of life and with cultural characteristics of the different population groups and dramatized by political factors, is actually a purely economic phenomenon which can be analysed in economic terms. The first chapter has already dealt with the theoretical background defining the concept of economic dualism and then explored the history of the concept which is only a part of the general history of economic thought. The dualistic approach was found to exist in the works of such different authorities as R. Muskerejee of India, J.H. Boeke of the Netherlands, Benjamin Higgins, Albert Hirschman, R. S. Eckaws and others. The historical survey led to the pertinent question whether the dual economies need a theory of their own. Both sides of the argument were presented and evaluated.

The case study of the Sudan begins in the second chapter with an introduction to the country and its people. The introduction is admittedly short and extremely selective considering the high expanse of the country and the medley of tribes and peoples inhabiting it. A map is attached

at the end of the thesis to help the reader through the labyrinth of Arabic and other names of places. Special attention is given in this section to the 12°N parallel dividing the Sudan into two major regions, the south and the north. The resources of the country are dealt with next, stressing the fact that irrigation water and not land is the limiting factor to the future development of agriculture in the Sudan. The mineral resources of the country are also assessed. After the introductory material is dispensed with the structure of the economy is studied noting its clear division into a monetized exchange sector centred mainly in the north and a subsistence sector occupying nearly the whole of the southern provinces. The problems facing the development of such a dual economy conclude the second chapter.

Having divided the Sudan economy into two economic systems, the third chapter is devoted to the study of one of them; the northern exchange economy. The chapter starts by examining the historical factors that led to the relative development of the northern economy. The experience of the Sudan shows that the emergence of "growing points" in an underdeveloped economy and therefore the difference between regions, is inevitable and is a condition of further growth anywhere. As the cornerstone of the exchange sector of the Sudan economy is the world famous Gezira Scheme, a whole section is devoted to show why it is regarded by some authorities as "one of the most outstanding experiments in socio-economic problems of the current century and its success is so great that it deserves to go in history as a great romance of creative achievement." Are there any tendencies for the exchange sector to leave the subsistence sector alone for a prolonged period rather than attacking it frontally? More technically,



to use Myrdal's terms, is there a "spreading" or a "backwash" effect in the northern exchange economy, or to use Hirschman's terminology, is the exchange economy "polarizing" or "trickling down" to the subsistence sector? This important question is dealt with in the third section and the chapter ends with a discussion of the special problems of the exchange economy which, in the case of the Sudan, is a monoculture primary producing economy.

The southern subsistence sector is the topic of the third chapter. At this point the dissertation takes a distinct social anthropological bias describing the tribal structures of the people, their customs and taboos as related to their economic life. The natural resources of the area are described bearing in mind the institutional setting and the state of technology in the region. After discussing hindrances facing the development of the subsistence economy the chapter ends with an evaluation of the development schemes carried out in the region to enlarge the exchange economy. The final chapter of thesis is naturally the most important one. It discusses, to begin with, the all important south-north conflict, a feature common to most dual economies. An effort is made in describing the Sudan's experience, to give the historical, cultural, sociological as well as the economic factors behind the south-north faction. The question will then be asked, what are the economist's prescriptions for such a case to bring about a closer integration in the territorial dual economy? The views and policy recommendations of several economists are evaluated and the chapter ends with an attempt to integrate some of these views into a possible line of action, suggesting policy measures which are hoped, not only to bring closer integration of the Sudan economy but also

to lead to its growth and welfare.

Development in a dual economy is a complicated process and implies many subtle changes that may remain obscure for sometime. Each question raised in this thesis carries with it a host of ancillary questions, not all of which can be dealt with in a short study. Many of the topics that cannot be fully dealt with here, have been treated elsewhere in literature cited in the bibliography and footnotes. Much of the necessary and available statistical data about the Sudan economy has been put into tables throughout the text. In preparing this study, it has been necessary to choose between descriptive analysis and the construction of a theoretical model for the study of economic development in dual economies. For a variety of reasons, I have chosen to emphasize the former, thus avoiding, "humanity's incurable weakness of erecting special cases into universal laws."

## CHAPTER TWO

### STRUCTURE OF THE SUDAN ECONOMY

#### I. The Country and the People.<sup>1</sup>

"Bilad al-Sudan" literally the/land of the Blacks in Arabic was a vague term given by the Mediaeval Arabs to the Islamized sub-Sahara stretching from the Atlantic Ocean to the Red Sea. They realised, however, that it was not the true home of the negroes but that intermediate zone laying between the Hamitic group of North Africa and the Negro groups of Central Africa.<sup>2</sup> The British, however, used the term in a restricted sense to refer to the East African administrative area called the Anglo-Egyptian Sudan, bordered in the north by Egypt, in the east by the Red Sea and Ethiopia, in the south by Kenya, Uganda and the Belgian Congo.

Until 1954 the Sudan was a condominium, which meant little more than that it was a colony administered by two masters, Britain and Egypt, instead of one. The "political dualism" was mainly on paper and in practice Britain had been the major, and since 1924, the sole power<sup>of</sup> administering the country. Subsequent discord in the Anglo-Egyptian relations, provoked to a considerable extent by the Sudan question itself, and the accompanying upsurge of Sudanese nationalism, hastened the political development of the Sudan. Complete national independence was achieved in January 1956 when the blue, yellow and green flag was raised over Khartoum the capital, thus declaring the birth of the Republic by the Sudan.<sup>3</sup>

The Sudan is a vast country, a territory of 967,500 square miles,

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<sup>1</sup> The reader is kindly requested to refer to the map of the Sudan at the end of the thesis.

<sup>2</sup> See J.S. Trimingham, Islam in the Sudan, Oxford University Press, London, 1949, Chapter I.

<sup>3</sup> For a detailed discussion of political development in the Sudan, see M.T. Shebeika, British Policy in the Sudan, Oxford Univ. Press, London, 1952. R.C. Mayal, "Recent Constitutional Developments in the Sudan" International Affairs, vol. 28, July 1952, and Deryk Abel, "Free Sudan: The First Year", Contemporary Review, March, 1957.

approximately a third the size of the United States of America and nearly equal to the combined expanse of Britain, Ireland, Spain, Portugal, France, Belgium, Norway, Sweden, Denmark and Italy. From the northern limits of the Sudan to its southern boundary with Uganda and the Belgian Congo the distance is as much as 1400 miles, while its width from the east to west is almost 1000 miles. Some African countries are larger but none of them extends over 18 degrees of latitude as does the Sudan, and <sup>none</sup> shows a greater diversity of climatic conditions. Furthermore the Sudan is unique among African countries in having a river such as the Nile running through its entire length from south to north. Most of this large area, however, consists of more or less uniform plains except for the Red Sea hills in the north east and the Nuba hills south of Elbeida.

Climatically, the Sudan is transitional from the hot dry desert of south Egypt to the constantly hot, constantly wet regions of equatorial Africa. Throughout its enormous length from the southern border of the temperate zone to 3 degrees north of the Equator, one finds extreme differences of climate, soil, vegetation and ways of life.<sup>4</sup> Average rainfall increases from practically zero at the boundary with Egypt to more than 50 inches per annum in places along the Congo and Uganda frontier. The increase in the amount of precipitation and in the number of rainy months has of course a direct bearing on the natural vegetation. Again as one travels south from the northern boundary there is a gradual change from true desert with its scanty vegetation to desert scrub to short grass savanna. Tall grass savanna is dominant over much of the south central part of the country; and the south and south-west is mostly thin, dry

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<sup>4</sup> See A.W. Ireland, "The Climate of the Sudan," in J.D. Tothill ed. Agriculture in the Sudan, Oxford Univ. Press, London, 1952, and V.C.W. Rath, "The Climate of the Sudan : a factor in the Social and Economic Development of the Country", in the 1953 Proceedings of the Philosophical Society of the Sudan, Khartoum, 1955.

woodland - grass savanna, except for broad areas of papyrus, reeds, and grasses in the swamps and some broadleaf forest in the lowlands.

Equally heterogeneous is the country's sparse population. Its position immediately south of Egypt, its 500 miles facing Arabia across the Red Sea, and its deep extension into the heart of Africa, are together responsible for the racial variety of its 10,262,536 inhabitants.<sup>5</sup> The population comprises such different tribal societies as the nomadic camel breeding Arabs in the north, to the sedentary pagan negroid tribes of the south. The largest densities of population as might be expected, are found in the areas of maximum rainfall and in areas where irrigation is practised.

Until the final figures of the recent population census are published, no reliable estimate of the population can be made. The preliminary results of the census indicate the total figure quoted in Table (1). This gives a density of 10 persons to the square mile compared with 753 in England and Wales, 171 in Scotland, 49 in the U.S.A., 15 in Argentina, 4 in Canada and 2 in Australia. These figures of course convey little if one does not know how much of the country is virtually uninhabited or uninhabitable. Of the countries just mentioned, possibly Argentina is the country most nearly comparable to the Sudan. The rate of population growth in the Sudan estimated at 2% a year will rapidly reduce the country's margin of relatively abundant land in the future.

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<sup>5</sup> Estimated figures; the first population census taken in the Sudan started in 1957, the results are not yet available.

TABLE (1)  
SUDAN POPULATION  
REGIONAL DISTRIBUTION (1957)

PROVINCE	MALES	FEMALES	TOTAL	AREA Sq. Miles	DENSITY Person/Mile
1. Blue Nile	1,065,586	1,004,060	2,069,646	54,880	34
2. Kordofan	887,571	874,397	1,761,968	146,930	12
3. Darfur	632,166	696,599	1,328,765	191,650	7
4. B. Elghazal	505,094	485,928	991,022	82,530	12
5. Kassala	502,947	438,092	941,039	131,528	7
6. Equatoria	442,997	460,506	903,503	78,495	12
7. Upper Nile	454,644	433,967	888,011	91,190	10
8. Northern	422,297	450,762	873,059	184,200	5
9. Khartoum	272,824	232,099	504,923	8,097	63
Grand Total	5,186,126	5,076,410	10,262,536	967,500	10

Source: Economic Survey & Sudan Almanac, 1957

In view of the striking ecological contrasts between the latitudes in this part of the world, the country and its people can be best presented in two zones, the north and the south. North of approximately 12°N stretches a country of savanna and desert, culturally a part of the Middle East. Here Islam prevails, Arabic is spoken and irrigation is practised. South of 12°N is a land of rivers and swamps of pagan tribes who are either cattle breeders or subsistence cultivators. Across these two regions flows the river Nile upon which much of the economic life of the country depends. There are, however, so many exceptions and qualifications to the above division to make it only of partial value. But the line of division is well marked geographically, ethnologically and culturally and still potent as a political factor.<sup>6</sup>

<sup>6</sup> "The difference between northern and southern Sudan coupled with the fact that the two parts are politically integrated is the most important political characteristic of the Sudan. For it makes the country the connecting link between the Middle East and Africa." Hammad Towfig "Economic Development in the Sudan", India Quarterly, vol. XI, No. 3, p. 284,

The northern half of the Sudan is "desert". To the west the land is flat, to the east bare rocky hills are being worn down to a featureless and lifeless plain. The hot days and cool nights lead to the fracture of granite rock; the softer Nubian sandstone is fretted by wind blown sand. This area is traversed by the Nile beside which are small irrigated plots producing dates and grain, citrus fruits and legumes. Transport is costly because the cataracts hinder navigation on the Nile. The railway system completes the route between Khartoum and Cairo and also gives access to the Red Sea.

Conditions and modes of life in the extreme north of the Sudan are almost identical with those of the southern part of upper Egypt, as the political boundary is nowhere an ethnic one. These conditions are lack of rainfall; the intensive agriculture on the narrow strips of land which have not yet been "eaten up" by the desert; the extremes of winter and summer temperature and the same square mud houses. The inhabitants of this area, the Barabra or the Nubians, as they like to be called, are the most peaceful people in the country. "The magistrates of Wadi Halfa district may go for ten or twenty years without having to try a case of murder or of grievous bodily hurt. But much litigation goes on about land. A case about a fraction of an acre or two palm trees may run into volumes and take years to decide. This is due to the scarcity of arable land which also causes a heavy migration of labour to Egypt or to the interior of the Sudan."<sup>7</sup> The Nubians claim Arab origins but historical and anthropological evidence shows that they are a mixture of Caucasians who migrated to the Sudan in ancient Egyptian times and the Negroes who were the original inhabitants. Their claim to be Arab is due in the first place

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<sup>7</sup> Mekki Abbas, The Sudan Question, Faber & Faber, London, 1952, p. 3.

to the infusion of a strain of Arab filtration into the Sudan after the 7th century A.D. and secondly to the adoption of Islam in the whole area.<sup>8</sup> Several Nubian languages of Hamitic origin are spoken but Arabic is the lingua franca and is the only written language.

Away from the river in the Red Sea <sup>littoral</sup> live the Beja tribes - Kipling's fuzz-wuzzies, who were the first race to break a British square with inferior weapons. The Bisharin and the Hedendowa, the two northern groups of the Beja tribes, are warlike people, resentful to change and outside interference. They are devout Moslems and claim Arab origins for the same reasons as the Nubians but their features and their languages speak of more Hamitic than Arabic origins.<sup>9</sup> The third main tribe in this area is the Beni Amer which lives in the southern part and extends to Eritrea. Together with the hill Ababda of Egypt they are regarded by anthropologists as the purest representatives of the Caucasian Hamites. But the mother tongue of the Beni Amer, strangely enough, is tigre which is a semitic language.<sup>10</sup> All these tribes are Moslem and some of them are fanatical to the extreme. Here again, Arabic is the lingua franca and is the only written language. Most of these peoples are camel owning nomads and with the exception of those who grow high quality cotton in the basin of Khor Baraka and those who find employment in Port Sudan docks, they lead a rather precarious existence. The scanty rainfall and the heavily eroded hills along the Red Sea are not very favourable for growing millet which is the staple food of the inhabitants. Revenue from the sale of camels in upper

<sup>8</sup> Trimingham, op. cit., p. Ch.I.

<sup>9</sup> A. Paul, A History of the Beja Tribes of the Sudan, Cambridge University Press, 1954.

<sup>10</sup> C.G. Seligman, Some Aspects of the Hamitic Problem in the Anglo-Egyptian Sudan, The Journal of the Royal Anthropological Institute of Great Britain, vol. XLIII, 1913, pp.610-624.



Egypt helps the more northern tribesmen to augment the poor resources of their land.

West of the river in the northern Sudan conditions of life of those who are unable to draw upon the river, are determined by the amount of rainfall on the different belts. Although the 15°N parallel has an average rainfall of 1 to 12 inches per annum, the average east of the river is higher than the west of it. This produces enough pasturage to render nomadic life possible for camel owning tribes.<sup>11</sup> South of this region between 13°N and 15°N parallels lies a belt which has an average rainfall of 12 - 16 inches west of the White Nile and 12 inches to over 20 inches east of the Blue Nile. The part which extends from the White Nile to the western boundary of the Sudan is mostly vast stretches of undulating sand. The inhabitants grow varieties of millet, sesame and groundnuts and collect gum from the Hashab or acasia verek trees. These agricultural opportunities make sedentary life possible and except for the few who roam about with herds of sheep and goats, the inhabitants live in villages of straw huts. East of the White Nile plains of black cotton soil stretch to the Ethiopian frontier.<sup>12</sup> The people excluding those who live in the Gezira irrigated area, lead much the same life as those who live west of the White Nile but this eastern belt produces more millet and less gum and groundnuts.

South of Khartoum stretches the fertile plain of the Gezira - Arabic for island - a triangular shaped region of about 5,000,000 acres laying between the White and Blue Niles with its base roughly at the railroad from Kosti to Semmar and its apex at Khartoum. The land slopes gently

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<sup>11</sup> C.G. Seligman, The Kababish : A Sudan Arab, Harvard African Studies, vol.2, 1918.

<sup>12</sup> Although the term black cotton soil is widely used in the Sudan, Dr. J.D. Tothill did not seem to favour its application to the "cracking clays of the Sudan", see his Agriculture in the Sudan, Oxford Univ. Press, 1952, p.5.

from the Blue Nile towards the White Nile and northward to the apex. Here almost all irrigation is done by gravity from the Sennar dam. The cotton crop of this area which averages about 200,000 tons of long staple Egyptian seed cotton, contributes over 50% of the Government revenue and is the backbone of the country's economy.

The Sudan has few sizeable cities and probably not more than 10% of the population could be classed as city dwellers. The largest single concentration of people (about 50% of urban population), live in a group of three cities hence called the triple capital, all located at, or, near the junction of the Blue and White Niles and connected by two bridges so that they more or less form a continuous urban area. Omdurman, the largest town of the triple is a purely native city with a population of 113,107. Khartoum, the country's capital and the centre of the triple is a modern cosmopolitan city inhabited by 92,829 people of mixed origins. Khartoum north is the third of the triple with a population of only 38,838 people. Few other towns have populations above 30,000 people. Atbara the headquarters of Sudan railways laying just north of Khartoum has a population of 36,416. Port Sudan the only sea port of the country has a population of 47,000, Wad Medani 48,131, Elobied 51,927 and Kassala 36,000, the provincial towns of the Blue Nile, Kordofan and Kassala provinces complete the list of important towns in the Sudan. They all lie, it is noticeable, north of latitude 12°N. The urban population of the northern region together with the other groups mentioned above, account for about 75% of the total population of the Sudan.<sup>13</sup>

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<sup>13</sup> The population of what we termed the northern Sudan also occupies 75% of the total area of the country. See Dr. M.A. Mohamed, The Northern Sudan, its Peoples and Tribes (Arabic) Cairo, 1951.

The southmost part of the northern Sudan stretches roughly to the 12°N parallel. More abundant rains fall in this part and produce richer grass, more acacia trees and render more cultivation possible. The main occupation of the inhabitants is cattle breeding and they are therefore called the "Beggara" or cow owners.<sup>14</sup> Beside cattle breeding, the Beggara grow much the same crops as those grown in the region immediately to the north. They also grow in the Nuba Mountains of Kordofan a variety of short staple American cotton.

The southern Sudan as we have defined it, stretches from parallel 12°N to the southern frontiers of the country which border Kenya, Uganda and the Belgian Congo. The rainfall which ranges from 30 to 50 inches per annum makes this part of the country vary from savanna type of vegetation to broadleaf tropical forest. The area as a whole could be generally considered as a large shallow basin situated on the great African plateau surface of crystalline rocks through which meanders sluggishly the Upper White Nile or Bahr el Jebel. After it leaves the Uganda border, Bahr el Jebel is joined by Bahr el Ghazal river and the numerous tributaries which flow down from the watershed of the Nile and Congo basin. In the heart of the basin is the marshy area - the Sudd, perhaps one of the most extensive in the world, from which the great masses of floating vegetation find their way to the river course and into the Nile itself. The long thick papyrus grass which grows in the vast marshes used to block the course of the river. A narrow stream has been opened up for navigation<sup>15</sup> since 1898, still even now, the steamer pumps against the tall grass as it

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<sup>14</sup> D.C. Rife and J.R. Randall, "The Peoples of the Sudan", Middle East Journal, Vol. 7, No. 2, 1953.

<sup>15</sup> See G.F. March, "Transport in the Sudan", in Tothill ed. Agriculture in The Sudan, p. 179,

is steered in the winding course at a speed not exceeding two miles an hour.

The Sudd area is the home of the tribes known to the anthropologists as the Nilotes. There are three groups of these, the Shilluk, the Dinka and the Nuer. Although these groups are generally described as negroes, anthropologists suppose that they are an admixture of caucasians and negroes who were later driven south by waves of Hamites.<sup>16</sup> Nearly all the Nilotes are devoted cattle breeders and the cow plays an important part in their life and culture. Most of their clan traditions relate stories about cattle and many of their titles of honour are derived from names of cows and kraals. Cattle also, the Nilotes believe, are the medium through which they maintain relations with the ghosts of their ancestors. With such attitudes, the economic value of cattle takes a second place.<sup>17</sup> The breeder's object is not weight of meat or yield of milk but rather the size and form of horns or the colour of cattle. The Shilluk have a special craftsman, the "horn dresser", whose task it is to give the horns of the young oxen the shape which the owner desires. In circumstances like these, separation from a favourite animal is a real sorrow and the idea of slaughtering for a merely material purpose strikes the owner as cruel.

<sup>16</sup> C.G. Seligman, Pagan Tribes of the Nilatic Sudan, Routledge & Sons Ltd., London, 1932, and his "Some Aspects of the Hamitic Problem in the Anglo-Egyptian Sudan", op. cit. Also Audrey Butt, "The Nilatics of the Anglo-Egyptian Sudan", in D. Forde Ethnographic Survey of Africa, vol.1, London, 1952.

<sup>17</sup> "To these peoples, cattle represent worldly wealth, are an important source of food, and above all, are of almost religious import. Their number determine the social position of their owner. The whole life of the people of each family unit, is tied up in the welfare of the cattle. Their seasonal movement to and from the rivers is controlled by the needs of the cattle." Dr. J.F.E. Bloss, "Nutrition and Society Among the Nilotics", in Food and Society in the Sudan, p. 152, Khartoum 1955.

The Nilo-Hamites, the second largest group of tribes inhabiting the southern Sudan, resemble the Nilotes of the Upper Nile in stature, but they differ from them in that their language and culture are more Hamitic. Where pastoral conditions are favourable, they are keen cattle owners and show little interest in agriculture.<sup>18</sup> Most of the tribes inhabiting the east bank of Bahr el Jebel belong to this group; the Bari, Latoka and Toposa, being the biggest tribes.

The margin of the basin including Equatoria Province, constitute a remote almost inaccessible area. This region is inhabited by the Zande and other minor tribes who completely depend on agriculture for livelihood as no domestic animals are kept, due to the occurrence of the tsetse fly in the region.<sup>19</sup> All crops are rain grown in the Zande area, and only hand hoes are used. For these reasons, and due to the poor soil in some parts of the area, the Zande were never a prosperous tribe. Rain making and magic play an important part in the latter amongst Zande and related tribes. A rain maker's functions are to bring rain when required and advise on sowing dates and crops generally.<sup>20</sup> Magic is practised by all tribes and its main functions in agriculture are to provide antidotes against evil influences or to encourage good influences upon the crops. Certain crops are often planted for this purpose especially when new cultivations are being opened.

What has been written above is admittedly sketchy and incomplete but a complete anthropological and ecological survey is out of order in such a

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<sup>18</sup> C.G. Selgiman, *Pagan Tribes of the Nilotic Sudan*, op. cit., p.20

<sup>19</sup> J.F.E. Bloss, "Tsetse Fly in the Sudan", Sudan Notes and Records, vol. XXVI, Part I, Khartoum, 1945.

<sup>20</sup> E.E. Evans-Pritchard, Witchcraft, Oracles and Magic Among the Azande, Oxford Clarendon Press, 1937.

<sup>21</sup> H.F. Ferguson, "Equatoria Province", in Tothill ed. Agriculture in the Sudan, op. cit., p. 890.

study. It is hoped that the brief outline above will help to introduce the reader to the complexity of the country and the heterogeneity of its population. One factor emerges clearly from the otherwise hazy picture and that is the line drawn east and west along latitude  $12^{\circ}\text{N}$  which divides the Sudan into two major regions conveniently termed north and south. In the north, we observed, the people are predominantly of Arab origin, Arabic in culture, Moslem, practising irrigation for the production of a cash crop upon which the exchange economy of the country depends. To the south, the people are largely negroid in origin, pagan, although minorities of Christians and Moslems are found. The southern tribes are livestock breeders or subsistence agriculturists. The line dividing the major cultures is essentially coincident with the line that separates desert and steppe in the north, from tall grass savanna and forests in the south; hence it is climatic, vegetational as well as a cultural one.

## II. Natural Resources and National Income:

To the economic geographer, natural resources in their broadest sense include all the freely given material phenomena of nature within the zone of men's activity; at present, a zone extending about 12 miles above the surface of the earth and about four miles below it, plus the additional non-material quality of situation or location. The association of these elements of land, air, sea and situation in a single area is commonly identified as its "resource base" or "resource endowment".<sup>22</sup> On closer study the concept proves to be elusive, dynamic and somewhat misleading. It assures, amongst other things, a complete knowledge of the ways the physical endowment may be utilized. This knowledge is by no way

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<sup>22</sup> N. Ginsbury, "Natural Resources and Economic Development", Annals of American Geographers, vol. 47, No. 30, Sept. 1957, p. 197.

complete and in the words of Zimmerman, "Much of the environment is in fact composed of "neutral stuff awaiting awareness of its possibilities and the development of techniques which can exploit it effectively."<sup>23</sup> As the dimensions of these understandings and the abilities to exploit the resource base however defined, vary with cultures and with time, it is necessary, therefore, to distinguish between resource potentials and resource endowments, both available and known.

It is controversial in economic thought whether natural resources play an important part in economic development. We find the striking contrast between David Ricardo who, in representing the conditions of his times, assigned a major role to agricultural land, and R.F. Harrod who in 1948 when selecting the economic variables for his "Dynamic Economics" saw it fit to leave land out altogether.<sup>24</sup> Furthermore, in the Keynesian economics, the labour theory of value is basic, i.e. value is assigned only to man-made goods and agricultural products. Keynes only recognized two factors of production namely labour and capital in his treatment of investment, output, incomes and savings. "The Keynesian definition of investment, for example, does not include the value of a discovered oilfield or gold mine."<sup>25</sup>

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<sup>23</sup> E.W. Zimmerman, World Resources and Industries, Harper Bros., New York, Rev. ed. 1951, p. 8.

<sup>24</sup> Ricardo had in mind a high-food-drain community in which most of the productive effort is required to produce food, a technically under-developed community, over populated with a low level of living. Harrod's model is that of a low-food-drain community one approximately in a stage of development equal to the U.S.A. See T.W. Schultz, "The Declining Economic Importance of Agricultural Land", Economic Journal, vol. 61, No. 244, Dec. 1951, p.725-726.

<sup>25</sup> J. Barena, "National Income, Capital Formation and Natural Resources", Kyklos, vol. 9, 1956, pp.360-368. He goes on to suggest a change in economic theory and national income analysis where value should be attributed not only to man-made goods but also to natural resources. As a corollary, capital formation would have to be calculated independently of the national income. This will destroy the unity of structure of present national income accounting systems, Mr. Barena contends, but it will lead to a more realistic appreciation of the world economies.

Whereas in an underdeveloped economy natural resources apart from land play only a minor role in its development, they perform an increasingly important part in a modern industrial society. Energy, for instance, which in the underdeveloped economy is supplied by human labour, is derived in the industrial economy from coal, petroleum, natural gas, hydro-electric power to which in the near future uranium and thorium will be added.

The significance and functions of natural resources will differ markedly with the stages in the economic development process. Under normal conditions, the role of the resource base is most important in the earlier stages of development when it acts as a means of capital formation and an accelerator for economic growth.<sup>26</sup> It also determines the course and direction for such growth. In spite of the often quoted example of Switzerland, the possession of a sizeable and diversified natural resource endowment, is a major advantage to any country embarking upon a period of rapid economic development. Diversification may not be as important as the dimension of one or more resources, if these resources are large enough for profitable commercial exploitation and if the long run demand for them is strong and steady.

The Sudan has a total area of just under one million square miles or approximately 600 million acres. A great deal of this land is of little use for agriculture, nor is it rich in minerals.<sup>27</sup> If we take for example the area north of the 18°N parallel we find that it is a desert waste, except for the narrow Nile valley which traverses it. The hot and

<sup>26</sup> See A.C. Harberger, "Fundamentals of Economic Progress in Underdeveloped Countries : Using the Resources at Hand More Effectively"; Papers and Proceedings of the American Economic Association, vol.XLIX, No.2, May, 1959, pp.134-146.

<sup>27</sup> It is interesting to compare the "vast Sudan" with a small mineral rich country, like Kuwait, a country of only 1,930 square miles in size, mostly unproductive desert, but which is riding the crest of a rising national income almost entirely from oil production. It all goes to prove Dr. Niculescu's point that a baby elephant may be larger, but it is not more fully developed than a mature rabbit.



very dry northerly winds from the Sahara anti-cyclones, the world's largest, hottest and driest desert, prevail throughout the year. Rainfall is rare in the region, Wadi Halfa for instance has an average of 0.1 mm. of very irregular rainfall. In this part of the country where water is so scarce, and where more water than anywhere in the world is needed per head of cattle, per tree or per pound of grain produced, it could be said that agricultural progress and increasing production will always be limited and restricted to the narrow strip along the Nile.

Out of its 600 million acres, the Sudan is estimated to have around 200 million acres potentially useful for agriculture. It is useful to deduct 8 million acres from the cultivable area, as they are more suited to live-stock rearing than to crop growing. This leaves 120 million acres of cultivable land. It is estimated that only some 6 million acres or 3% of the total cultivable area is under cultivation in any one year.<sup>28</sup> See Table (2).

TABLE (2)

SUDANS LAND POTENTIAL (ESTIMATED)

DESCRIPTION	AREA		Percentage
	Sq. Miles	Feddans	
Northern Deserts	145,500	89,686,200	15.00
Marginal Lands	366,175	225,710,210	37.75
Ironstone Country	145,500	89,686,200	15.00
Total Land Difficult or Impossible to Develop:	657,175	405,082,670	67.75
Swamp	12,125	7,473,850	1.25
Southern Rainlands	9,700	5,979,080	1.00
Rainflood Plain	48,500	29,895,400	5.00
Central Rainlands	121,250	74,738,500	12.50
Western Cattle Country	121,250	74,738,500	12.50
Total Land of Potential Development:	312,825	192,825,330	32.25
GRAND TOTAL:	790,000	597,825,330	100.00

Source: Public Relations Office, Sudan.

<sup>28</sup> Sudan Land Potential in feature No. 279 of "Project", 19 Sept. 1953, published by Public Relations Office, Sudan Government.

It is evident from the above that in the Sudan as a whole, insufficiency of land is not a problem compared with neighbouring Egypt, where about 70% of all the land that could be possibly irrigated, is under cultivation. An important factor however is the distribution of population in the cultivable area. Assuming that the cultivable area from Jebel Aulia dam to Wadi Halfa consist of a strip of land at most two miles wide, it seems that, approximately 856,000 people excluding the populations of the bigger towns, occupy an area of about 200 square miles, at a density of 428 persons per square mile <sup>which</sup> in Egypt, it is by far greater than the density of population of the whole Sudan estimated at 11 persons per the square mile.

In most of the underdeveloped countries the transition from a primitive to a sedentary society is accompanied by the evolution of land tenure system, from communal ownership of land by the tribe, to ownership by a group and finally to private ownership. Examples of these types exist in different parts of the Sudan. Prima facie, all unregistered land is deemed to belong to the government, but in practice the government exercises its ownership as a trust for the people who have habitually exercised rights over it and has consistently refrained from interference with such rights.<sup>29</sup> Settlement of rights in agricultural land followed by registration, has been undertaken very extensively in the Northern Province and in the provinces of Khartoum and the Blue Nile. Outside these provinces, especially in the southern provinces, where land is cultivated at irregular intervals, or is superabundant, the necessity for registration had seldom arisen, and it is recognized both by the government and the people that

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<sup>29</sup> A.R.C. Bolton, "Land Tenure in Agricultural Land in the Sudan", in Tothill's ed. Agriculture in the Sudan, Oxford Univ. Press, London, 1952, p. 188.

land is held communally and administered by the authorities of the tribe, village or other communal unit. Even with the absence of registration of land there is no feudal or big landlord class in the Sudan nor is there a landless agricultural labour class.<sup>30</sup> The largest agricultural schemes in the country are utilized or run, as a partnership between the government and the farmers.

In almost all parts of the Sudan irrigation is either highly desirable or advantageous for agriculture. At Khartoum the rainy season is short and the total rainfall is low and very variable. Northwards the valley of the Nile is virtually rainless. From Khartoum northwards therefore irrigation is very essential. To the south the rain increases but remains both seasonal and highly variable. Thus even there, irrigation is extremely desirable. All the irrigated cultivated areas of the Sudan, except the flush irrigation on the Gash and Baraka and the small area watered from wells, depend for their supply of water on the Nile and its tributaries.<sup>31</sup> The entire water supply of Egypt also comes from the same source. The distribution of the Nile waters between the Sudan and Egypt is governed by the Nile Waters Agreement of 1929. According to the treaty, the Sudan's share equals 1/18 of that of Egypt. Furthermore, the Sudan has by now exhausted all the amounts granted by the treaty and so any further expansion of irrigation will have to wait for the modification or change of the 1929 treaty, or by economizing the use of the available water. Thus in the case of the Sudan, we might agree with the Woytinskys that, "the core of the problem of carrying capacity of the earth is not the scarcity of fertile land in comparison with the number of mouths that must

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<sup>30</sup> Hammad Towfig, "Economic Development in the Sudan", India Quarterly, vol. XI, No. 3, p. 289.

<sup>31</sup> W.N. Allan, "Irrigation in the Sudan", in Tothill ed. Agriculture in the Sudan, op. cit., p. 593.

be fed, but the insufficient ability of men to make full use of the available resources."<sup>32</sup>

An even more important role played by natural resources in the development of underdeveloped countries, some economists believe, is in the international trade field where these countries are suppliers of industrial raw materials. They give the example of some Middle Eastern and Latin American countries to prove their point. There are dissenting voices against this view, perhaps the most vocal of them is that of Mr. Charles Rollins. It may be useful to summarize his views briefly. He believes that only in the new countries, like Canada and Australia, where an institutional structure conducive to investment is already in existence, does additional funds invested in mineral resource exploitation speed the development process. In the old underdeveloped countries, the situation is quite different. In these areas the country which has an institutional basis for fostering economic growth can, with justification, be regarded as quite exceptional. The dangers of unwarranted focussing of attention on mineral resource exploitation are quite considerable. If this danger is overcome another conflict is faced. The funds obtained by the underdeveloped countries from mineral schemes will in most cases be so small to require the most careful husbandry if they are to finance economic advance of any significant size. The measures required to ensure that the funds are used internally for further development, will be of a type regarded as contrary to the interests of the mineral producers and thus will create a "hostile climate" for further investment. If such measures were enforced after the scheme has begun, the firms involved could be expected to oppose them. A variety

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<sup>32</sup> W.S. and E.S. Woytinsky, World Population and Production, 20th Century Fund, New York, 1953.

of solutions might result from such a conflict depending on the government policies and the degree to which the mineral firms involved chose to carry their opposition.<sup>33</sup>

Only if the mineral exploited and the funds obtained are sufficiently large, Mr. Rollins concedes, can the above conflict be avoided. In the vast majority of the cases this will not be a probability, and the Sudan will face the same problem. So far the problem did not arise due to the insignificance of this sector in the Sudan economy. Efforts were made however as early as the Conquest to encourage British firms by giving them concessions to investigate and exploit any mineral resources they could discover. None of them succeeded in finding any mineral wealth of appreciable size in the northern part of the Sudan. A rather poor quality coal was discovered in Dongala district along the Nile, but they found to the best of their knowledge, no geological indications of any workable deposits.<sup>34</sup> Gold was discovered in several places, but the only workable deposit is a small one at Gebeit west of Port Sudan. Aerial photos indicate the existence of a small oilfield on the Red Sea coast but boring possibilities have not been fully investigated.

More cheerful, however, is the picture of the mineral wealth in the southern provinces of the Sudan. Surface deposits are known to exist in all three provinces and solid deposits exist in Bahr el Ghazal and Upper Nile. The iron ores of Bahr el Ghazal cover an area of about 80,000 sq. kilometres and their thickness which varies from one to five metres, may be much more

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<sup>33</sup> Charles E. Rollins, "Mineral Development and Economic Growth", Social Research, vol. 23, No. 3, Autumn 1956, pp.253-280.

<sup>34</sup> S.C. Dunn, Notes on the Mineral Deposits of the Anglo-Egyptian Sudan, published by Sudan Government, Khartoum, p. 7.

in places.<sup>35</sup> So far as is known with certainty, no coal of good quality exists in the southern provinces or in any area of the Sudan. Deposits of good quality coal are known to exist in Ethiopia, those nearest to the Sudan are north of Lake Tana near the Sudanese post of Gallabat. The absence of coal and the difficulties of communications are presumably the main reasons for the absence of any plans to develop these mineral resources.<sup>36</sup> The inhabitants of the area have in the past smelted iron using charcoal and clay furnaces. They used it for weapons, tools and ornaments, and the dowry in Zande land up to the present day, is paid in locally made iron spear heads.

It is highly questionable whether the Sudan, or any other country, can be regarded as poor in resources in any absolute sense, since the usefulness of resources depends on technical knowledge, demand conditions and new discoveries. Although a country may now be poor in resources, it is not entirely impossible that in future it may become richer as a result of new discoveries or the adoption of new technologies.<sup>37</sup> Existing resources may reflect a technical inability to withdraw a material from its matrix of associated elements or it may reflect a simple lack of external economies as in the case of the southern Sudan. This leads to the pertinent point

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<sup>35</sup> S. C. Dunn, *ibid*, pp.8-9.

<sup>36</sup> Unless of course use is made of the abundant water power resources, the utilization of which is very limited now. A.L. Banks estimated that utilization of water power is about 60% in Europe, 13% in Asia, 3% in South America, and little more than 0.1% in Africa, although Africa possesses 44% of the world's potential hydro-electric resources. See A.L. Banks ed. The Development of Tropical and Sub-Tropical Countries, London, 1954, p.70.

<sup>37</sup> Cf. The following quotation from B. Neuman, Die Metalle, Halle A.S. 1904, p. 408: "Metallic uranium has practically no uses. On this account, there are no production statistics." Translated and quoted by C.P. Kindleberger in his Economic Development, McGraw Hill, New York, 1958, p. 18.

that if a given resource is not accessible it cannot be described as freely given or natural. The qualification may be extended to all resources since they must be acted upon in order to make them useful to men. Norton Ginsburg suggests that a "degree of naturalness" can be worked out depending on how much capital and labour are involved in extracting the resource.<sup>38</sup>

Two other important characteristics of resources are of special interest in the case of the Sudan. The first is that resources can substitute each other and they can supplement each other. If a resource in one area cannot bear the cost of distant transport it may be substituted for in another area by <sup>a</sup>more abundant resource. Secondly, resources tend to complement each other; to be linked in a chain of utilization patterns in which the production of one demands or affects the production or availability of others. An example cited before is mining and use of iron ore in steel manufacturing demands, limestone and coal; also the strip mining of coal destroys valuable farm land.

In conclusion, it is reasonable to postulate, that in normal circumstances the larger and varied the resource base of a given country, the more opportunities it will have, *ceteris paribus*, for rapid economic development. All the major industrial countries have, or have had, relatively large and diversified resource endowments; the United States and Canada being the most striking examples. In the case of the Sudan, no important minerals have yet been found in significant quantities and the possibility that large oilfields lie beneath the surface seems remote although it cannot, in the absence of complete geophysical survey, be ruled out. The Sudan must therefore concentrate on the development of agriculture

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<sup>38</sup> Norton Ginsburg, "Natural Resources and Economic Development", *op. cit.*, p. 200.

including livestock, fish and forest products and on those industries which use for their raw materials the products of agriculture.

No national income figures are available for the Sudan as yet. In most international statistical publications the area occupied by the Sudan remains a virgin white, with the footnote "unknown", or "no data available". The government, however, estimated the national income in 1956 to be in the neighbourhood of £s 200 million or some £s20 per capita. On this basis it may be inferred that about one third of the domestic product was exported, indicating the importance of the export sector to the economy. Also it was estimated that 10% of the national income was invested.<sup>39</sup> There are reasons to believe, however, that the national income accounting in an underdeveloped country like the Sudan is never accurate and tends to show a downward bias. There are also conceptual, as well as statistical objections against the use of per capita income as a basis for international comparisons.<sup>40</sup> Dr. Tothill expresses such doubts in the Sudan case, he wrote, "Were one to adopt money as the yardstick and to use Western standards the conclusion would be that the entire rural population is miserably poor. Such a conclusion would, however, be wide of the mark. The people in Darfur villages (for example) are extremely well off as compared to many people in Europe: for the poorest people there is peace and security and sunshine, there is ample food supply and a good variety of foods .... houses are plentiful and in a good state of repair....Cotton for clothing materials can be grown, spun and woven.

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<sup>39</sup> United Nations, Structure and Growth of Selected African Economies, New York, 1958, p. 149.

<sup>40</sup> See S. H. Frankel, The Economic Impact of Underdeveloped Societies, Oxford Univ. Press, 1953, p.31. Colin Clark, Conditions of Economic Progress, 2nd ed. 1951, pp.16-17. V.K.R. Rao, "Some Reflections on the Comparability of Real Incomes of Industrial and Underdeveloped Areas", in M. Gilbert, Income and Wealth: Series III, Cambridge 1953, pp.178-210.



There is in fact no shortage of anything that is vital for the material comfort of a household."<sup>41</sup>

Nevertheless, the per capita national income of the Sudan is low even in comparison with that of many other underdeveloped countries. The low level of income and productivity is due in general to the structure of the economy, comprising a large subsistence sector where methods of production are primitive. Density of population in the Sudan is low in contrast with that of many underdeveloped countries of the Far East but, with the high population increase, estimated at 2 per cent a year, the ~~low~~ density will rapidly rise in the future.

### III. The Dual Economy:

The Sudan economy is predominantly agricultural and pastoral with land and water providing the main sources of production and income. This fundamental fact manifests itself in a number of ways. It is reflected in the fact that over 90% of the gainfully employed population is engaged in agricultural and pastoral activities. It can also be seen in the fact that the bulk of the national income is derived from agriculture and stock rearing. Similarly, the most superficial examination of the foreign trade statistics will show that the Sudan's exports consist of agricultural and pastoral products (in 1957 cotton accounted for 46.6% of total exports, cotton seeds 10.9% and Gum 9.9%). See Table (3). Export earnings, however, constitute the sole money income for many producers. These incomes are mainly spent on imports of manufactured consumer and producer goods, of which the domestic production is exceedingly limited. The export incomes are also the government's main source of revenue and therefore of budgetary surpluses

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<sup>41</sup> J. D. Tothill ed. Agriculture in the Sudan, op. cit., p.3.

TABLE (3)  
THE SUDAN  
COMMODITY COMPOSITION OF TRADE  
1917 - 1957  
PERCENTAGES OF TOTAL

I T E M	1917	1927	1937	1947	1957
<u>EXPORTS :</u>					
Cotton & Products	18	71	73	68	58
Gum	21	14	9	9	10
Animals & Products	19	5	4	5	6
Oil Seeds	8	4	4	-	15
Other	34	6	10	18	11
TOTAL EXPORTS	100	100	100	100	100
<u>IMPORTS :</u>					
Consumer Goods :					
Textiles	25	14	20	27	16
Coffee & Tea	7	6	9	9	8
Sugar	13	6	9	4	9
Other	42	43	37	31	23
Total Consumer Goods	87	69	75	71	56
Producer Goods:					
Petroleum Products	1	-	2	4	7
Vehicles & Transport Equipment	2	2	4	5	7
Metals & Machinery	-	24	12	10	19
Other	10	5	7	10	11
Total Producer Goods	13	31	25	29	44
TOTAL IMPORTS	100	100	100	100	100

which are, in turn, the country's chief form of savings. Mineral deposits so far as is known, are limited to a few items commercially workable on only a small scale. The little industrial sector that exists, consists of public utilities, establishments for processing agricultural and pastoral products and some repair shops.

The structure of the dual economy of the Sudan may be better understood if it is conceived as two comprising two economies, one, the age old traditional subsistence economy in which production for the market plays a very small part and the other, ~~is~~ a modern irrigation money economy devoted essentially to the production of cash crops notably long staple cotton, and producing most of the country's foreign exchange. A recent United Nations' publication described the Sudan dual economy in the following words, "The country is a sea of subsistence activities superimposed with islands and belts of commercialized activities. The main commercialized sections are in the Khartoum-Gezira area along the river and rail lines which are concentrated in the north eastern quarter of the country. Commercialization in other regions is spotty and of varied degrees."<sup>42</sup> Thus the Sudan like many other underdeveloped, but developing countries, did not pass from mule to airplane in one generation, but it is, and appears to remain, for a long time in a situation where "both airplane and mule fulfill essential economic functions."<sup>43</sup> This dualistic character of developing countries, discussed in the first chapter of this study, is to be noted not only with respect to methods of production and distribution, but it exists also in attitudes and in ways of living.

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<sup>42</sup> United Nations, Structure and Growth of Selected African Economies, New York, 1958, p. 172.

<sup>43</sup> A.O. Hirschman, The Strategy of Economic Development, Yale Univ. Press, New Haven, 1958, p. 126.

The subsistence sector of the Sudan economy is based mainly on rain fed cultivation of food crops with primitive methods, and on livestock rearing. This sector employs by far the greater part of the country's utilized land and labour resources. Out of the 7 or 8 million acres brought under cultivation in any one year, 4 or 5 million acres are devoted to rain crop production. Also about half the population of the Sudan is engaged in agricultural work in the rain belt. Among the major crops of subsistence agriculture are Dura and Dukhn, the two staple food grains of the country, <sup>although</sup> increasing quantities are ~~however~~ being marketed and exported. Other crops, animal products, dates, oil seeds, are in various degrees subsistence produce. Cotton and Gum Arabic are wholly cash crops for export. See Table (4). Another sector of the subsistence economy is grazing carried out by nomadic tribes in a world of isolated but, self-centred, units based on tribal and family ties.

The most outstanding characteristic of rain crop production in the Sudan is its primitiveness.<sup>44</sup> Most, if not all, of the agricultural operations depend on manual labour using the most primitive agricultural implements and production is essentially limited to "the capacity of the man with a hoe."<sup>45</sup> The unit of production is the peasant's family cultivating some 7 or 8 acres of land. But land is not the limiting factor, as extensive areas are laying idle. Nor is capital required in large amounts, as more of the simple implements required could easily be purchased.<sup>46</sup> The scarcity of labour however is evident in many ways; by the practice of shifting

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<sup>44</sup> J.D. Tothill, *Agriculture in the Sudan*, op. cit., p. 284.

<sup>45</sup> See G.O. Gutman, "A Note on Economic Development with Subsistence Agriculture", *Oxford Economic Papers*, Oct. 1957, pp.323-329.

<sup>46</sup> United Nations, Structure and Economic Growth of Selected African Economies, op. cit., p. 173.

TABLE (4)

THE SUDAN:

## PRODUCTION &amp; EXPORT OF SELECTED CROPS

Crop & Year	Production 000' Ton (a)	EXPORT	Percentage of Production Marketed (b)	Indices of Export Prices 1953=100 (c)
<u>Cotton :</u>				
1954	84.3	60.5	71.8	120
1955	92.1	94.7	102.8	108
1956	128.0	114.9	89.7	122
1957	91.4	56.9	62.	126
1958	--	42.0	--	--
<u>Gum:</u>				
1954	49.5	38.5	77.8	129
1955	41.6	41.9	100.7	148
1956	40.8	49.4	121.1	147
1957	41.3	41.3	100	145
1958	40.2	50.1	124.6	108
<u>Groundnuts:</u>				
1954	43.5	23.6	87.6	94
1955	64.5	49.9	53.8	94
1956	53.1	64.5	121.5	116
1957	146.1	67.4	46.1	127
1958	128.7	67.6	52.5	--
<u>Sesame:</u>				
1954	89.1	20.0	43.9	125
1955	150.0	25.3	29.3	118
1956	149.5	30.7	20.5	110
1957	153.1	36.1	23.6	120
1958	131.5	31.2	23.7	--

Source : Annual Foreign Trade Reports

(a) Production refers to crop year beginning in calendar year stated.

(b) On major domestic markets.

(c) Export Unit Value.

cultivation a system by which one piece of land after another is used to the point of exhaustion. It is also evident from the wide use of "hariq" cultivation; clearing land by grass burning. It is clear there that the marginal productivity of land in the rain crop subsistence cultivation is negligible. The situation here is in clear contrast with that in many Far and Middle Eastern Countries where the population pressure on land pushes the marginal productivity of labour to a very low level or even zero.

The decisions of the rain crop cultivators to expand or contract production from year to year will depend on a number of factors. They will have of course to depend on their judgement as to the anticipated quantity and distribution of rain. Dr. S. Fawzi adds the following interesting factors determining the cultivators' decisions in the Sudan: (1) The ease with which land can be prepared for cultivation, i.e. by the choice of the labourer between leisure and expected returns. Inasmuch as there is little need for capital goods, labour is in most cases the only scarce factor if not the only productive one. (2) The inducement to contract cultivation owing to the previous factor will be weakened or strengthened by the cultivators' reserves of grain stored from the previous seasons. (3) The situation is however complicated by another factor namely the likely market price. This ~~is a~~ factor, which Dr. Fawzi considers only dimly appreciated, depends to a large extent on the desire for cash usually created by the necessity of paying taxes and tribute in cash, also for ceremonial expenses and for buying limited quantities of consumer goods.<sup>47</sup> As the need for money income is limited in the subsistence sector, and probably the need is invariable, elasticity of goods and labour for many subsistence units is negative.

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<sup>47</sup> S. Fawzi, "Problems of Economic Development in the Sudan", Presence Africaine, Paris, 1956, p. 30.

Mechanized crop production was introduced in rain crop area since 1954, the object being to increase the ~~population~~<sup>production</sup> of dura in the dryer rainfall zone and thus allowing areas of higher rainfall to concentrate on the production of oil crops. In both 1945 and 1946 over 20,000 acres were sown mechanically in the Gedaref area with such tractors and agricultural implements as could be scraped together at the time. While costs of production were high compared with the returns at local prices, they were considerably less than the returns that would have been obtained had the crop been sold in the world market.<sup>48</sup> By 1950 tractors and implements suitable for the job were obtained and by 1952, 30,000 acres were sown. Unfortunately, it has been found out that in the dryer parts of the rainlands, where dura is the only crop worth cultivating, the returns are not sufficient to support a scheme operating on crop sharing basis, in view of the increasing costs of wages and salaries and the reduction of dura prices. Another problem facing mechanized production is the availability of suitable combine varieties, many of which are now under trial. Mechanized production is still being tackled on an experimental basis and most of the main crop production is carried out by peasant cultivators in the old traditional methods.

Livestock owners of the Sudan fall into three main groups, the nomadic Arab tribes of the north and the west and the Nilotics of the southern provinces. The Arab nomads range over nearly all the remote districts of the northern Sudan. Their habitat is sparsely populated and they follow their flocks and herds over vast areas in search of grazing and water. The people's whole mode of life is bound up with the well being of

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<sup>48</sup> T.R.G. Moir, "Some Aspects of Agricultural Development in the Sudan", in Food and Society in the Sudan, Philosophical Society Proceedings, Khartoum 1953, p. 232.

their livestock and it is on the livestock they depend for their subsistence. They carry trade across the northern frontier sending large herds of camels on the hoof to upper Egypt where they are sold for meat. Livestock however plays no part in such agriculture as the Arabs practice. In fact they regard agriculture as an unpleasant and degrading work.

The Nilotic tribes live even in a closer association with their cattle than do the Arab nomads, for climatic conditions and beasts of prey necessitate a more highly organized mode of life and system of stockmanship. While the Arab nomads assess their wealth by the size of their herds, the Nilotics attach much more individual importance to their cattle. As a result of living in such close contact with their cattle, the animals of the Nilotics came to assume an almost religious significance. These animals are specially fed and groomed, their horns are trimmed and decorated with tassels, they are lauded in song and regarded with an affection amounting to worship.<sup>49</sup>

The economic life of the subsistence sector as a whole is a circular flow, unaffected by the lapse of time with no essential change in methods of production and consumption. The natural growth of population is generally balanced by the extension of cultivated areas or acquiring larger herds of livestock. Nevertheless great potentialities exist in the resources of the subsistence sector which could be utilized, if only means of transport and marketing were available. Like most dual economies, economic, as distinct from political pressures to develop "the backwater of the subsistence sector"<sup>50</sup> will arise only at a relatively late stage. Usually they happen when the balance of payments problems make the country realize that it

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<sup>49</sup> See Audrey Butt, "The Nilotics of the Anglo-Egyptian Sudan", in D. Forde, Ethnographic Survey of Africa, vol. I, London, 1952.

<sup>50</sup> A.O. Hirschman, The Strategy of Economic Development, op. cit., p. 556.



would save foreign exchange by an improved use of the subsistence sector resources.

Side by side with this more or less stagnant subsistence sector, modern irrigation methods have made possible the establishment of social services and schemes of development on a large scale. About three million acres have been laid down for irrigation from the Blue Nile and two smaller rivers, the Gash and Baraka, of these two million acres would be under cultivation in any one year and about half of the gross cultivated area is usually accounted for by the Gezira Scheme.<sup>51</sup> The Gezira cotton accounted for 63.7% of the total earnings of Sudan exports; with cotton seeds it amounted to 70.8% in 1956. The corresponding percentages for 1957 were 46.6% and 57.5% respectively. Moreover the Government derives a large share of its revenue from the net proceeds of sales of the Gezira cotton. The development of irrigated cotton cultivation has greatly enlarged the money economy and transformed it into a monoculture export economy.

Leaving the agricultural sector of the exchange economy we now turn to industry. Modern industry is of recent origin in the Sudan, although crude handicrafts, pottery work, smelting and making of iron ore, weaving and spinning of local cloth, etc., have been practised as domestic industries for centuries, together with a bit of gold mining and soap making.<sup>52</sup> Domestic industries of this sort still persist partly as occupations to fill the dead agricultural season with, and partly as production intended for sale carried out by women to meet the simple needs of a people engaged in a subsistence semi-isolated economy.<sup>53</sup> Like most of the underdeveloped

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<sup>51</sup> Sudan Economic Institute, Economic Development in the Sudan, Khartoum 1954, pp.22-23.

<sup>52</sup> S. Fawzi, "Problems of Economic Development in the Sudan", Présence Africaine, op. cit., pp.32-33.

<sup>53</sup> S.F. Nadel, The Nuba, Oxford University Press, 1947, p. 68.

countries with little known mineral resources, the pattern of modern industry in the Sudan consists of public utility services, processing of agricultural products and repair establishments. In the public utility sector, where marginal returns of capital are relatively low, the chief investor is the government. Indeed the government is the chief source of employment and wage income. The government itself employs 45,500 persons, and the Sudan Railways has 25,000 employees. The two figures combined constitute half the country's wage employment of 150,000 persons which accounts for less than 2% of the total population. Another important branch of the industrial sector is processing of agricultural materials such as cotton ginning, textile manufacturing, oil pressing, etc. In this field again government ownership is dominant.

Although the government sector is dominant in the money economy, because of the strategic fields in which the government is engaged, and the highly organized manner in which its activities are conducted, the private sector apart from subsistence activities, accounts in many instances for a large proportion of production and trade.<sup>54</sup> Important additions to the private industrial sector in recent years include a glass factory, knitwear workshop, a brewery, two aluminium working plants, a cement factory, a meat canning factory and a cigarette factory. Also it has just been officially announced in Khartoum, that the English Electric Company and the West German Sienas Co. are jointly to carry out a hydro-electrification scheme at the Sennar Dam. The projected is estimated to cost about ~~£~~\$5,000,000 and to be

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<sup>54</sup> For a general discussion of the government's role in economic development, see A.H. Hanson, Public Enterprise and Economic Development, Kegan Paul, London, 1959. A. Eckstein, "Individualism and the State in Economic Development", Economic Development and Cultural Change, Vol. VI, No. 2, January, 1958, and C. Gamba, "The Role of the State in Underdeveloped Areas," Economic Record, vol. XXIX.

completed by 1961. The aggregate capital investment in the major industries excluding ginning plants and public utilities was in the order of ~~£~~\$4,000,000 in 1951. While agricultural investments are mostly from indigenous capital the larger part of the industrial capital is of foreign origin.

The dual economy of the Sudan to sum up, is a product of two often autonomous economic systems interacting over time. One of these may be described as the indigenous subsistence economy. It is non-commercial, rain crop and livestock rearing oriented, village and tribally organized, and comprising about 80% of the population. The second system of economic activity is predominantly commercial taking the form of cropping of cotton for export and production, based on modern methods of irrigation. A minor but growing sector of the exchange economy is devoted to public utilities, processing of agricultural products. The role of government is predominant in the exchange sector. More profound, however, is the concentration of the exchange economy north of 12°N parallel. Most of the relatively large income generating enterprises are in the Khartoum-Gezira region. It is in these areas that cotton and other cash crops are cultivated. The southern provinces still remain the largest single concentration of the subsistence economy. However, as in many dual economies, the subsistence sector is yielding more and more ground to the money economy.

#### IV. Limitations to Economic Development:

In spite of the recent large spate of literature on the economic development of the underdeveloped areas, an increasingly discouraging element still remains, and that is the ever lengthening list of factors,

conditions and prerequisites for economic growth.<sup>55</sup> The classical economists spoke of three major factors of production, land, labour and capital. To these, modern economists added technology and non-economic conditions that indirectly determine development by their influence on these factors. The list has now become impressively long. It includes minimum standards of law and order. The historians joined in and identified a number of beliefs and attitudes favouring economic growth. The psychologists joining the search for the "premium mobile" have recently undertaken to establish the dependence of development on the presence of achievement motivation.<sup>56</sup> The fact remains that economic development is inseparably an economic, social and political transformation which cannot be attributed to one or a number of factors. Nor can it be stated that a group of factors as the only prerequisites which can be provided in a prescription labelled "to be taken before development".<sup>57</sup> Some of the factors limiting future economic development in the Sudan are discussed below.

In the field of agricultural expansion in the Sudan, the most important obstacle is the provision of a timely and assured supply of

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<sup>55</sup> See A. Gerschenkorn, "Reflections on the Concept of Prerequisites of Modern Industrialization", L'Industria, April-June 1957, pp.357-372. H.W. Singer, "Obstacles to Economic Development", Social Research, vol. 20, No.1, Spring 1953, pp.19-31. J.K. Galbraith, "Conditions for Economic Change in Underdeveloped Countries", Journal of Farm Economics, November, 1951.

<sup>56</sup> E.E. Hgen, "The Process of Economic Development", Economic Development & Cultural Change, vol. V, April, 1957, pp.202-4. D.C. McClelland et al. The Achievement Motivation, Appleton-Century-Crofts Inc., New York, 1953. A. O. Hirschman, The Strategy of Economic Development, Yale Univ. Press, 1958, Ch.I.

<sup>57</sup> Hans Singer believes that these factors are not so scarce or so difficult to realize provided that economic development itself first raises its head. This is a positive statement of the well known proposition that development is held back by a series of interlocking vicious circles. But it also adds that once development has started the circle is likely to become an upward spiral as all the prerequisites and conditions for development are brought into being. H.W. Singer, "Economic Progress in Underdeveloped Countries", Social Research, vol. 16, March, 1949, p.5.

irrigation water. The Sudan has ample resources of cultivable land but the limiting factor to agricultural development is water. This is particularly so because rain cannot be depended on in most parts of the country. Further north, the densely populated Egypt depends wholly on the Nile for irrigation and other uses. The division of the Nile waters as between Egypt and the Sudan is at present governed by the Nile Waters Agreement of 1929. The agreement reserves for Egypt the entire natural flow of the river from January 1st to July 15th of every year and consequently the total amount of water which the Sudan may use in the period in question is in principle the volume in storage for that purpose at the beginning of any year.<sup>58</sup> The agreement also stipulated that neither the Sudan nor Ethiopia can construct irrigation projects in the Nile without the consent of Egypt.

Although it is a fact that the only way for Egypt to cater for its growing population, having increased from 3 to 22 millions in the past hundred years, is by extending its cultivable area which depends on the available water supply and power for lift irrigation, such a need does not justify the terms of the Nile Waters Agreement. In many ways the agreement is unfair to the Sudan, it limited to begin with, the development of irrigation in the Sudan while leaving Egypt free to develop her irrigation. As a result, Egypt has increased her established rights from 40 milliards in 1920 to 48 milliards cubic metres at the present time. The Sudan's share at present is no more than 4 milliard cubic metres, i.e.  $1/12$  of the established Egyptian share.<sup>59</sup> What makes the Sudan's situation worse

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<sup>58</sup> Ministry of Irrigation, Sudan Government, The Nile Waters Question, Khartoum, 1955, p.2.

<sup>59</sup> Ministry of Irrigation, Sudan Govt., The Nile Waters Question, op.cit., p.3, and S. Fawzi, "Problems of Economic Development in the Sudan", Presence Africaine, Paris, No.6, February-March, 1956. Also M. Abbas, The Sudan Question, Faber & Faber, London, 1952, Ch. VII.

is that it has already exhausted its meagre water allowance. Indeed most of the planned irrigation projects in the Sudan cannot be started or extended without Egypt's consent. Such projects as the second phase of the Managil extension, the Roseries dam and consequently the Kenana project will have to wait for the revision of the agreement. As yet the Egyptian consent seems to be conditional to the Sudan giving its consent to the High Dam, which Egypt intends to build near Aswan, and to which the Sudan has some objections.<sup>60</sup> Negotiations between Egypt and the Sudan since 1955 to reach an agreement about water allocation, have so far proved fruitless. There are now uneasy prospects impelling the Sudan to reopen the negotiations; Egypt, however, is under less compulsion but the two countries need an agreement before progress on the High Dam (work scheduled to start October 1959) can be made. Both sides have interests in reaching some kind of arrangement, at least for the time being.<sup>61</sup>

Even if an agreement was reached with Egypt and a fair share of the Nile waters was allotted to the Sudan another factor will be needed, and that is capital. In recent economic literature the shortage of capital has come to hold the stage as the most important bottleneck in economic development. The process of economic development, it was observed, implies successive additions to the country's store of capital equipment and these must be large enough to effect an increase in both the total and per capita

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<sup>60</sup> The Sudan's objections include that the reservoir would flood more than one hundred miles of Sudanese land along the Nile submerging the Nubian Valley and the town of Wadi Halfa. Another criticism is that the loss by evaporation in the dry Aswan region would be greater than in the sites nearer the sources of the river. See, "Regaei El Mallakh, "Some Economic Aspects of the Aswan High Dam Project in Egypt", Land Economics, vol. XXXV, No. 1, Feb. 1959.

<sup>61</sup> The Economist, London, vol. CXCI, No. 6039, May 29, 1959, p. 718.

national income. Although the widespread view that capital is the only bottleneck and that sufficient amounts of it would be able to "finish the job", has been challenged, it is still a fact that one of the tasks of economic development is to find the resources for capital formation and ensure that they are properly applied.

Capital can be acquired or accumulated in several ways, at the least in the short run by (1) Importation in the form of loans and grants, (2) The rapid creation of surpluses through the application of a rapidly acquired technique or a given resource or (3) By squeezing living standards to, or even below, the subsistence level. Let us take the last method first. There are limits to how far living standards can be squeezed in a poor economy. Indeed the cause for low capital formation is the poverty of the people which prevents them from saving more than small proportions of their current incomes. Thus the underdeveloped countries are involved in what Fitchie Caldor calls the "Misery-Go-Round". The operation of this dismal machine may be summarized by saying that the country's poverty is both the cause and effect of its insufficient capital formation. "On the supply curve," writes Professor Nurkse, "there is the small capacity to save resulting from the low level of real incomes. The low real income is a reflection of low productivity which is in turn largely due to lack of capital. The lack of capital is a result of the small capacity to save and so the circle is complete."<sup>62</sup>

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<sup>62</sup> R. Nurkse, Problems of Capital Formation in Underdeveloped Countries, Basil Blackwell, Oxford 1953. In recent years, increasing numbers of economists have come to doubt that insufficiency of savings is the most important factor holding back economic development. For one thing, they have noticed the luxury consumption of the rich, ceremonial expenditure, the widespread hoarding and the ubiquitous instances of misdirected and unproductive investment. For another, they have realized that savings and productive investment are as such a result as a cause of development. See A.K. Cairncross, "The Place of Capital in Economic Progress", International Social Sciences Bulletin, vol.VI No. 2, 1954.

Leaving the third method of capital formation discussed above, which requires for its implementation a militant society or a totalitarian government, the Sudan has in the past tried the other two methods. Up to the first World War, economic development in the Sudan was made possible to a large extent by the fact that Egypt had continued to meet the Sudan's budget deficits from 1899 to 1912. Between the two wars the most important development project was the Gezira Scheme financed with a loan raised in London and guaranteed by the British Government.<sup>63</sup> After the second World War, two development programmes were prepared and they were fed from budget surpluses particularly when cotton yields and prices were high. In the 1951-52 season for example, yields and prices were exceptionally high and the budget surplus rose to £24 millions. Since independence budget surpluses as a means of financing development have been complicated by many factors;<sup>64</sup> cotton prices were much lower than average, while government expenditure has increased in many directions, to cater for self-government, e.g. payment of compensations to expatriate officials, enlarging the Sudan Defence Force and expanding social services. The Sudan had to look for external sources for loans and assistance in a moderate way to begin with. See Table (5). The Minister of Finance in his 1955-56 budget speech declared, "We must all do what we can to the extent of sacrificing immediate benefits to raise the sum required for development programmes from our own

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<sup>63</sup> M. Abbas, The Sudan Question, Faber & Faber, London, 1953, Ch. IX.

<sup>64</sup> "The fact that the development expenditure has exceeded the budget surplus since 1951 reflects not only the rising trend in development expenditure but also a relatively lower rate of increase in budget surplus as compared with earlier post-war years resulting from the expanding tendency in general budget expenditures. So far the government has been able to draw upon previously accumulated liquid resources. However, it is deemed necessary that a considerable part of the enlarged five-year programme being considered for 1957-1962 should be financed by foreign loans". United Nations, Structure & Growth of Selected African Economies, New York 1958, p. 193.



TABLE (5)  
SUDAN'S FOREIGN DEBTS  
In Sudanese Pounds

L O A N	Original Amount Borrowed	Balance Outstanding as at Dec. 31st 1 9 5 7	Balance Outstanding as at Dec. 31st 1 9 5 8	Interest Paid During 1 9 5 7	Interest Paid During 1 9 5 8
1. LONDON MARKET BONDS					
5½% Guaranteed Bonds	6,220,500	Repaid	Repaid	--	--
4½% Guaranteed Stock, 1939-1973	3,669,315	2,287,058	2,171,506	106,665	101,704
4% G. Stock 1950-1974	1,462,500	1,126,710	1,005,190	46,773	44,936
3¼% G. Stock 1954-1959	1,950,000	198,802	60,738	10,552	6,461
4½% G. Debentures Stock for Kassala Railways Co.	1,404,000	Repaid	Repaid	--	--
4½% G. Stock for Sudan Construction Co.	526,500	Repaid	Repaid	--	--
5% G. Stock for Gedaref Railways 1932-1962	2,106,000	461,468	403,961	24,292	21,682
TOTAL	17,338,815	4,074,038	3,649,395	188,282	174,783
2. EGYPTIAN LOAN	5,414,525	Nil	Nil	Nil	--
3. INTERNATIONAL MONETARY FUND	--	--	1,741,214	--	--
GRAND TOTAL	22,753,340	4,074,038	5,390,609	188,282	174,783

Source : Sudan Government Economic Surveys

resources. It may be possible, provided no political ties are attached, to raise a moderate part of this sum from abroad as a means of supplementing our own efforts". Since then the situation has deteriorated,<sup>65</sup> and the new government of the Sudan recently accepted a \$40 million American aid programme.

From the first sight, it would appear that foreign assistance offers the only way out of this impasse, and no one could doubt that capital imports are of the greatest importance to underdeveloped countries. Nevertheless, there are some limitations springing out from factors inside the underdeveloped countries themselves, others from the nature of the present system of international economic relations. One of the internal limitations is the absence of adequate basic services such as transport facilities, water supplies, electric power and other facilities enjoyed by the productive undertakings in industrial countries. In fact the defective provision of the whole range of public services from power to education, from transport to health, may be more important in some circumstances than the lack of investable resources. Furthermore, most of the underdeveloped countries, especially those who were under colonial rule, are swept by an aftermath of nationalistic feelings and the fear that the influx of foreign capital will <sup>endanger</sup> ~~enhance~~ their autonomy. Thus they prefer to finance their economic growth by the "bootstraps policy".<sup>66</sup> Finding resources for capital formation is one problem, and the allocation of these resources is equally

<sup>65</sup> William Harcourt, writing in the News Chronicle, London, March 6, 1959, gave the following exaggerated, dismal picture, "Last year the Sudan faced a £15 million balance of payments deficit, and the situation has further deteriorated these last few months. The Government has been desperately seeking foreign aid. The Sudan needs at least a further £24 million to stabilize her economy and to continue her modest development schemes. Unless this aid is forthcoming within a matter of months, it is almost certain that the Sudan will disintegrate as a state".

<sup>66</sup> For a statement of the by-the-bootstraps policy, see B. Higgins and W. Malenbaum, Development Financing, Carnegie Endowment, 1955, pp.285-88 and B. Higgins, Economic Development, W.W. Norton, New York, 1959, Ch. 19.

important, especially in <sup>a</sup>monoculture, primary producing country like the Sudan where diversification of production is urgently needed.

In a country as huge as the Sudan where the productive areas are so scattered and the unproductive tracts so large the question of transport looms large when development is under consideration. There are in the Sudan just over 2,500 miles of double line railways track. In Argentina which is a few miles larger than the Sudan and which is also long and narrow, there are 27,000 miles of track.<sup>67</sup> In some countries with small railway systems, road communications have been developed extensively. In the Sudan, the made-up roads are few, and the wear and tear of vehicles which carry loads over the many rough tracks is extremely heavy. It has been calculated that in 1951, there were 9.2 million lorries and buses in the U.S.A. and 8.8 million in all other countries of the world. To this latter total the Sudan contributed 5,488 vehicles or one fifteenth of one per cent. Even with the little advance made so far, motor lorry transport has placed many up country areas on the map as regards economic production.<sup>68</sup> Port Sudan is not only the country's only sea port, 91% of total exports and imports passing through it, it is also inconveniently situated at the right hand corner of the country, like the orifice of the neck of a very long bottle. The Nile does of course provide an additional means of communications over some 2,300 miles but it has not so far <sup>become</sup> an economic highway for goods. So much so, that it is cheaper to send goods

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<sup>67</sup> E.F. Aglen, "The Economic Limitations to Future Development", in Food and Society in the Sudan, Proceeding of the Philosophical Society of the Sudan, Khartoum 1955, p. 285.

<sup>68</sup> G.F. March, "Transport in the Sudan", in J.D. Tothill, ed. Agriculture in The Sudan, op. cit., p. 176.

to lower Egypt through Port Sudan and the sea. To say that the Sudan is hampered by its transport system does not mean that the present system is inefficient, but that much more development in this sector is needed. Underdeveloped countries with development plans have generally allocated from 18% to 40% of planned public investment to transport, for example in Afghanistan it was 40%, Cambodia 34%, India 29%, Pakistan 18%, while<sup>in</sup> the Sudan<sup>it</sup> is only 15%.<sup>69</sup>

A further point closely associated with transport is worth considering, and that is the partial commercialization of the economy. The great distance from the sea has no doubt been the chief reason for the lack of development in Equatoria where considerable areas of fertile country are to be found. The development of a dual economy like the Sudan, involves the shift of resources of land and labour from ~~the~~ subsistence production to production for exchange. The produce of the subsistence sector could be brought to consumption or export centres if only means of transport and marketing facilities were available. Also required is a good marketing system to replace the primitive methods adopted now. One of the abuses of primitive marketing in the Sudan is the "sheil" system whereby a farmer gets goods and money to finance his farm by pledging next year's crop to a merchant at a fraction of its true value, and the farmer is never out of debt.<sup>70</sup>

Shortage of labour has always been one of the most difficult obstacles to economic development in the Sudan. Hence it was natural that the earlier stages of government intervention in the field of labour problems, was mainly concerned with the solution of this problem. As early as 1904 a central labour office was established in Khartoum with branches in certain

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<sup>69</sup> Figures quoted by W. Owen, "Transportation and Economic Development", American Economic Review, Papers & Proceedings, vol. XLIX, No.2, May 1959.

<sup>70</sup> A.F. Aglen, Economic Limitations, op. cit., p. 287.

provinces to tap the available labour supply and to promote the mobility of labour to points of demand. But these efforts were faced with a serious conflict between recruiting sufficient labour for transport and public works from agricultural areas, and the government policy of encouraging agricultural production. A further complication arose from the unwillingness of the government to import foreign labour. Local labour was not forthcoming in sufficient numbers and those who offered the least resistance came from districts that were most suitable for agricultural expansion. The government therefore, concentrated its efforts on the least productive areas especially among the nomadic and semi-nomadic tribes. These were encouraged by higher wages to accept wage employment.

A more difficult problem in the supply of labour in the Sudan is the scarcity of skilled artisans and technical staff. A memorandum submitted with the 1954-55 Development Budget reads, "Progress in the development programme in the past year has been slower than expected. The main factor responsible for this has been the shortage of staff. Not only are most ministries and departments short of trained Sudanese staff at all levels, but many of the expatriate technical staff have resigned and it has been difficult to replace them. In particular financial control has been, and still is , hampered by the shortage of trained accounting staff. The government's accounting machine has proved quite unequal to the stress imposed upon it, during the last few years." Since that time the government has made successful attempts to recruit expatriate staff from European countries to fill the posts for which qualified Sudanese were not available. The fact remains, however, that the Sudan will have to depend to some extent, for some time to come, on imported skills if its development programmes are not to be hampered.

Another labour problem which is facing the Sudan as well as the young developing countries is the role of trade unionism in economic development. It may be easy for a government in these countries, while rationing its limited resources, to persuade independent producers to accept lower standards of social services, but the task of moderating the demands of a well organized and militant labour movement for better living conditions, is by no means easy.<sup>71</sup> The trade unions' demand for higher wages is not often based on considerations of labour productivity or their social opportunity cost, but rather on some preconceived standard of living. The large number of dependents supported by each worker in an extended family system, renders the average wage rate demanded much higher than the marginal product of labour in the Sudan.<sup>72</sup> The problem is complicated by the fact that wage labour in the Sudan is mostly employed in rendering services such as transport, etc., and the need to keep a high efficiency in these industries cannot be over-emphasized. The trade unions even after the Sudanese independence, were never satisfied with the Government wage policy or the liberal freedoms granted to them. Whether this confirms the opinion that "the labour movement in the Sudan was allowed to develop too fast and too far"<sup>73</sup> is of little importance now since the new government in the Sudan has banned all trade unions.

The non-economic factors in the development of underdeveloped countries have received their due attention in recent years.<sup>74</sup> This combination

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<sup>71</sup> See A. Mehta, "The Mediating Role of Trade Unions in Underdeveloped Countries", Economic Development & Cultural Change, vol.VI, No.1, Oct. 1957.

<sup>72</sup> O.M. Osman, "Social and Economic Development in the Sudan", International Labour Review, October 1958, p. 345.

<sup>73</sup> S.Fawzi, The Labour Movement in the Sudan, 1946-52, Oxford Univ. Press, London, 1957.

<sup>74</sup> See B. Hoselitz, "Non Economic Factors in Economic Development", American Economic Review, vol.47, May 1957; K. Helleiner "Moral Conditions of Economic Growth", Journal of Economic History, 1951, and M. Nash, "Some Social and Cultural Aspects of Economic Development", Economic Development & Cultural Change, Vol. VII, No. 2, January, 1959.

of factors has been variedly termed the "will to economize", "cultural configuration" and "growth perspective". The concept arose from the conviction that "the fundamental factors making for economic growth are non-economic and non-materialistic in character, in the words of Schiller, "It is the spirit itself which builds the body".<sup>75</sup> What is required for rapid economic growth beside the economic factors, is a system of social organization combined with a constellation of values, goals or objectives favouring growth and change. All societies possess their systems which vary sometimes only to a modest degree, often sharply. Without resorting to Parsonian terminology, it is clear that some societies are oriented towards goals which emphasize individual initiative and production of goods and services beyond basic needs, others are not.<sup>76</sup> These model conceptions are not wholly realistic but they serve to show that if a presently underdeveloped country is to develop rapidly it must have a "will to develop". Awareness of the need is not enough, what is more important is what Hirschman christened "growth perspective" which comprises not only the desire for economic growth, but also the perception of the essential nature of the long and difficult road towards it.

Any country attempting rapid development will suffer a sharp accentuation of social tensions. These may express themselves in the form of political instability, a characteristic of most of the underdeveloped countries today. "Government generated instability", write Buchanan and Ellis, "involves heavier taxation, inflation, expropriation, etc., which gives rise to hoarding, flight of capital and investment in land rather than

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<sup>75</sup> D.M. Wright "The Open Secret of Growth" in Fortune Magazine, April 1957; also see his "Moral Psychological & Political Aspects of Economic Growth", Economisk Tidskrift, vol. LVI, October, 1954.

<sup>76</sup> Talcot Parsons, The Social System, The Free Press, Glensene, 1951. C. Kluckhohn "Universal Categories of Culture", in A.L. Kroeber, ed. Anthropology Today, Chicago University Press, 1953, p. 515.

in productive enterprises."<sup>77</sup> It may be agreed that such conditions are not favourable to economic growth, but it is doubtful whether the present conditions in underdeveloped countries, which the two authors seem to envisage, is so absolutely hostile as they suggest. Several underdeveloped countries especially in Latin America and the Middle East have shown signs of rapid economic growth in spite of their chronic liability to coup d'etat.<sup>78</sup> The present governments of some underdeveloped countries although stable, may be so corrupt and feckless that they may fail to pursue any consistent policy at all. The problem here is that of not quite knowing when the next coup d'etat is going to take place. The change may be less hostile to development than the stable corrupt government.<sup>79</sup>

The value of political stability as such, in underdeveloped countries, is often exaggerated. Successful economic development demands not only a stable government but a stable government with the right kind of consistent policy. To obtain such a government, an underdeveloped country may have to go through an extended time of troubles, characterized by political instability, until such a government is brought to power. It may be added, that political instability is often a characteristic not of a stagnant country, but of a vigorously developing one. Political turmoil may thus be an effect of the newly aroused economic expectations which cannot be immediately satisfied, of disturbances of traditional loyalties and shifts in the balance as

<sup>77</sup> N.S. Buchanan and H.S. Ellis, Approaches to Economic Development, 20th Century Fund, New York, 1955.

<sup>78</sup> "Syria for example during the post-war years has combined fairly rapid development with frequent and violent political change. In spite of frequent changes in government, writes the International Bank Mission, "private enterprise has retained a buoyant outlook and continued to expand". Economic Development of Syria, Baltimore, 1955, p.23.

<sup>79</sup> We may instance the pre-revolutionary Egyptian government's "inconsistency in such matters as export licences". The United Nations Economic Development in the Middle East, 1954-55, New York 1955, p. 41.



between groups and classes.<sup>80</sup> The governments of these countries will have to do their best to cushion these disturbances in a way consistent with economic development. The degree of political stability therefore is not something to be provided for as a prerequisite to economic growth, but it has to be recreated in the face of considerable opposition during the course of development by processes which will have to involve both reconciliation and suppression.<sup>81</sup> Only in the light of these considerations, can the factor of political instability as an obstacle, have its proper perspective.

It is clear from the above discussion that economic growth in the Sudan and elsewhere is singularly complex, and the factors which enter into it are mutually interdependent. It is not correct to think of economic growth in terms of missing components, because this will likely lead to the belief that the problem can be solved by injecting those components from the outside or by looking for ways and means of producing them within the country. Even if one concentrates instead on the need for a binding agent which is to bring together the various scattered or hidden elements, the task becomes even more difficult. Development in these countries depends on the ability and determination of a nation and its citizens to organize themselves for development.<sup>82</sup> One of the specific characteristics of a developing country like the Sudan is that it is a "latecomer", this condition is likely to make development into a less spontaneous and more deliberate process than was the case in the developed countries.

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<sup>80</sup> D.E. Apter, "Nationalism, Government and Economic Growth", Economic Development and Cultural Change, Vol. VII, No.2, January, 1959.

<sup>81</sup> A.H. Hanson, Public Enterprise and Economic Development, Routledge & Kegan Paul, London, 1959, p. 51.

<sup>82</sup> G. Myrdal, Economic Theory and Underdeveloped Regions, Duckworth, London 1957, pp.66-68.

### CHAPTER THREE

#### THE NORTHERN MONEY ECONOMY

##### 1. The Rise of the Northern Money Economy:

"The rise of a money economy", M.M. Poston the economic historian has written, "is one of the residuary hypotehsis of economic history, a deus ex machina, to be called upon when no other explanation is available."<sup>1</sup> The term is least relevant when it is used in its simplest and most direct sense to point out to the contrast with economies in which trade is altogether absent or also is conducted without money and the "rise" is taken to mean, the birth of such a system. The formula means more when used in its vaguer and more general sense, to mean the relative frequency of money payments while the word "rise" can be used to denote not their birthday, but their general expansion. In this sense the growth of a money economy means merely, an increase in the relative volume of money payments and is something which economists can understand and historians can test. For in this sense, the process is historically not very different from what economic historians prefer to describe as the "rise of the exchange economy" and the "decline of a natural economy".

The most significant economic development in the Sudan and other African economies since the beginning of this century, has been the shift of resources from subsistence production to production for sale and thus a growing exchange economy.<sup>2</sup> Initially, the traditional economies of these countries were basically organized for the needs and with the resources of

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<sup>1</sup> M.M. Poston, "The Rise of a Money Economy", The Economic History Review, vol. 14, 1944-45, p. 123.

<sup>2</sup> See the United Nations Three Studies, Enlargement of the Exchange Economy in Tropical Africa, 1954; Scope and Structure of Money Economies in Tropical Africa, 1955; and Structure and Growth of Selected African Economies, 1958. Also see E.K. Hawkins, "The Growth of a Money Economy in Nigeria and Ghana", Oxford Economic Papers, vol.10, No. 3, Oct.1958, pp.339-345.

self-contained rural communities. These subsistence economies were characterized by lack of specialization, a lack of regular production of a surplus with a view to sale, and stationary technologies. The combination of these three factors, composed a pattern of a static economy common to most African economies at the turn of the preceding century. "The vicious circle of stagnancy", in which the traditional economies were caught has been broken by the advance of exchange activities. The shift took a number of ways but two main trends were noticeable. Firstly through the transfer of small scale agricultural producers from the traditional economy into producers of cash crops for export. The initial impulse of such transfer was exogenous, coming and being continuously fed from outside the economy and in most cases fostered by government action. This form of production did not require heavy capital investment, except for transport facilities, or advanced technology. The other trend, however, was dominated by large scale foreign investment and/or immigrant settlements from advanced economic backgrounds, establishing themselves as producers for export in the midst of a traditional economy. The latter type of production took place in African countries endowed with natural resources and tolerable climatic conditions which proved attractive to foreign enterprise and settlement.<sup>3</sup>

In the Sudan the rise of the money economy though based entirely on production for export, has not been brought about by large scale foreign enterprise or immigrant settlers. The country was opened to sea-borne trade only about eighty years ago, before that, it was, in spite of its vastness,

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<sup>3</sup> S.F. Frankel, "Some Aspects of Investment and Economic Development: The Continent of Africa, International Social Sciences Bulletin, vol. 111, 1951, pp. 11-16; and M.J. Herskovits', "African Economic Development in Cross Cultural Perspective", American Economic Review, vol. 46, May, 1956, pp. 452-461.

a country "with hardly any vestige of material development, inhabited by semi-nomadic peasants dependent on fitful rains for subsistence and pasture and having one asset, the precious river Nile"<sup>4</sup>. Three quarters of the exports comprised outcome of wild or semi-wild growth, such as gum arabic, ivory and dom nuts. These products thrive in the special climate and soil of the Sudan and were scattered in extensive areas. Their production is rather elastic, the volume supplied being conditioned largely by external demand or by the relationship between export price and gathering and transport costs.

During the first quarter of the twentieth century, cotton was produced and exported but its cultivation was limited to a few pump schemes and to the Tokar and Gash Deltas where the acreage varied widely with river flushes.<sup>5</sup> Cotton accounted for only a small fraction of export or domestic product. The largest sources of wage employment at that time were the government and the Egyptian Army. The methods of agricultural production remained largely at the traditional or subsistence level though the use of pumps to use water for irrigation represented a significant technological advance from the indigenous Sagias or water-wheels. Food production, both in area and yield, had a rising trend mainly as a result of population growth but partly stimulated by effective demand from the urban and chronically deficient areas, which it was possible to supply from different sources when transport was extended. It is believed that population has increased by some 2% a year between 1912 - 1927, while rain grown dura output expanded at an annual rate of 4%, hence it

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<sup>4</sup> Arthur Gaitskell, "Planned Regional Development in Underdeveloped Countries", in Background Papers to H.R.H. The Duke of Edinburgh's Study Conference, July, 1956, Oxford University Press, 1957, p.77.

<sup>5</sup> E. Mackinnon, "Kassala Province", in J. D. Tothill ed., Agriculture in the Sudan, Oxford University Press, 1952, pp.706-722.

is indicated that there was an improvement in consumption and living standards.<sup>6</sup> It should be noted, however, that the improvement occurred in the money sector especially in the urban area; the subsistence sector remaining largely stationary in production as well as in consumption.

After the conquest of the Sudan by Egypt and Britain, the first problem that faced the administrators was the chronic lack of money. (1898 budget was £35,000). They were therefore determined that the quickest way for monetizing the economy was through government investment. Secondly, they determined that development, although assisted by capital and skills imported from abroad, the major part of the activities of the exchange economy should depend upon a type of peasant agriculture brought about by the transformation of a part of the traditional economy. They rejected the conception of foreign capitalists developing the country purely for private profit, because the administrators had political and social aims mixed with their economic ones. The mixture of social, political and economic aims, was mainly to control or plan development partly to ensure that the state should get the revenue and partly to remain a master of the social results.<sup>7</sup> All these factors were responsible to a great <sup>extent</sup> ~~deal~~ for the direction and growth of the northern money economy in the Sudan.

The acceleration of the commercializing process was increased during the first World War and the early inter-war years when primary producers' prices rose because of shortages, but the upsurge did not happen until the establishment of the Gezira Irrigation Scheme. It was evident for a long time

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<sup>6</sup> United Nations, Structure and Growth of Selected African Economies, op. cit., p. 177.

<sup>7</sup> See M. T. Shebeika, British Policy in the Sudan, 1882-1902, Oxford University Press, London, 1952, Ch. II.

that the best bet for enlarging the money economy and creating an exportable surplus was to bring irrigation to the Gezira plain.<sup>8</sup> The plain consisting of 5 million acres of rich clay soil, is a triangle of land between the White and Blue Niles with its apex at Khartoum, where the two rivers join. The soil although heavy is well suited to the cultivation of cotton, for which climatic conditions are also favourable. Only irrigation is needed, and this can be provided ~~fer~~ with comparatively less difficulty as the high banks of the Blue Nile at Sennar facilitate the construction of a control and storage dam from which virtually the whole area can be irrigated by gravity.

Once it was determined that the future development of the Sudan depended on bringing irrigation on the Gezira plain, the administration of the country tried to make the project attractive to foreign investment. It was realized, of course, that foreign investors were hardly expected to loan money to an untried government in a very poor country. An attempt was thus made to make the project credit worthy, and to provide it with the prerequisites of production. Firstly communications were extended. Good shipping facilities were installed at Port Sudan, railways and roads were extended into the interior so that any exchange crop produced on the Gezira could be marketed economically in the world market. Secondly, foreign markets were tapped. From experimental farms cotton was sent to textile manufacturers for assessment of quality thereby building up confidence and good faith in Sudan cotton. Thirdly, land use research was conducted experimenting on pilot schemes to find out what relations, what crops, what kind of association with local people, what size of unit per family, what machinery, what degree of

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<sup>8</sup> W. A. Hance, "The Gezira, An Experiment in Development", Geographical Review, vol. 44, April, 1954, p. 253.

supervision was needed and was possible to give a production which was at once economically and socially satisfactory.<sup>9</sup>

The deliberate planning bore the fruit of confidence, and loans totalling £14 million were obtained in the United Kingdom with the British Treasury's support for the Sudan Government to go on with the project.<sup>10</sup> These loans sufficed to build the Sennar dam and major canalization, but the servicing of interest and sinking fund on them was such a burden on a country with a small revenue that the government could not afford to borrow more. Yet the Gezira project needed further capital to clear and level the land, to dig the minor canals, to provide buildings and machinery, to supervise cultivation, and store and market the crop. For the required extra capital and specialized management, the government turned to private enterprise. Two private companies, the Sudan Plantation Syndicate and Kassala Cotton Company accepted the offer. The division of labour between the three partners was that the government built the Sennar dam on the main canals and rented the land from its owners; the two companies provided additional capital, supervised cultivation, stored and marketed the crop. The owners-cum-tenants provided the labour. Certain portions of each tenant's land were set aside for the production of subsistence foodstuffs, the remainder was devoted to cotton, the cash crop. Proceeds of sale were divided between the government, the two companies and the tenants in the proportion 40:20:40 respectively. And so conceived in 1904 but launched after much pilot experiments in 1925, began the curious triple partnership of the state, private enterprise and local people which characterized the Gezira scheme, the main single influence

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<sup>9</sup> F. Growther, "Organisation of Agricultural Research and the Experimental Farms", in Tothill ed., Agriculture in the Sudan, op. cit., pp. 416-438.

<sup>10</sup> M. Abbas, The Sudan Question, London, Faber & Faber, 1952, Ch. IX.

in enlarging the money economy in the Sudan.<sup>11</sup> Since 1950, the two companies have been eliminated and the scheme today is a joint enterprise of the tenants and the Sudan Government and its administration has been conferred to a board, governmentally appointed.

The establishment of the Gezira scheme did not only involve improved methods of irrigation and cultivation but also partial mechanization and the establishment of a new socio-economic order. From the technological and organizational point of view the scheme was an advance from the traditional to the modern methods of production and an extension of the money economy from trade to cultivation.<sup>12</sup> Another result of the scheme is that cotton the cash crop has dominated the export economy. In recent years cotton accounted for 1/5 of the total cultivated acreage and over 60% of the country's export earnings. Thus the Gezira scheme while enlarging the money has transferred it into essentially a monoculture export economy.

Cotton as a cash crop continued to dominate the export sector. (See Table (5)). Between 1935-37 and 1955-56 cotton acreage in the Gezira which was responsible for over 70% of the country's cotton output, expanded by 30% and production by 70% while proceeds rose eight times.<sup>13</sup> The faster increase in financial returns than in physical product, is explained chiefly by the rising trend in cotton prices whereas the faster increase in productivity is a result of high yields brought about by improved cultivation methods including mechanization and disease control. However, since 1951, the relative importance of the Gezira scheme in cotton production has been reduced by the

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<sup>11</sup> The unique economic organisation as well as the problems facing the Gezira scheme will be dealt with in the second section of this chapter.

<sup>12</sup> The United Nations, Structure and Growth of Selected African Economies, op. cit., p. 178.

<sup>13</sup> F. Growther, "Annual Variation in Cotton Yield of Gezira", in Tothill, Agriculture in the Sudan, op. cit., pp. 492-500.



sharp increase in private pump schemes, largely as a result of increased private savings. The proportion of private schemes in total cotton production rose from some 10% in early post-war years to 30% or 40% in recent years indicating the faster growth of the private sector in general.<sup>14</sup>

A small industrial sector grew around the money economy and it was mainly initiated by the export activities. As yet, this sector is at a very early stage being limited to processing of agricultural products such as cotton ginning, textile making and oil pressing, also public utilities such as railways, ports, electricity and river transport and a small repair services sector consisting of engineering workshops and garages. This basic pattern of the industrial sector remained unchanged although some large scale industries were recently added. Some of them were inspired by makeshift industries set up during the war-time shortages. Others, developed with the agricultural and commercial expansion following the war.<sup>15</sup> Most of the industrial establishments are foreign owned and operated though Sudanese industrial enterprises have been increasing as a result of increased capital accumulation from agricultural incomes. (See Table (6)). Side by side with these modern industries, traditional handicrafts and domestic industries in various fields, still exist especially in the interior area.<sup>16</sup>

To sum up, the rise of the northern exchange economy in the Sudan though assisted by capital and skill imported from abroad the upsurge depended on a type of state controlled peasant agriculture established by a transformation of part of the subsistence economy. The shift made the subsistence cultivators into peasant producers of cotton as a cash crop. There was

<sup>14</sup> Ministry of Finance, Economic Survey, 1957, Khartoum, Sudan, 1957, pp.5-6.

<sup>15</sup> United Nations, Structure & Growth of Selected African Economies, op.cit., p.181.

<sup>16</sup> S. Fawzi, "Problems of Economic Development in the Sudan", Presence Africaine, Paris, No. 6, Feb. - March, 1956.

TABLE (6)

STRUCTURE OF SECONDARY AND EXTRACTIVE INDUSTRIES : 1957

Type of Industry	No. of Factories	Capital Invested £s000	No. of Employees	Annual Produc- tion	Unit	Site
<u>Cotton &amp; Apparel:</u>						
Spinning & Weaving	1	..	..	331	Yarns	Nzara
Knitwear	1	16	30	26	Tons	Khartoum
Ginning	26	..	7800	92	Tons	Port Sudan
Delinting	1	70	125	1980	"	
Dyeing	8	..	109	..		
Tanneries	2	..	52	..		Khartoum N
Canvas Shoes	1	..	..	300,000	Pairs	
<u>Food &amp; Tobacco:</u>						
Meat Canning	1	750	383	180,000	Heads of Cattle	Kosti
Vegetable Ghee	1	..	..	20	Tons	Khartoum
Confectioneries	6	200	225	1,000	"	"
Squashes (beverage)	-	-	-	-		
Vermicelli	3	8	26	540	Sacks	"
Sausage	1	5	16	208	Tons	"
Oil Mills	26	..	915	25,000	Tons	Omdurman
Tea Packing	1	10	33	218	"	
Grain Cleaning	15	..	750	25,873	"	
Cigarettes	2	50	..	..	"	Wad Medani
<u>Chemical:</u>						
Cement	1	400	365	32,400	"	Atbara
Glass	1	50	174	780	"	Khartoum
Soap	16	..	318	7,000	"	All Sudan
Carbon Dioxide	1	50	10	220	"	Khartoum
<u>Beverage:</u>						
Brewery	1	750	132	25,000	Hecto- litres	Khartoum North
Mineral Waters	58	400	486	9.7	Million Dozens	
<u>Extractive:</u>						
Manganese	3	..	..	50,000	Tons	Sinkat
Iron Oxide	1	..	..		"	Red Sea Hills
Coal Mines	2	..	..	250	"	"
Common Salt	1	750	..	30,000	"	Port Sudan
Sawmills	9	..	886	..	"	

Cont'd.....

TABLE (6) Cont'd.

Type of Industry	No. of Factories	Capital Invested £000	No. of Employees	Annual Produc-	Unit	Site
<u>Other:</u>						
Air Conditioners	37	50	..	240	Units	Khartoum
Nails & Hinges	1	..	10	248	Tons	Omdurman
Aluminum shaping & pressing	2	30	50	240		"
Liquid Air	1	59	20			Khartoum
Tin Making	2	..	312	..		Port Sudan
Creosoting	1	..	188	..		Atbara
Decorating plants	5	..	30	..		
Blue Nile Packing Co.	1	150	135	..		Khartoum North
Total All Items	240	3798	13,580			

## UNITED NATIONS : GROWTH AND STRUCTURE OF SELECTED AFRICAN ECONOMIES

The data covers shops employing six or more labourers but excluding public utilities, repair shops and handicrafts.

relatively little foreign investment in large scale enterprises or settlement of immigrants due to the government's decision to initiate most of the development work and be a master of the social consequences of it. The flow of workers from the traditional economy to become wage earners in the exchange economy is relatively insignificant and sometimes highly periodic. Since the northern money economy is a monoculture, open economy and export incomes are very unstable. This factor coupled with the facts that import leakages are very high and the influx of foreign capital is still relatively small, all resulted in only a modest growth of the money economy of the Sudan.

## II. The Gezira Scheme: An Experiment in Planned Regional Development :

It has been said, that the Gezira Scheme in the Sudan is probably the largest peasant estate under one management in the free world. Today it is the dynamo of the Sudan economy, the main contributor to revenue and the main stimulus to trade. At its peak, the Gezira in a single year, produced a cotton crop of £45 million, a sum more than double the value of its total capital investment.<sup>17</sup> The Gezira is more interesting, however, as an experiment in tackling the human problems of the transition from a subsistence to an exchange economy. It is often preached that the collective approach is the best approach in such cases, because it imposes a discipline on an otherwise hard to control peasantry and it also provides a series of coherent rationally organized centres upon which the various agricultural services provided by the state may be concentrated.<sup>18</sup> These arguments cannot be ruled out, but even

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<sup>17</sup> A. Gaitskell, "Planned Regional Development in Underdeveloped Countries; Reflections from Experience in the Gezira Scheme in the Sudan." In H.R.H. Duke of Edinburgh's Study Conference, Background Papers, vol. II, Oxford Univ. Press, London, 1957, p.77.

<sup>18</sup> A.H. Hanson, Public Enterprise and Economic Development, Routledge & Kegan Paul, Ltd., London, 1959, p. 290.

the most advanced countries have been reluctant to experiment with collectivism and that is for two reasons: first, that its efficiency in raising agricultural productivity is, to say the least, open to dispute; secondly, that there is considerable doubt whether it can be introduced without coercion on a scale that ~~is~~ only a communist state would be willing, or able to employ. There is, nevertheless, a half-way house between absolute state ownership and complete free enterprise and between individualism and collectivism. The Gezira scheme is such a compromise, offering the same kind of advantage that are promised by the collective approach, yet at the same time, avoiding the defects that have made the institutions so unpopular.

To visualize the changes which have taken place in the Gezira irrigated area, it is necessary to picture the original state of affairs there before the scheme was introduced. The Gezira then consisted of a gently sloping flat clay plain on which cultivation~~s~~ grew a rain dura crop. The rainfall to the north was uncertain, but it increased gradually to the south into a zone of 16-20 inches annually. To make the fullest use of the rainfall, small earthen banks were constructed. These divided up the land into a complicated jig-saw pattern. Villages were dotted here and there, usually on high land useless for cultivation and their inhabitants had to obtain their water by raising it laboriously, from deep wells. During the rainy season cultivators often grew their crops far from these permanent villages and so, many temporary dwellings were constructed and occupied for a few months only.<sup>19</sup> The production of dura in the region was always uncertain because the rains might fail or tail off after a good start or pests

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<sup>19</sup> For a detailed description see E. MacKinnon, "The Blue Nile Province", in J.D. Tothill ed. Agriculture in the Sudan, op. cit., pp.762-809.

and parasitic plants might ruin a good crop. The lack of rotation steadily exhausted even the better areas.<sup>20</sup>

As early as 1914, Sir William Garstin published a report on the basin of the Upper Nile pointing out that there was enough good land and an adequate population for a big agricultural scheme in the middle part of the Gezira. Sir Garstin's original plan was to erect a dam in the Blue Nile to raise the water level to irrigate the fertile soil of the Gezira to grow wheat there. The total planned irrigated surface was about 100,000 feddans. Meanwhile experiments with Egyptian long staple cotton had been carried out on a concession on Zeidab by an American, Mr. Leigh Hunt, who after a visit to London established the Sudan Experimental Plantation Syndicate in 1904. A few successful years later the word "experimental" was dropped, and in 1911 when the Sudan Government was about to open a pump scheme on the Blue Nile, it invited the Syndicate to manage the scheme.<sup>21</sup> This was the beginning of a long and fruitful collaboration that lasted until 1950.

The Garstin plan was slowly carried out but it came to a complete halt during the First World War. Upon consideration, it was found that the plan might be improved by extending the proposed dam to irrigate at least 300,000 feddans and further by changing to cotton as the cash crop instead of wheat.<sup>22</sup> When the First World War was over, the project was more

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<sup>20</sup> See F. W. Andrews, "Weeds in the Sudan", and R. C. Maxwell-Darling, "Locusts in the Sudan", both in J. D. Tothill ed. Agriculture in the Sudan, op. cit., pp. 401-404 and 404-415 respectively.

<sup>21</sup> William A. Hance, "The Gezira: An Experiment in Development", Geographical Review, vol. 44, April, 1954, p. 256.

<sup>22</sup> G. H. Bacon gives a short history of cotton in the Sudan economy in J. D. Tothill, Agriculture in the Sudan, op. cit., pp. 324-338.

definite than before and had also drawn the attention of the British Cotton Growers Association who led the British Government to increase the original loan of £3 million to the Sudan Government to £6 million which was later enlarged to £13 million because of increasing material and labour costs.<sup>23</sup>

The principal work in the Gezira Scheme was the construction of a big dam in the Blue Nile near Sennar. The basin so formed has a capacity of 781 million cubic metres. The dam has a total length of 3,025 metres. This work, the main canal and the branch canals having a total length of 323 km., were all completed by 1925, their irrigating capacity was 240,000 feddans and the capital invested totalled £11 million. Further extension brought the irrigated surfaces to nearly 900,000 feddans and the investment costs rose to £13 million.<sup>24</sup> All this however was not possible without a settlement with Egypt regarding the use of the Nile waters. By the treaty of May 7th 1929, it was agreed that the Sudan should be allowed to use 922 million cubic metres yearly. This settlement limited the volume of water to be used while the surface to be irrigated was restricted to 300,000 feddans.<sup>25</sup> It was fortunate that the Gezira soil has low permeability to water, which prevents practically all percolation loss of water. Therefore, it was found out, that less water per feddan was needed than was originally estimated.

Yet the Gezira project needed extra capital to clear and level the land, to dig the minor canals, to build houses, offices and stores, to provide supervisory staff and to teach, what amounted to an agrarian revolution to the peasants. More capital was also needed to pay for ginning

<sup>23</sup> M. Abbas, The Sudan Question, Faber & Faber, London, 1952, p. 95.

<sup>24</sup> W.N. Allen, "Irrigation in the Sudan", in J.D. Tothill ed. Agriculture in The Sudan, op. cit., pp.602-608.

<sup>25</sup> See M. Abbas, The Sudan Question, op. cit., Ch. VII; R.G. McGregor, "The Nile Waters in J.A. de C. Hamilton (ed) The Anglo-Egyptian Sudan from Within, London, 1935, p. 289. About the political issues involved, see Sir Harold MacMichael, The Sudan, London, 1954, ch. XVII.

factories and a light railway, to provide credit for the peasants, to finance the processing, transport and marketing of the cotton crop. To find this extra capital and manage the scheme in a commercially efficient way, the government sought a partner from private enterprise. By historic chance, there was one at hand. In their land use research, the government had been substantially helped by the Sudan Plantation Syndicate, owners of an estate, 200 miles north of Khartoum, where they experimented with partnership with the local cultivators.<sup>26</sup> The Syndicate which was under the same management as Kassala Cotton Company, found that it got better economic results when working in partnership with local farmers, supplying the skill and capital while they supplied the field work. The Syndicate agreed to take over the management of the Gezira scheme and in return for the money involved, they were given a concession in the Gezira terminable in 1950.

In contrast to current antagonisms between the state and private enterprise, the two found a reason to be allied in the Gezira scheme. It was realized that there were at least two functions for which private enterprise was desirable. Firstly, efficient commercial management by a company with a financial stake in satisfactory production and using specialized personnel permanently in touch with the peasants, was held to be a better form of organization than a government department. Secondly, the company was filling a gap in the capital needs, thus taking the risk of adding to the badly needed capital. This feature is an interesting example of a joint approach in planned development which today's circumstances in many underdeveloped countries seem to demand.

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<sup>26</sup> Curiously enough the original directors of the Syndicate were an American philanthropist, a Scottish banker, and certain London financiers who had made their money in diamond trade. A. Gaitskell, "Planned Regional Development", op. cit., p. 79.



The scheme was run between 1925 and 1950 on a triple partnership basis between the government, the concession companies and the local tenants. The government provided the irrigation system and paid the rent of land, the companies contributed the management and undertook the supervision, ginning and marketing of cotton. The local inhabitants as tenants cultivators were not working labourers in an enterprise with fixed wages, but shared fully in the profits. This partnership is one of the unique characteristics of the scheme.<sup>27</sup> The proportion of shares was about 40% to the tenants, 40% to the Government, and approximately 20% to the Sudan Plantation Syndicate. When the Kassala Cotton Company later joined the enterprise in 1928, both companies shared the same 20% of the proceeds.<sup>28</sup> The tenants in addition to their share in cotton profits, were allowed an area of ten feddans each for growing their millet, vegetables and fodder. They took all these crops and paid no taxes or rent for land, furthermore, they received free water to irrigate these subsistence crops.

Before the Gezira project began, the region was already one of the most important parts of the Sudan, producing yearly about 130,000 tons of dura. It was not therefore a completely new country in which the scheme was carried out, although formerly agriculture was mainly carried on according to the caprice of unreliable rains with very few certain crops. There were, of course, legitimate landowners and their claims were respected. Long before

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<sup>27</sup> This feature is especially emphasized by J.D.N. Versluys, "The Gezira in the Sudan and the Russian Kilkhoz: a Comparison of Two Experiments", Economic Development and Cultural Change, vol. 2, no. 11, pp.32-59.

<sup>28</sup> These percentages have not been exactly the same. Kassala Cotton Company received about 30% by reason of special circumstances. This company controlled about 20% of the Sudan Plantation Syndicate's 80% of the area. The gross division of the proceeds of the cotton crop was therefore 38% to the government, 22% to the two companies and 40% to the tenants. J.D. Tothill, Agriculture in The Sudan, op. cit., p. 204.

the start of the scheme these rights had been registered and legislations were passed to the effect that everybody who possessed land within the scheme was obliged to rent it on a forty years' lease to the government at a price of 10 P.T. per feddan, the highest price for a lease under normal circumstances before the irrigation.<sup>29</sup> The rights of the owners were further restricted since they were not allowed to sell their property without government approval. The government's approval was given usually if the land was sold to :-

- (a) a tenant or sheikh or a close relative of the vendor who owns less than 720 feddans.
- (b) bona fide residents in the area and potential cultivators who may thereby increase their holdings up to forty feddans.

The same rules applied to mortgages and gifts. Although the original landowners were not deprived of their whole rights by compulsory purchase, the unique method of rationalising land use employed in the Gezira limited most of their original rights. As it was put in a booklet issued by the Sudan Government, "The use, but not the ownership of the land has been nationalized, i.e. no individual can keep his land out of the scheme."<sup>30</sup> The government has bought a good deal of land in recent years. In 1946, it owned about 25% of the irrigated area but the concession companies were not allowed to own land themselves.

The allocation of tenancies (consisting 4 : 10 feddan plots) is regulated by the Gezira Land Ordinance of 1927 which amended earlier legislations.

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<sup>29</sup> The defenders of the scheme would say that 10 P.T. per feddan of unirrigated land was a very good rent and it is clear that the additional value of the land due to irrigation was made possible after irrigation. See E. MacKinnon's "The Blue Nile", op. cit., pp.770-773.

<sup>30</sup> Sudan Government, The Sudan : A Record of Progress, 1898-1947, Khartoum, 1947, p. 32.

Those who originally owned 40 feddans or more, usually called right holders, come first as tenants; then their nominees; people nominated by owners who possess twice 40 feddans or more; finally come preferential tenants, i.e. people who possess more than twenty but less than forty feddans. The allocation of tenancies to right holders and nominees is obligatory unless they have a bad cultivation record. Preferential tenants are allocated tenancies in preference to landless men. After tenancies have been allotted to these three classes of cultivators, the claims of others are considered suitably after consultation with the village council concerned.<sup>31</sup> The allotment of individual tenancies was jointly decided by the representatives of the concession companies, the government and the tenants but the companies had the last word.<sup>32</sup> Tenancies are let on an annual basis, but tenants have a reasonable security of tenure provided they cultivate satisfactorily. Inefficient tenants can be evicted by the companies and tenants can voluntarily surrender their holdings although cases of both are very few.

The size of a tenancy in the Gezira consists of 40 feddans, 10 of which are under cotton cultivation. General supervision is provided by the companies' inspectors but the daily control is exercised by the agricultural Sheikhs or Samads who represent their villages in any negotiations with the inspectors and they pass on the latter's instructions and advice. Some control is exercised over the actions of the Samads by the Village Councils - bodies elected by the inhabitants of the village (tenants and others) which were just set up in 1941 and rapidly increased, now to be found in more than 90% of all the Gezira villages. As only ten feddans of each tenancy are used for cotton,

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<sup>31</sup> J.D. Tothill, Agriculture in the Sudan, op. cit., p. 771.

<sup>32</sup> Since 1950 the Sudan Gezira Board assumed these functions.

much land could be used for other purposes. But experience has proved it advantageous to keep at least half of the land fallow, and a rigid control is set up to maintain crop rotation. Since 1933-34 an eight year rotation has been in force: cotton - resting - resting - cotton - resting - dura - lubia or resting - resting. Within eight years there are two cotton crops from the same tenancy, one dura and perhaps one lubia. The forty feddans plot is divided into four "hasashas" of 10 feddans of cotton and shares one hawasha of dura with his neighbour, thus cultivating 15 feddans, or if dura is also grown, he will share 10 more feddans with an adjoining tenancy as well.<sup>33</sup> Although the present rotation is somewhat wasteful with regard to the use of land, its effects have been good on the yields obtained, both on cotton and the other crops sown. It is therefore, likely to continue in force, as it suits the conditions of today admirably. If conditions altered, especially on account of population pressure, it would not be too hard to change.

The years 1929-31 were less favourable to the scheme. The world crises caused a serious fall in cotton prices and the crop especially that of 1930-31 was exceptionally low: 1.4 Kantars per feddan compared to the average yield of 3.75 Kantars per feddan in 1925-29. So the net credit brought to the joint account of the three partners was in that season only £349,000 or about 1/16 of the amount of the 1928-29 season. The low yields of 1930-31 were not only caused by excessive rains but also by pests and plant diseases and this was the reason why much attention and energy have since been devoted

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<sup>33</sup> Several blocks or areas in the Gezira show a divergence from the general rotation noted above. But the Gezira scheme proper, follows this rotation.

to fight these perpetual threats. Much has been done to develop research and today many insects and plant diseases have been brought under control.<sup>34</sup> It was 1940 before the Gezira was really considered an economic success. Since then the scheme has greatly expanded and has proved beyond doubt that it was a success. See Table (7). Visitors of the scheme expressed their admiration; Dr. Afzal exclaims, the results have to be seen to be believed.<sup>35</sup> Edward Atiyah, writing in the *London Spectator*, mentions that stone houses started to be built in the Gezira where one may hear the sound of a radio and not seldom find a refrigerator.<sup>36</sup> Thus the living standards of the Gezira tenants in a few years rose far above those in other parts of the Sudan. So much so that Mrs. Culwick estimated in 1951, that the daily meat consumption of a Gezira tenant equalled the weekly ration in England.<sup>37</sup>

With the first signs of prosperity in the Gezira, the scheme was overtaken by rather a new set of problems, collectively referred to as "social development". This had a number of aspects. One arose from the fluctuating economic history of the scheme and had an agrarian flavour. Although the irrigated food crop provided a "sheet anchor of subsistence" whatever happened to the price of cotton, it became clear that great security, a subsidiary income, and better conditions of diet ought to be obtainable if the peasant became a real mixed farmer instead of just a cash crop producer in a partnership. This meant training in animal husbandry, experimental machinery, fruit and vegetable growing, involving time, expense and staff to organize these activities. The companies as managers were most suited

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<sup>34</sup> F. Crowther, "A Review of Experimental Work", In Tothill ed. Agriculture in the Sudan, op. cit., pp.501-525.

<sup>35</sup> Dr. M. Afzal, "A Note on the Gezira Scheme", Indian Cotton Growing Review, April, 1949, New Delhi.

<sup>36</sup> Edward Atiyah, "Progress in the Sudan", The Spectator, vol. 184, London, March 31st, 1950.

<sup>37</sup> G.M. Culwick, Diet in the Gezira Irrigated Area, Survey Department, Khartoum, 1951.

TABLE (7)  
GEZIRA SCHEME  
IRRIGATED AREA, COTTON PRODUCTION, YIELDS &  
PROCEEDS

Crop Year	Total Canalised Area 000 Feddans	Crop Area '000 Feddans		Cotton Production		Proceeds Is Million
		Cotton	Other Crops	Total '000 Kantars	Yield per Fed.	
1947/48	872	225	199	720	3.2	11.9
1949/50	972	226	208	994	4.4	16.0
1950/51	882	227	196	1,476	6.5	43.8
1952/53	948	232	196	1,090	4.7	15.9
1953/54	948	245	161	1,152	4.7	12.8
1954/55	949	235	177	1,082	4.6	14.6
1955/56	948	245	288	1,127	4.6	17.0
1956/57	..	255	..	1,709	6.7	..
1957/58	..	255	..	1,734	6.8	..

SOURCE: Gezira Board : Annual Reports.

to undertake such a project, but on the other hand, the shareholders' money ~~was~~ <sup>was</sup> not invested to meet expenses from which they derived no dividend. The second aspect of social development concerned the material and health needs in the villages of the scheme. Housing, water supply, anti-malaria campaigns and a new awareness of health and social work, were urgently needed. The government which was supposed to remedy these problems did its best within its limited means, but the Gezira clearly needed special attention.

More important, however, was the enormous and rapid social change in the Gezira. When the scheme started villages were self-contained and isolated. Demands on life were simple. Authority was local and patriarchal. Administration was by orders, and orders were in general respected. Within fifteen years, the scene was transformed and no one has described the change better than Mr. Gaitskell when he wrote, "We had brought separate economic income and separate economic freedom to hundreds of previously poor and dependent people and the flow of money had given new openings in trade and created new people of influence and importance. Demands on life were more insistent and criticism was beginning to replace acceptance. We had lost the cohesion of an old society and put nothing very much in its place, except a scramble for wealth, without much contact with costs of producing that wealth beyond the peasant's own field, and without much understanding of its dependence on world prices".<sup>38</sup>

Together with the problem of social change, there was going on in the country a process of political change. Local government was moving from a tribal to a democratic basis. Sudanese officials were being promoted to

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<sup>38</sup> A. Gaitskell, "Planned Regional Development in Underdeveloped Countries".... op. cit., p. 83; also see his article "The Gezira Scheme", in the Journal of the Royal Society of Arts, vol. VIIV, No. 4966, London, December, 1955.

posts previously held by the British. People were pressing for greater political independence and the objective of the Sudanese running their own country, was in sight. These factors together with the disappointing 1946 crops and the steady rise in labour costs, led to a big strike of the Gezira tenants in June 1946.<sup>39</sup> With the paternal attitude of early days, the management had tucked away over the years, some of the peasants' moneys into a reserve fund, without saying much about it. Rumours got around after the war, when costs of living were rising, that the fund had a million pounds in it, which was true. The strike was to get it paid out, because the tenants said they have insufficient insight in its administration. The Governor General wrote<sup>o</sup> in his yearly report of 1947 that the complaint was, "not completely unreasonable". In accordance with the advice of a special commission £400,000 or about 20% of the Reserve Fund was paid out. The strike helped to show that although there was close contact at the bottom, between the company's local field officers and the local peasants, there was no contact at the top between the management and the peasants as a whole over general policy because the peasants had no general representative body. Such a body was hastily set up, and the tenants elected most of the strike leaders and their first meeting with the management was a stormy one. Later on, however, after explaining and discussing all aspects of costs, management, marketing and husbandry rules, confidence and co-operation persisted. The story illustrates what must be one of the major difficulties in the morale of big organizations, the difficulty of getting common contact and understanding of costs, rules and policy beyond representatives to the rank and file

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<sup>39</sup> For a brief discussion of the causes and consequences of the strike, see S. Fawzi, Labour Movement in the Sudan, 1946-1955, Oxford Univ. Press, London, 1957, p. 20.



themselves so that they may feel they are getting a fair share out of the product.

On July 1st 1950 a national board, called the Sudan Gezira Board, was appointed by the government to replace the concession companies, as manager of the scheme. The directors of the board are appointed by the head of the State but they are responsible to the Council of Ministers through the Minister of Finance. The duties of the Board are to manage the scheme, to promote social development using the special social development fund, and to promote research to further the productivity and stability of the scheme. The important differences between the new and old organisation are, that social development is now included in the Board's duties; and research formerly carried out by the Government is now a duty of the Board but is paid for by the three partners. The division of the gross profits remains practically what it was: to the government and tenants 40% each, and 20% to the Board.<sup>40</sup>

What factors were responsible for the success of the Gezira Scheme, and to what extent is it capable of being reproduced elsewhere? Some of them, if not peculiar to the Gezira, are unlikely to be found similarly combined in other areas, e.g. soil, climatic conditions, topography, etc. On the other hand, there were factors that did not depend on natural circumstances. One was the high quality of the initial planning, and before heavy capital expenditure was embarked upon, plans were put to the test of a series of pilot projects. Another factor was the partnership programme - a fine example of the application of imagination to an economic and administrative problem. The capital structure was fitting as one method of throwing a

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<sup>40</sup> Sudan Government, Select Committee of the Legislative Assembly, Report on The Future Administration of the Gezira Scheme, Khartoum, 1950 stipulated most of these changes.

bridge across the gap of suspicion which lies between nationalism and foreign capital and this for two reasons. On the one hand, because they were partners; state and people and foreign private capital all sank or swam together in the venture. On the other hand because there was a time limit to foreign investment, the company had only a twenty five year concession and the government loans were repayable in forty years.<sup>41</sup> Now the company has departed, most of the loans were repaid, the greatest asset in the Sudan belongs to the country itself. Another important factor was that the switch to an exchange economy did not mean burning one's boats as far as subsistence was concerned. On the contrary, in the Gezira not only was a new cash crop available, but irrigation water now made the food crops safe. This was specially important when bad yields or low prices hit the scheme. The participation of the local peasants not merely as employees but as participating principals, matches up the current desire in underdeveloped countries to be controllers of their own economic destiny. Furthermore, there was a deliberate push for participation and training of local people to run their own show.

There are, nowever, entries to be made on the debit side. The scheme has been criticized for being too paternalistic in conception, an insufficient effort was made to develop initiative and self-help among the peasant cultivators, who although now expert cotton growers, are still far from being real peasant farmers.<sup>42</sup> More significant however, is that the Gezira is

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<sup>41</sup> "Moreover this was not welfare or aid with strings attached; it was a business proposition. Loan holders got their interest and their capital back. Shareholders averaged 15% of their equity and got their capital back". A. Gaitskell, "Planned Regional Development", op. cit., p. 87.

<sup>42</sup> Most of these criticisms are developed in J.D.N. Versluis's, "The Gezira Scheme in the Sudan and the Russian Kolkhoz: a comparison of two experiments", op. cit., pp.58-59.

essentially a one-crop enterprise and that the chosen crop is one for which demand fluctuates considerably from year to year, with the result that earnings are anything but stable. If these fluctuations permitted an average to be struck they would not be serious, but the danger is that, with the increasing popularity of artificial fibres, the general demand trend will be downwards. So far owing to the increasing world demand for finished products, the great increase in the production of artificial fibres has not reduced total world cotton consumption. But with the steadily increasing capacity for production in artificial fibre industries, this competition must continue to be a serious problem for cotton growing countries in the future. How the Gezira will react to such a menace, if it materialises at all - cannot be foreseen. The present experiments in the scheme for alternative crops should be expanded, one feels, into a definite plan for greater diversity of production.<sup>43</sup>

### III. Characteristics and Significance of the Money Economy:

In our brief discussion of the rise of the northern money economy we have noticed the flows of money income go mainly to the growers of cash crops, the collectors of gum arabic, the owners of livestock, the proprietors of transport facilities and industrial establishments and the suppliers of commercial and professional services. We can group these activities into three major strategic sectors, which determine the scope and structure of the money economy. These are the export sector, the public sector and the autonomous exchange activities arising independently of the other two sectors.<sup>44</sup>

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<sup>43</sup> The First Annual Report of the Sudan Gezira Board, 1950-51, recognizes the problem, see pp.20-22.

<sup>44</sup> The classification of sectors follows the same lines as The United Nations, Scope and Structure of Money Economies in Tropical Africa, New York, 1955; the study, however, did not include the Sudan, as no adequate statistics were available.

The first two sectors are strategic in the sense that they are largely responsible for both the short run fluctuations in the level of activities and the growth of the money economy in the long run. The three sectors will be dealt with briefly below.

Exports are the main source of the Sudan's money incomes. These incomes are yielded mainly by cotton and cotton products and to a lesser extent by a few other agricultural and animal products. Of the export earnings of £40 million to £65 million a year in 1951-56, 60% to 80% is accounted for by cotton and cotton products mostly of the sakal type. Next in importance are gum arabic, 6% to 10% of total exports, oil seeds, 5% to 11% and animals and animal products 3% to 6%. (See Table (5)). It is hardly necessary to draw attention to the importance of cotton and its by-products (seed, oil and cake) among the Sudan's exports. But there are signs that "the eggs in one basket"<sup>45</sup> argument is not quite as strong as it was before. Beside the unprecedented decline of cotton exports in favour of some other products, particularly oil seeds, it is interesting to note the change in the composition of cotton exports. The tonnage of cotton products sent abroad in 1952 was nearly the same as in 1938. The comparison is not exact, however, since there are now in the country mechanical oil mills which enable cotton seed to be crushed in the country. In 1952 nearly 5,000 tons of oil and over 11,000 tons of cake were exported. Gum arabic has for many years occupied second place as a money <sup>CROP</sup> but it was recently replaced by oil seeds and it will probably continue to do so. Although the Sudan presents nearly 80% of the world supply of gum arabic the market for it is an elastic one and is under a constant threat of substitutes.

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<sup>45</sup> E.F. Aglen, "The Economic Limitations to Future Development", in Food and Society in the Sudan, The Proceedings of the Philosophical Society of Sudan, Khartoum, 1955, p. 273.

Most of the Sudan trade is directed to the sterling area and Egypt. Hence the export earnings of the country are in the form of sterling and Egyptian pounds. In 1951-57, 25% to 70% of total annual exports went to the United Kingdom, 4% to 15% to Egypt and 6% to 24% in aggregate to France, Italy and the Federal Republic of Germany. Exports to the dollar area amounted to only 2% to 4% of the total. See Table (8). The major items exported to the sterling area are cotton, gum arabic and animal products: those to Egypt are animals and animal products, oil seeds, cotton seeds and melon seeds, dura and other cereals, and those to the Dollar area, are gum arabic, hides and skins. In recent years there was a clear change of direction of exports marked by the increased shipments to Continental Europe at the expense of those to the United Kingdom. The relative share of the United Kingdom fell from 68% in 1951 to 33% in 1956 and further to 30% in 1957, whereas the combined share for France, Italy and the Federal Republic of Germany rose from 6% to 30% and 34% respectively for the same period. This reflects in part the increased industrial activities of Continental European countries while there was a prolonged textile recession with a consequent reduction in cotton consumption in the United Kingdom. In 1957, the demand of the United Kingdom for Sudanese cotton was further weakened by the increased supplies for the U.S.A. at competitive prices.<sup>46</sup>

The extent to which a given volume of export incomes brings about a further enlargement of the money economy depends, to a large extent, on the income recipients and in the way it is distributed. In the Sudan, the government receives directly a considerable proportion - 35% to 55% in

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<sup>46</sup> Sudan Government, Ministry of Finance, Economic Survey, 1957, Khartoum, 1958, p.2.

TABLE (8)  
THE SUDAN  
DIRECTION OF TRADE, 1917-57

PERCENTAGES OF  
TOTAL

SOURCE: Sudan Foreign Trade Statistics.

I T E M	1917	1927	1937	1947	1957
<u>EXPORTS:</u>					
United Kingdom	20	76	43	40	22
Egypt	74	9	8	18	16
India	1	-	21	22	11
France	-	2	5	-	7
Italy	1	2	4	2	9
Fed. Rep. of Germany	-	3	2	-	5
Japan	-	-	4	-	2
United States	1	5	4	6	3
Other	3	3	9	12	25
TOTAL EXPORTS	100	100	100	100	100
<u>IMPORTS:</u>					
United Kingdom	13	37	23	24	27
Egypt	59	28	23	22	7
India	14	9	7	12	12
France	-	2	1	-	2
Italy	1	1	1	2	4
Fed. Rep. of Germany	-	1	3	-	7
Japan	-	5	19	6	6
United States	-	2	2	4	3
Other	13	15	21	30	32
TOTAL IMPORTS	100	100	100	100	100

TABLE (9)  
BALANCE OF TRADE BY COUNTRY  
1917-1957  
 (Ls000)

C O U N T R Y	1917	1927	1937	1947	1957
United Kingdom	+ 312	+1508	+2039	+2007	-6054
India	-409	-552	+1244	+1362	-2233
Egypt	+745	-1306	-727	-846	+ 3113
France	+ 6	-21	+319	-54	+2513
Italy	+ 9	-4	+262	-67	+1896
Fed. Rep.of Germany	-	+ 26	+ 4	-	-2156
Japan	-	-227	-887	-925	-2725
United States	+ 33	+114	+213	+221	-865
Other	-307	-723	-620	-3039	-8345
Balance of Trade	+389	-1199	+1847	-1341	-14854

SOURCE: Sudan Foreign Trade Statistics.

1952-1956 - of export, the balance going to the private sector.<sup>47</sup> This percentage of government earnings although still large, represents a substantial decline from the 60% in 1950 and 1951, reflecting the sharp increase in private cotton production and exports stimulated by the high cotton prices during the Korean boom. From 1950 to 1956 the total of private export earnings tripled, while that of the public sector increased by only some 50%. It was in 1953 that the export incomes occurring to the government for the first time since 1925, fell short of that accruing to the private sector. Export incomes flowing to the public sector are mainly returns on government investment in cotton and transport contributing to 20% of the total budget revenue in 1956-1957. In the same year custom duties and royalties together with consumption taxes on selected imports, contributed some 37% of the budget revenue. The government sugar import monopoly which constitutes another form of import duty, accounts for 13% of the revenue. The direct income tax which makes only about 5% of tax revenue, includes business profits taxes which are collected mostly from export and import firms and from cotton schemes. It includes also taxes on dates and animals which are partly export goods. Hence more than 2/3 of the total government budgeted receipts in 1956-1957 came from trade sources. See Table (10).

Sudanese imports are largely a function of exports. The largest segment of export earnings is directed with some time lag to the purchase of imports directly, or through the domestic sector, although the multiplier effect of export earnings on the domestic economy is rather small.<sup>48</sup>

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<sup>47</sup> United Nations, Structure and Growth of Selected African Economies, New York, 1958, p. 159.

<sup>48</sup> For a general theoretical discussion of leakages and the multiplier effect in underdeveloped economies, see V.K.R.V. Rao, "Income, Investment and the Multiplier in Underdeveloped Countries", Indian Economic Review, Vol. 1, 1952-53, and B. Higgins, Economic Development, Norton & Co., New York, 1959, pp. 545-546.



TABLE (10)

THE SUDAN GOVERNMENT BUDGETS - 1956 - 1957 and 1957 - 1958

I T E M	1956/57 Estimated Revenue £s(000)	Per Cent of Total	Estimated Revenue (1957/58) £s(000)	Per Cent of Total
REVENUE				
Direct Taxation (a)	2,030	5.4	1,385	3.0
Indirect Taxation	14,183	37.8	19,930	43.7
Sugar Monopoly	4,900	13.1	2,860	6.3
Rates(b)	9		1	
Licenses	214	0.6	209	0.5
Fines	74	0.2	89	0.2
Fees and Charges for Goods and Services	4,282	11.4	4,829	10.6
Rents from Government Land & Buildings	226	0.6	243	0.5
Royalties	34	0.1	37	0.1
Sales of Government	20	0.1	22	
Participation in Agricultural Undertakings	6,483	17.3	10,095	22.1
Interest and Dividends	1,876	5.0	2,277	5.0
Pension Contributions	225	0.6	225	0.5
Unclassified	105	0.3	187	0.5
Reimbursement and Interdepartmental services	2,840	7.6	3,196	7.0
Total Revenues	37,501	100.0	45,585	100.0
EXPENDITURE				
Personnel	12,594	33.6	16,122	35.4
Services	16,835	44.9	19,514	42.8
Extraordinary	4,020	10.7	4,744	10.4
Total Expenditure	33,450	89.2	40,380	88.6
SURPLUS	4,052	10.8	5,205	11.4
Total	37,501	100.0	45,585	100.0

Source: Data Supplied by the Sudan Government.

(a) Figures for the estimated revenue from direct taxation do not include direct taxes assigned to the local government Councils, but the contributions from these Councils are taken into account.

(b) Conservancy rates, education rates, general rates and town rates.

Domestic investment which constitute the second largest generator of money income has been undertaken in recent years, for the larger part, by the government and financed by budgetary surpluses, of which the major portion originates from exports. Private investments though increasing in volume remain of secondary importance being financed largely by savings from export incomes and foreign capital. Thus foreign capital apart, most domestic investments and derivatives of exports and export earnings constitute the main source of primary incomes and savings. It should be noted that export incomes accruing to foreign capital if not reinvested, partly leak out of the country as transfers but this leakage is not very important in the case of the Sudan.

It is clear from the above discussion that the export sector plays such a dominant part in the money economy, that any major fluctuations in exports would, if not compensated, jeopardise the stability of the whole economy. Although such an open economy implies a relatively high elasticity of supply, the domestic supply, even of imported goods in the Sudan, may be relatively inelastic in the short run, because of time lags in delivery and because of inadequacy of port and internal transport facilities.<sup>49</sup> As a result of these inelasticities a sudden large rise in export incomes tends to be partly dissipated in inflation.<sup>50</sup> On the other hand, a sudden large fall in income can have adverse effects on the money economy greater than might appear since many agriculturists, partly dependent on subsistence

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<sup>49</sup> E.F. Aglen, "The Economic Limitations to Future Development" in Food and Society in the Sudan, op. cit. pp.284-287.

<sup>50</sup> See S.H. Axelrod, "Inflation and the Development of Underdeveloped Areas", Review of Economics & Statistics, 1954, pp.334-338, and S.P. Schatz, "Inflation in Underdeveloped Countries", American Economic Review, Vol. XLVII, no. 5, Sept. 1957, for the theoretical discussion. For a good case study, see Z. Sieminski, "The Impact of the Coffee Boom in Ethiopia", Middle East Journal, Winter, 1955.

production, are able to postpone purchases of goods.<sup>51</sup> In these conditions, it is clear that effective checks of severe fluctuations in export incomes can play an important role in enlarging the money economy.

The public sector of the money economy comprises the activities of central and local governments, as well as those of public or semi-public bodies. Activities of this sector affect the money economy in two ways: they bring about changes in its structure as well as its scope. The impact of these activities changes the patterns of income distribution, savings, expenditure and consumption. Thus taxations affect the levels of private incomes and consequently the way individual incomes are used, particularly the relative importance of savings out of incomes and the composition of expenditure. Furthermore taxations result in a transfer of incomes from the private sector to the public sector. Apart from these administrative and financial aspects, the public sector in the Sudan is more strategic because it is the predominant owner of modern capital establishments and the chief promoter and participant in large scale production schemes. It has been estimated that more than half the social capital stock employed in commercialized production, belongs to the government. Between 75% to 90% of total cotton output and exports have been accounted for by government schemes in recent years.<sup>52</sup> In public utilities, transport and communications, the chief investor is the government. The government also plays an important part in investment and management of cotton ginning plants building and engineering industries. It exercises a monopoly in imports of sugar and a

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<sup>51</sup> See Z.M. Kubinski, "The Great Depression in an Export Economy: The Case of the Sudan", Public Finance, vol. XIII, No. 1 (Netherlands) 1958, pp.69-90.

<sup>52</sup> Sudan Government, Ministry of Finance, Economic Survey 1956, Khartoum, 1957, p. 4.

virtual monopoly in cotton sales overseas. Since the war several five-year development plans have ensued a further expansion of the public sector thus adding to its strategic position.

The public sector in the Sudan engages in three main economic activities: general administration, production and transport schemes and development programmes. The combined gross income of the public sector in the years 1952-1953 to 1955-1956 averaged ~~£~~60 million per year. (See Table (10)). By far the larger part of this income is derived from cotton which, exclusive of the export duty, accounts for 50 to 60 per cent of the total. The dominance of cotton will be even more pronounced if export duties on cotton are added. This is mainly due to the unbalanced nature of the economy and the "backward, traditional, non-productive and costly tax system."<sup>53</sup> On the expenditure side the most important item is labour, getting more than half the budget allocations. Indeed the public sector is the chief source of employment and wage income. The government itself employs some 45,500 persons and the Sudan Railways some 25,000 persons, the two figures constituting about a half of wage employment.<sup>54</sup> The central budget surpluses combined with the retained profits of Sudan Railways and of the Gezira and other government schemes a sum of about ~~£~~57 to ~~£~~59 million, constitute the aggregate savings of the public sector, which is the chief source of saving of the money economy. Most of the government savings have been invested, with some time lag, which tends to produce sometimes a deflectionary, sometimes an inflationary effect. Most of government wage recipients, it may

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<sup>53</sup> United Nations, Structure and Growth of Selected African Economies, op. cit., p. 161; Steps are now being taken to reorganize the whole tax system on modern lines.

<sup>54</sup> Sudan Government, Ministry of Finance, Economic Survey 1957, Khartoum 1958, p. 9.

be assumed, spend most of their income and have little margin for savings.

Whether the activities of the public sector result in ~~an~~<sup>a</sup> enlargement or a contraction of the money economy depends chiefly on the manner in which they affect the pattern of domestic expenditure and the incentive to produce.<sup>55</sup> Furthermore, on a given level of real expenditure any shift from imports to domestic goods and services tends to widen the scope of the money economy and vice versa. Thus it could be assumed that in the case of the Sudan, the activities of the public sector tend to bring about an enlargement of the money economy.

The public sector, as we have seen, is dominant in the money economy of the Sudan because of the strategic fields in which the government is engaged and because of the highly organized manner in which its activities are conducted. In recent years, however, private enterprise has been expanding although large scale investments remain mostly in the hands of the government. In agricultural cash crops production, apart from Sakel cotton and mechanized farming in the Gedaref area where the public sector dominates, private enterprise is prevalent. Even in the case of Sakel cotton, private producers increased their share in total output from about 10% in 1950-51 to 28% in 1955-57. In the industrial field although government ownership is dominant in cotton ginning, sawmills and public utilities, most of the manufacturing and other industries are privately owned. Private industries though in the early stages of development, have substantially expanded in the post-war years, with aggregate employment numbering some 20,000 people in 1955, compared with 17,300 in 1951. (See Table (6).)

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<sup>55</sup> United Nations, Scope and Structure of Money Economies in Tropical Africa, op. cit., p. 41.

Another indicator of the expansion of the private sector is the increase in the volume of borrowing of private enterprises. The long-term advances totalled some £3.2 million in 1957, compared with £200,000 in 1951. Long-term loans for capital construction alone rose from £121,000 in 1951 to £923,000 in 1957. (See Table (11)). These advances were much higher than the deposits of the private sector. The government influence on commercial banking has been relatively limited since there is as yet no centralized banking system.<sup>56</sup> The few commercial banks operating in the Sudan are all foreign owned and operated. The government sector, however, maintains comparatively large deposits with these banks but it does not borrow from them. The banks may therefore channel deposits received from the government sector to the private sector in the form of advances. Other means for expanding credit by the banks are limited by their borrowing from their overseas offices or by their exchange reserves which rise and fall to a large extent with the export earnings of cotton. Whereas cotton earnings constitute the chief origin of bank deposits, cotton trade and cultivation have accounted for a considerable part of credit in recent years. In 1956, about 40% of bank advances were for cotton trade and production, 20% for gum and other crops, and 10% each for imports and industry. In total about 90% of the advances were for short terms.

As with the public sector, the main source of the primary incomes of the private sector is export earnings which have been at a rate of some £25 million to £40 million a year for 1954-1956 compared with £10 million to

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<sup>56</sup> Z. Siemieniowski, The Sudan Currency Board, Economic Section, Ministry of Finance, Pamphlet No.1, Khartoum, 1956. See also I. Greaves, "Sterling Balances and the Colonial Currency System: a Comment", Economic Journal, vol. LXIII, No. 252, pp.921-923.

TABLE (11)

ANALYSIS OF BANK ADVANCES  
in ~~Rs~~ 000's

Year	C u r r e n t      A d v a n c e											Long Term Advance		Total Advances
	Seasonal Cultivation		Financing of Exports			Financing of Imports		Industrial	Miscellaneous		Total Short Term Advances	Capital Construction	Payments Agreements	
	Cotton	Others	Cotton	Gum	Others	Wholesale	Retail		Personal	Others				
1951	69	85	...	...	...	1480	231	56	10	79	2010	122	-	2132
1956	3265	6	5885	588	4527	3151	512	585	97	171	18787	3197	976	22960
1957	4214	33	6881	1031	3660	4173	828	747	163	136	21866	4166	299	26331

Source: Ministry of Finance: Economic Survey 1957

£25 million a year for 1950-51. These figures however, fall substantially short of the import purchases by the private sector which ran at £35 million to £40 million a year in 1954-56. The import excess indicates the sizeable income demand by the private sector for both domestic and foreign capital. In recent years, government imports declined in value in relation to private imports, reflecting the higher rate of expansion in activities and requirements of the private sector. In the early 1950s the major part of imported capital goods was absorbed by the public sector and that of consumer goods by the private sector. After 1953, however, due to the expansion of the private sector, it tended to catch up with the public sector in importing capital goods.<sup>57</sup>

The foregoing generalised account has attempted to describe, for the purpose of short run analysis, the essential features and relationships in the structure of the money economy. Statistical information is not yet sufficient to quantify all the parameters. Nevertheless, with the available statistical data, we can distinguish three characteristics of the money economy of the Sudan: (1) that the dynamic process of economic development in the money economy arises from external impulses by which it is largely determined. What is more, it is a monoculture economy depending on the export of cotton. Most of the money income is concentrated in the northern part of the country. (2) The secondary effects of the export impetus

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<sup>57</sup> More important, however, is the fact that amounts transferred to the public sector are likely to be spent in greater proportion on domestic goods than if left in the private sector. This inference is derived from the assumption that the government has, so to speak, a higher propensity to purchase domestic goods than has the private sector. This also explains why the activities of the public sector are considered to have a multiplier effect. See the United Nations, Scope and Structure of Money Economies in Tropical Africa, op. cit., p. 52.



in creating further activities within the economies are limited in scope due to leakages. Export incomes are directed either to imports or to domestic production. Expenditure on imports generates secondary incomes only to the extent that it gives rise to services provided internally and to government revenue. On the other hand the whole expenditure directed towards domestic production generates secondary incomes within the home economy, though its effects tend to be quickly dissipated because (3) The supply of domestically produced goods is relatively inelastic, at least in the short run. The money economy of the Sudan has recently been the scene for changes of a long-term nature. In April 1957 a currency reform was instituted with the Sudanese Pound replacing Egyptian currency as legal tender. In addition steps have been taken to establish a national banking system including a central bank, an agricultural bank and private commercial banks. A new, bold, five-year plan is energetically pushed which will include extending the railways system westward and enlarging the irrigated area of the Gezira. In general, the country is in the process of reconstructing its economic structure. Efforts to enlarge the money economy although acquiring something of a self-sustaining nature, are still faced with problems, and their tempo tends to correlate with the short-term fluctuations. To the discussion of these problems we now turn.

#### IV. Problems of the Money Economy

In a dual underdeveloped economy the problems of economic development are considerably complex. In the first place economic development involves the enlargement of the exchange economy, that is a further shift of resources of land and labour from subsistence production to specialized production for

markets. Since the proportion of total indigenous resources presently devoted to subsistence is large, 80% of the cultivated land and more than half the population in the case of the Sudan, it would seem that further enlargement of the exchange economy is an easy task. But there are many problems facing such an expansion, and these problems are inherent in the structure of these economies. Firstly the money economy tends ~~to be~~ to be concentrated in one region in the country. Secondly the Sudan northern money economy is essentially a monoculture, primary producing, open economy and there are problems associated with these characteristics. These two sets of difficulties will be dealt with below.

Most of the money incomes and economic activities are concentrated north of 11° north parallel in the Sudan. From the first impression it would seem that it is only a normal phenomena because economic growth does not appear everywhere at the same time. The emergence of such "growing points" or "growth poles" in the course of development process and the substantial gains to be reaped from overcoming the "friction of space" through agglomeration, has been analysed in detail by the economic theory of location.<sup>58</sup> Thus inter-regional inequality is accepted as an inevitable concomitant and condition to growth, and in the geographic sense, growth is essentially unbalanced. The problem turns to be one of degree. In under-developed countries there are reasons to believe that the lagging-behind regions have today a far better chance to be untouched by the activities of the growing region than was the case in developed countries. The ability and tendency of growth to round itself out for a long time within some region

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<sup>58</sup> For a general survey of the theory of location, see Douglas C. North, "Location Theory and Regional Economic Growth", Journal of Political Economy, vol. LXIII, No. 3, pp.243-258. Walter Isard "The General Theory of Location and Space Economy," The Quarterly Journal of Economics, vol. LXIII, Nov.1949; and also "Current Development in Regional Analysis", Weltwirtschaftliches Archiv, vol. 69, No. 1, 1952, and Milton Friedman, "Locational Aspects of Economic Development", Land Economics, August, 1956, pp.213-227.

while backwardness retained its hold elsewhere, has been noted as one of the characteristics of dual economies.<sup>59</sup> It was further noticed that, especially in the northern hemisphere, the northern regions are usually the ones experiencing growth while the southern regions remain backwaters of subsistence economies. This observation which excludes undeveloped largely unsettled areas, is typical of such backward regions as Brazil's Nordeste, Colombia's Oriente, Italy's Mezzogiorno<sup>60</sup> and the Sudan's Southern Provinces.

The expansion of the northern money economy can be visualized as a process involving the clash of two forces. On the one hand, there are forces favouring the "spreading" or "trickling down" effects from the developed north to the stagnant south. On the other hand, there are other forces strengthening the "polarization" effects and concentrating growth in the developed region.<sup>61</sup> The trickling down effects are easy to account for. Once growth takes a firm hand in one part of the national territory it obviously sets in motion certain forces which act strongly or feebly on the remaining parts. In the case of the Sudan, the trickling down effects take the form of purchases of foodstuffs, animal and forest products from the remote southern region. It is also affected by the extension of transport and marketing facilities. In addition, the north is absorbing some of the disguised unemployed of the south and thereby raising the marginal productivity of labour and per capita in the south. But this flow of workers from the traditional southern economy to become wage earners in the north,

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<sup>59</sup> See Chapter one, Section I of this thesis.

<sup>60</sup> Albert O. Hirschman, The Strategy of Economic Development, Yale University Press, 1958, p. 189, hereinafter referred to as Hirschman's Strategy.

<sup>61</sup> The terms "trickling down" and "polarization" effects are used by A.O. Hirschman; they correspond exactly to Myrdal's "spread" and "backwash" effects. They are used as alternatives in this thesis. See Hirschman's Strategy, op. cit., Ch. 10, and G. Myrdal, Economic Theory and Underdeveloped Regions, G. Duckworth & Co., London, 1957, Ch. 3.

is relatively insignificant and consequently the trickling down effect is very modest.<sup>62</sup>

Working in opposition to the abovementioned "trickling down effects", are the unfavourable "polarization effects" which are due to a number of reasons. Firstly it takes a special kind of boldness to establish a new basic industry or to perceive the development of potentials in the more backward regions of a developing country. Thus investors spend a long time mopping all the opportunities around some 'growth pole' and neglect those that might have arisen or could be made to arise elsewhere. What appears to happen is that the external economies due to the growth poles, though real, are constantly over-estimated by the economic operators. Another reason is the absence of precedents in the form of successful capital creating undertakings in the less developed region, and so investment, meagre as it is, tends to follow the beaten track of few proven investment outlets, like financing cotton production in the northern and central Sudan.

The polarization effect may have a positive side manifesting itself in the fact that some of the comparatively inefficient yet income creating activities in small industries and exports may become depressed as a result of northern competition.<sup>63</sup> A more serious and frequently observed polarization effect, however, is the kind of migration that may follow upon the economic advance of the north. Instead of absorbing the disguised unemployed, northern

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<sup>62</sup> "Non-transferable workers serving in the southern provinces are paid by the government at lower rates, a practice based.... on the fact that <sup>cost</sup> of living and the level of productivity are both lower there than the north. S. Fawzi, Labour Movement in the Sudan, Oxford Univ. Press, 1957, p. 101.

<sup>63</sup> Professor Hirschman goes on to explore, what he calls, the "economic arguments for separatism" discussing the theoretical proposition whether it is better for an underdeveloped area to be a region or a nation. See his Strategy, op. cit., pp.197-199.

progress may denude the south of its key technicians, managers as well as its more enterprising young men.<sup>64</sup> This factor is of special importance in the case of the Sudan because the government is the chief source of employment and wage income.

The expansion of trade in the developed region, according to Dr. Myrdal will aggravate the disparity in the relative growth of the two regions. "The freeing and widening of the markets", he writes, "will confer such competitive advantages on the industries in already established centres of expansion, which usually work under conditions of increasing returns, that even the handicraft industries existing earlier in the other region are threatened."<sup>65</sup> He cites the expansion of the north and retrogression of the south of Italy, following the political unification of 1860, as a dramatic example of regional disparities following the liberation of trade. Another reason for the disparities, according to Dr. Myrdal, is the past policies of colonial powers for developing these countries. These policies accounted for the failure of the export sector to have a multiplier effect because most of the financing, insuring, transporting and processing of industrial raw materials occurred outside the colonial country, usually in the metropolis where they led to expansion in the secondary and tertiary sectors of the economy. The evidence from the case of the Sudan seems to support Dr. Myrdal in this contention.

If the free market forces expressing themselves through the trickling

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<sup>64</sup> The fear of draining the south of enterprising young men was also expressed, although for different reasons, by the Christian Missionaries working there. See Christian Missionary Society, Introducing the Diocese of the Sudan, London 1947, p.67,

<sup>65</sup> The point needs further explanation. The spread effects according to Myrdal could outweigh the polarization effects only if income and employment in the leading sectors grew relative to that of the laggard sector, as they did in the now advanced countries. In underdeveloped countries, the historical pattern of growth has been such that spread effects were weak. The "rural sector" did not produce the raw materials for the expanding "industrial sector", nor did the expanding "industrial sector" rely heavily on the "rural sector" for foodstuffs. Thus the growth of the "industrial sector" did not much expand the market for cash crops of the "rural sector". See Gunnar Myrdal, Economic Theory and Underdeveloped Regions, London, 1957, p. 29.

down and polarization effects result in a temporary victory of the latter, deliberate economic policy is sometimes called upon to improve the situation. The most obvious manner in which economic policy can be manipulated to affect the rates of growth of different parts of a country, is through the regional allocation of public investment. There are reasons, however, compelling governments not to adopt this line of policy. The two other alternatives they have are, concentration on growing points or dispersion of their investment allocations. The most pervasive tendency in the Sudan in making economic policy decisions, is not the obsession of dispersing of funds among large number of small projects, as concentrating in one showpiece. If all the development projects so far initiated in the Sudan are fulfilled, the present irrigated area of the Gezira, which is the mainstay of the Sudan's money economy, will be tripled.<sup>66</sup>

It is not always easy for the government to follow the obvious and most economic choice of investment allocation partly because of its continuing desire to revert to the policy of scattering investment allocations and partly because of new pressures soon will make themselves felt, namely to accelerate development in the areas that have fallen behind, and the government's compelling feeling of equity and national cohesion. The government, to the best of its ability, will thus try to counteract in part the polarization effects that result from the operation of market forces and to offset the locational advantages of the north by erecting external economies in the south through public investment. These non-economic factors will be strengthened by economic pressures working in the same direction when industry becomes congested in northern cities and its expansion is hampered by the

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<sup>66</sup> See the United Nations, Structure and Growth of Selected African Economies, New York, 1958, p. 196.

insufficient size of the market resulting from the low incomes in the south. The same pressure will be felt whenever balance of payments or other supply difficulties impel policy makers to take a close look at the southern development potentials and realize that the country is harming itself by its failure to utilize fully its southern resources. All these factors working together will make it evident that in the end the trickling down effects would gain the upper hand over the polarization effects.

It has been also observed, especially by Myrdal, that forces making for inter-regional transmission of growth are likely to be more powerful than those making for international transmission and hence the underdeveloped countries as a group, are kept in a state of poverty. The problem has many facets in the short run, the instability arising from export price fluctuations hinders the growth of these economies. In the long run certain economists have agreed that the terms of trade have a tendency to turn against the underdeveloped countries. Recently some economists have gone so far as to argue that international trade, far from encouraging growth of underdeveloped countries has actually retarded it by accentuating the dualistic nature of these economies. The three arguments in relation to the Sudan experience will be discussed below.

One of the most noticeable characteristics of money economies in underdeveloped countries is their orientation towards exports often combined with concentration on a very small range of raw materials and foodstuffs.<sup>67</sup> In the Sudan such a concentration is carried to the extreme depending mainly on cotton exports and to a lesser extent by <sup>a few</sup> other ~~few~~ commodities. (See Table(5)).

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<sup>67</sup> See R. Nurkse et al, "The Quest for a Stabilization Policy in Primary Producing Countries : A Symposium", Kyklos, vol. XI, No. 2, 1958.

Of the export earnings of ~~£~~40 million to ~~£~~65 million a year in 1951-56, 60 to 80 per cent is accounted for by cotton and cotton products, mostly of the Sakel type. Against this extreme dependence on cotton, the Sudan accounts for less than 5 per cent of the total international supply and as the demand for Sudan cotton is highly elastic with respect to price, its price is therefore determined externally.<sup>68</sup> Also due to the relatively high income elasticity of cotton demand and low-price elasticity of supply, cotton prices on world markets move abruptly. In these circumstances unless there is a highly flexible supply to match the highly elastic demand, there will be alternate, unintended accumulations and exhaustion of cotton stocks which will enhance the amplitude of oscillations in export earnings. The situation is aggravated by the fact that as world demand for cotton falls with a textile recession, as happened in 1952-53, the demand tends to shift relatively to lower grades and away from Sudanese cotton, which is mostly of high quality. On the other hand when demand for cotton increases, the tendency is for demand to shift to higher grades. Thus the high incidence of substitution between grades is another factor in the wide movement of cotton earnings of the Sudan.

In recent years export earnings fluctuated widely from year to year. The variations arose chiefly from shifts in export demand and prices, particularly those of cotton, originating from the industrial variations of importing countries although availability in the Sudan and the marketing policy of the Gezira Board which has a practical monopoly in cotton sales overseas, are also contributing factors. The Board, for example, followed fixed price policy that has met buyers' resistance in 1957, and accumulations

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<sup>68</sup> United Nations, Structure and Growth of Selected African Economies... op. cit., p. 152.



of unsold cotton resulted. The situation was aggravated by the record crop of 1956-57. The stocks as a result rose to over 400,000 bales at the end of September 1957 compared with some 87,000 bales one year earlier. Accordingly, the Gezira Board twice reduced its reserve prices in November 1957, which together with a government reduction in cotton export duty, led to substantial improvement in cotton sales towards the end of the year and in early 1958.<sup>69</sup> Nevertheless, the impact of the decline in export earnings was immense. According to government sources, the national income of the country in 1956 was in the region of £200 million or about £20 per capita. Inasmuch as about one third of the national income was derived from exports, and in view of the fact that export earnings in the first nine months of 1957 fell by about 30 per cent from the level in 1956, it is possible that the national income in 1957 declined by some 10 per cent from the level in 1956.<sup>70</sup>

The variation in income and employment through changes in demand for exports in underdeveloped countries is also different from fluctuations generated from the same source in more advanced countries. First a larger proportion of the unemployment resulting from a concentration of exports may be disguised. Secondly in some of these countries, the Sudan in particular, a large reduction in physical exports cannot be offset by reduced physical imports without causing extreme hardship. Thirdly, the secondary "super-multiplier" effects of a contraction in foreign trade is likely to be less pronounced in underdeveloped than in developed countries; this is

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<sup>69</sup> Sudan Government, Ministry of Finance, Economic Survey, 1957, p. 6.

<sup>70</sup> United Nations, Ibid, pp. 195-196.

due to the fact that the underdeveloped countries are less inter-dependent than the advanced ones and a substantial proportion of the population may be largely outside the money economy. Hence cyclical unemployment tends to be more localized and to spread less quickly, and less comprehensively than in a complex interdependent multi-stage industrial economy.<sup>71</sup> Finally the repercussions of export earnings in these countries is reflected in the government budget, which derives a large part of its revenue from customs duties and taxations on exports. In the Sudan the Government derives the largest part of its revenue from such sources and from the earnings of its cotton schemes. The reduction in budgetary surplus due to contraction of export earnings will further impose restriction on development expenditure and thereby interrupt the trend of general progress.

Furthermore several writers have spotted another element of instability, and that is the tendency of underdeveloped but developing countries of today to be much more subject to inflation and balance of payments difficulties, than were the countries which pursued their early stages of economic growth in the 19th century. The Sudan is no exception to this rule. For example in 1956 as in 1951, there was a sizeable surplus on the balance of payments, mainly on account of favourable cotton earnings. In the years 1952-1955 and 1957 a substantial deficit existed due mostly to the adverse turn of the cotton and invisible imports. The deficit in the first half of 1957 reached <sup>an</sup> the unprecedented £114 million. (See Table (12).)

Many explanations are offered to account for the chronic inflation and balance of payment difficulties mentioned above. Henry Wallich explains it by referring to a "basic difference in attitude" between the today

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<sup>71</sup> See B. Higgins, Economic Development, W.W. Norton & Co., New York, 1959, Ch. 24; and Dudley Seers, "An Approach to the Short Period Analysis of Primary Producing Economies", Oxford University Papers, vol. 11, No. 1, February, 1959.

TABLE (12)THE SUDAN - BALANCE OF PAYMENTS£s (000,000)

I T E M	1954	1955	1956	1957	1958
Receipts:					
Exports	45.7	56.1	71.8	24.0	44.9
Others	3.1	2.9	3.8	3.4	7.5
Total Receipts	48.8	59.0	75.6	27.4	69.7
Payments:					
Imports	45.7	51.2	48.2	24.8	54.0
Others	11.6	12.1	9.5	6.6	11.4
Total Payments	57.3	63.3	57.7	41.1	65.4
Balance:					
Merchandise	-2.9	+4.9	+23.6	-10.8	-9.1
Others	-5.6	-9.2	-5.7	-3.2	-3.9
Surplus or Deficit	-8.5	-4.3	+17.9	-14.0	-13.0

Source: Data supplied by the Sudan Government.

underdeveloped countries which are primarily "consumption oriented" and the developed countries which were "production oriented", while passing through the same style of development. "In a production oriented society", he adds, "the logical way of looking at economic progress is to visualize the benefits coming from one's productive efforts". In a "consumption oriented" society, social demand working through political and trade union levels, seeks to extract from the economy more than what, through domestic production and international trade, it can be made to yield."<sup>72</sup> The explanation is similar to the one implicit in Nurkse's appeal to the "demonstration effect": the attraction exerted on the consumers of underdeveloped countries by the high standard of living of the advanced countries and by the goods available there, thus making them desire the fruits of economic progress and not preparing them for the sacrifices necessary to obtain them.<sup>73</sup>

The above explanations relying on psychological propensities are very difficult to assert, and hence are not entirely convincing. Nevertheless, it is now believed that inflation and balance of payments pressures are part and parcel of the process of unbalanced growth.<sup>74</sup> There are two factors stressed by Hirschman adding to the vulnerability of the balance of payments in the course of development. The first one he calls, the "foreign exchange illusion". Within an economy the operators take account of certain supply limitations that are obvious to them but ignoring these limitations is virtually complete with respect to imports. As a result the user of imported

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<sup>72</sup> Henry Wallich, Notes Towards a Theory of Derived Development. A paper presented at the Third Meeting of the Central Bank Technicians, Havana, 1952.

<sup>73</sup> R. Nurkse, Problems of Capital Formation in Underdeveloped Countries, Basil Blackwell, Oxford, 1953, pp.58 ff.

<sup>74</sup> See K. Kurihara, "Economic Development and the Balance of Payments", Metroeconomica, vol. X, April 1958, pp.16-28; and W. Herenchak, "Inflation in an Export Economy", Southern Economic Review, vol. XXI, No. 1, pp.1-14.

products immediately reacts to an increase in his needs by putting through more orders and the importer transmits them abroad with gay abandon not realizing that the real supply limitation consists in the ability of the country to earn additional foreign exchange through exports. This supply limitation is never perceived in advance, and must therefore be brought home to the economic operators entirely through rises in the prices of foreign exchange or through exchange controls resulting from excess demands for foreign commodities." The other factor which Professor Hirschman stresses, is what he terms the "exportability" of the products of the developing country. If exportability is high, growth will not lead to balance of payments pressures and may actually be accompanied with export surpluses. If on the other hand the possibility of rapid growth is largely confined to activities whose outputs are characterized by low exportability - and this is the case in most underdeveloped countries - then the development process will be punctuated by recurrent tendencies towards balance of payments problems.

Taking the long run view, some economists have argued that the difficulties facing the underdeveloped countries spring out from a long run tendency for the terms of trade to turn against them.<sup>75</sup> The argument - known as the Prebisch-Singer thesis - in its simplest form stipulates that the gains of technological progress in industrialized countries were distributed to producers as higher incomes, whereas in countries producing primary products, the gains from such technological improvements as occurred, were

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<sup>75</sup> For a statement of the terms of trade argument, see U.N. Economic Commission for Asia and the Far East (R. Prebisch) The Economic Development of Latin America and Some of Its Problems, New York 1949, and Hans Singer, The Distribution of Gains Between Investing and Borrowing Countries, "American Economic Review Papers and Proceedings", May 1950, and his "Obstacles to Economic Development", Social Research, vol. 20, Spring 1953.

distributed to consumers in the form of lower prices. In a closed economy, it does not matter much which form the rise in real incomes takes; but when producers are at home and consumers are abroad it makes a good deal of difference. The industrialized countries have had the best of both worlds, both as consumers of primary commodities and as producers of manufactured articles, whereas the underdeveloped countries had the worst of both worlds as consumers of manufactured goods and producers of raw materials. Furthermore, the preverse effects of economic fluctuations in underdeveloped countries also retarded economic development by delaying the needed structural change. Good prices for raw materials and foodstuffs provide the means for financing the import of capital goods for industrialization but dilute the incentive to do so. When these prices fall the incentive to industrialize is stronger but the means are not available.

As yet it is apparent that available data are rather unsatisfactory for determining the validity of the terms of trade argument. In the case of the Sudan, although the terms of trade deteriorated during the inter-war period, but improved in the post-war years, the secular trend indicates a residual improvement. (See Table (12)). Such development was generally in line with changes in the price relation between primary and manufactured commodities on the world market.<sup>76</sup> It is particularly influenced by the price ratio between the Sudan's cotton exports and textile imports. Other factors also helped, e.g. dollar shortages, which led soft currency areas, customary buyers of dollar cotton, to divert their purchases to non-dollar

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<sup>76</sup> Cf. United Nations, Relative Prices of Exports and Imports of Underdeveloped Countries, New York 1949, p. 22, and Yearbook of International Trade Statistics, 1956, p. 29.

TABLE (13)INDICES OF EXPORTS, IMPORTS & TERMS OF TRADE

1953 = 100

I T E M	1950	1951	1952	1954	1955	1956	1957	1958
EXPORTS								
Value	75	141	96	91	114	151	108	105
Volume	75	98	66	79	106	130	94	
Unit Value	102	148	148	116	107	117	112	
COTTON EXPORTS								
Value	85	170	108	81	113	156	...	
Volume	47	106	61	67	105	127	...	
Unit Value	116	161	177	121	108	123	...	
Price	...	224	169	126	114	149	...	
IMPORTS								
Value	53	83	122	96	96	89	125	125
Volume	64	71	101	100	104	95	121	...
Unit Value	85	117	122	92	93	94	101	...
TERMS OF TRADE	120	126	121	125	115	124	...	...

UNITED NATIONS, MONTHLY BULLETIN OF STATISTICS.

sources.<sup>77</sup> As a result, non-dollar cotton has come to command a premium over American cotton, and this is the more so with respect to the long staple cotton of the Sudan. Accordingly, the price of Sudan cotton rose sharply in relation to textile goods and the terms of trade turned greatly in the Sudan's favour. The position of Sudan cotton was further strengthened by the Korean boom and by the interruptions to Egyptian supplies due to the Suez crisis, but was adversely affected in 1957, when American supplies, a large part under the special export programme, were greatly increased on the world market at competitive prices. The above example does not prove definitely that the Prebisch-Singer thesis could never be right.<sup>78</sup> What it demonstrated is that there seems to be prima facie evidence that, in the case of the Sudan at any rate, the thesis, as Higgins puts it, "ain't necessarily so".

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<sup>77</sup> "For example, the share of cotton from the United States in the United Kingdom cotton imports declined from 46 per cent. before the war to 27 per cent. in 1955; in those of the Federal Republic of Germany from 70 per cent. to 22 per cent. in 1950." United Nations, Structure and Scope of Selected African Economies, op. cit., p. 184.

<sup>78</sup> Professor Gottfried Haberler vehemently criticises the terms of trade argument, "To my mind", he says, "the alleged historical facts (of the deteriorating terms of trade) lack proof, their explanation is faulty, the extrapolation reckless, and the policy conclusions irresponsible; to put it mildly." See his "Critical Observations on Some Current Nations in the Theory of Economic Development", L'Industria, No. 2 (Milan), (1957), p. 8.



## CHAPTER FOUR

### THE SOUTHERN SUBSISTENCE ECONOMY

#### 1. The Region and the People:

There are several regions in the Sudan which economically lag behind the rest of the country, but the largest comparatively undeveloped area lies in the southern part of the country. It comprises the three southern provinces, collectively called the South. The three southern provinces; the Upper Nile Province, Bahr el Ghazal Province and Equatoria Province, cover a total area of 250,215 square miles (nearly three times the area of the United Kingdom) and a population of 2,782,536 (1957 estimates). This represents about a quarter of the whole country both in area and in population. Types of country in this area range from the papyrus swamps of the "sudd" to the peaks of Imatong Mountains; from the open grass plains of the Upper Nile Province to the dense gallery forests of the Nile-Congo divide. In this wide variety of country with many untapped resources and many areas uninhabited, the people are still largely dependent on subsistence agriculture, ranging from the migratory and pastoral economy of the Nilotics and Nilo-Hamitics to the economy of those who depend almost entirely on crop production.

The three southern provinces of the Sudan lie wholly within the tropics and are between 400 and 140 KMs north of the Equator. The double equatorial rainfall is felt in the southern part of the area. Normal annual rainfall isohyets decrease northwards and away from the elevated regions. Mean annual rainfall varies between 400 mm. north of Renk and about 1600 mm. on the Nile-Congo divide, and in the Imatong Mountains at Gilo it is about 2200 mm. The rainfall in any one year or month is most capricious and unreliable; this extreme variability of rainfall distribution is one of the

main climatic features of the area.

On the basis of climate and also of soil type, vegetation and a number of other factors, the Sudan as a whole, can be divided into four environmental regions; the desert region, the semi desert or arid region, the central rainlands, the flood region and the equatorial region.<sup>1</sup> The southern provinces include only a comparatively small part of the central rainlands and the whole of the flood and equatorial regions. These generalized divisions will be discussed separately below.

The central rainlands region can be further divided into two parts, both in the Upper Nile Province. The Northern part, where the annual rainfall is between 400 and 600mm., has mainly clayey soil with sandy patches, and the vegetation is open grassland alternating with bush thickets. The southern part has an average annual rainfall of 600 to 700 mm., during a rainy season of about 5 to 6 months. The soil is heavy alkaline clay and loams, which crack during the dry season. The natural vegetation is predominantly tall annual grassland alternating with thin woodland.

Three factors combine to make the flood region an area of swamps. First, the lack of slope and the heavy impenetrable soil together with a comparatively heavy rainfall (750 - 1000 mm. during a rainy season of 6 to 7 months a year) combined with drainage systems which are rarely sufficient to carry high accumulations of rain water, all mean that most of the land is subject to some degree of flooding and water logging during the rains. This area is called "toich" land and below it there is an

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<sup>1</sup> The classification is based on Tothill's (ed) Agriculture in the Sudan, Oxford University Press, London, 1952, Ch. IV.

area of permanent or semi permanent swampt called the "sudd"<sup>2</sup> area. The predominant vegetational species is papyrus grass.

Further south, bordering Uganda and the Belgian Congo one reaches the equatorial region where mean annual rainfall is between 900 to 1300 mm., distributed over 6 to 8 months in the year. The area is characterized by a higher rainfall than occurs in any of the above regions. The soils, however, are of free drainage but of low intrinsic fertility and subject to erosion. The vegetation is more luxurient, broad leaved, woodland with gallery forests, found along the upper reaches of the perennial streams, and bowl forests occuring in the depressions.

Broadly speaking, there are three main groups of peoples in the southern Sudan. The largest is the Nilotic group, Nuer, Dinka and Shilluk (Luo) speaking tribes, others are the Nilo-Hamitic group, the Western Sudanean or Sudanic group and other minor groups who represent varying admixtures of the three. This classification, based mainly on linguistic affinities, but also to some extent on culture, physical type and historical background, is somewhat a sweeping one.

The Nilotic group includes three main tribes, the Shilluk, Dinka and Nuer.<sup>3</sup> The Shilluk mainly inhabit the country by the river between Tonga and Kaka on the west bank of the Nile and a small section of the lines between Malakal and Sobat river. They are proud, reserved and more sedentary than the other branches of Nilotics. The Shilluk owe direct allegiance to the King of their tribe, who is an absolute head, both temporal and spiritual.<sup>4</sup>

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<sup>2</sup> Arabic term for the blockages in the drainage system composed of loosened swamp vegetation.

<sup>3</sup> See Audrey Butt, "The Nilotics of the Anglo-Egyptian Sudan and Uganda", in D. Forde (ed) Ethnographic Survey of Africa, Part IV, International African Institute, London, 1952.

<sup>4</sup> See E.E. Evans-Pritchard, The Divine Kingship of the Shilluk of Nilotic Sudan. The Frazer Lectures, Cambridge Univ. Press, 1948.

The Dinka who are the most sophisticated of the Nilotic tribes, possibly due to temperament, adaptability and proximity to communications, live south of Bahr el Ghazal Province. The Nuer, cattle loving, cattle worshipping<sup>5</sup> tribe possesses more cattle heads per man than any Nilotic tribe. Their territory extends east of the river and some of them live across the border in Ethiopia.

The Nilotics are tall, long headed, long legged, dark skinned tribesmen. They are proud, conservative, warlike and resentful to any foreign interference or influence. Although these three groups and other southern tribes are generally described as negroes, they are not so regarded by anthropologists. "It is doubtful", writes Professor Evans-Pritchard, "whether any peoples in the Sudan can be regarded as true negroes, and their non negroid characteristics, their pastoral pursuits and to a certain extent the structure of their language, are attributed to Hamitic admixture and influence."<sup>6</sup> Professor Seligman entertains no doubt that there is a "foreign" non-negroid element in the Shilluk, and says, that although this element is not so obvious in the Dinka and Nuer, there can be little doubt that it exists in them too.<sup>7</sup> He specified this foreign element as Hamitic Caucasian.<sup>8</sup> The Nilotics speak their own languages, but a debased form of Arabic is the lingua franca, not only in this area, but throughout the southern Sudan. The majority of these and other southern tribes, are pagan though there is a certain number of Christians and Moslems.

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<sup>5</sup> P.P. Howell, A Manual of Nuer Law, London, 1954.

<sup>6</sup> "Ethnological Survey of the Sudan by E.E. Evans Pritchard in J.A. de C. Hamilton ed. The Anglo-Egyptian Sudan from Within, London, 1935, p. 91.

<sup>7</sup> C.G. Seligman, "Some Aspects of the Hamitic Problems in the Anglo-Egyptian Sudan", The Journal of Royal Anthropol. Institute of Great Britain & Ireland, Vol. LXIII, 1913, pp.610-624.

<sup>8</sup> C.G. Seligman, Pagan Tribes of the Nilotic Sudan, Routledge & Sons, London, 1932, p. 20.

Cattle forms a very important factor of the Nilotic existence: so predominant is this interest over all others, that his social development has been negligible. Most of the clan traditions of the Nuer, for example, relate to stories about cattle and many of their titles of honour are derived from names of cows and kraals. Cattle also assumes an important role in the marital system of the Nilotics. A bride's dowry varies from 12 heads of cattle in the Shilluk tribe to 20 or 30 in the case of Nuer and Dinka. The movements of the Nilotic tribes are also determined to a great extent by search for pasture to their cattle. After cessation of the rains, when the grass is drying off, the Nilotic herdsmen move with their stock down the river where grazing is rich and they remain there throughout the winter until the beginning of the next rainy season. During the rainy season, the cattle inland are herded out to graze, under the watchful eyes of those youths who are not engaged in tending their cultivation.

The interdependence of the Nilotic and his livestock is very great. In the unique environment imposed by the annual flood, neither could well exist without the other. Added to and consequent upon a physical dependence on livestock, is the exceptionally important part that cattle plays in the social and ritual life of the people. The institution of the "bride wealth" or dowry mentioned above, makes cattle essential to the continuation of the present social system. Under these circumstances it is understandable that the Nilotics require more than a little time to adjust themselves to the idea of regarding their cattle as a commercial commodity.

Generally speaking the cattle owning Nilotic is an improvident and poor cultivator, growing only barely enough grain to maintain him and his

family until the following season. In a bad year when crops fail, a hunger situation develops, and it becomes necessary for the Government to undertake famine relief measures and the importation of grain from the north. The interest of the Nilotic in agricultural production to improve his present standard of living is very scanty. His present needs are extremely simple and the use of, and demand for, money, as a purchasing agent, barely exist. Apart from the Shilluk who wear a piece of cloth rather like a Roman toga, clothing to the Nilotics is not considered a necessity.

The normal diet of the Nilotic tribes is appalling, e.g. citrus fruits are never grown, tea, coffee and sugar are considered luxuries. Being such a hoarder of cattle, the Nilotic suffers from a scanty meat ration, owing to a reluctance to kill cattle except at ceremonies of religious or tribal significance. Very few Nilotics will kill their animals merely to satisfy hunger. All these tribes, however, are extremely conservative and they show no desire for better, varied food, education, medical care, improved agriculture or trade. There would certainly be a demand for veterinary services to control cattle diseases, but unless such services could be coupled with plans for annual sale of surplus cattle, they may result in increasing the cattle population beyond the capacity of the available pasturage.<sup>9</sup>

Until recent years all drinking water for both human beings and livestock of the Nilotic tribes, has been obtained either from rivers and pools or from very shallow wells in the beds of the watercourses. There are vast areas where drinking water is not obtainable during the dry season. The picture has been changed to a certain extent recently by the large scale excavation of "hafirs" north of the Sobat-Ghazal line and further south by

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<sup>9</sup> M.N. Harrison, Report on a Survey of Grazing Areas of the Sudan, Sudan Veterinary Service, Khartoum, Sudan, 1952.

the construction of wells, some of them as deep as 200 feet. In view of the needs of the population these improvements are little more than a beginning and great hardships are still felt by a large number of people during the rainless months. In the flood region lack of water during the dry season is the major cause for immigration and unsettled feature of life in the area.

The Nilo-Hamitic group is in many ways similar to the Nilotic group. Where pastoral conditions are favourable they are keen cattle owners and show little interest in agriculture. For example, the Murle tribe who live in the eastern extension of the flood region in Pibor district, maintain large herds of cattle and devote very little time to crop production. During the wet season, the Murles keep their cattle close to the villages along the river. After the rain the tribe migrate with their cattle over considerable distance in search of pasture. In years of drought and lack of pasture, the Murles suffer great hardship and cattle losses may be severe. The concept of trade is almost entirely alien to the Murles and it has to be assumed that their outlook must be radically changed before any extensive trade in cattle can be expected.

In the South West of the Southern provinces of the Sudan lives a tribe whose appearance, customs and interests, are diametrically opposed to the Nilotic or Nilo-Hamitic groups. This tribe, the Zande, entered the Sudan from the south west and <sup>was</sup> rapidly advancing until the Anglo-Egyptian rule stopped it; a large section of it still lives in the Belgian Congo. The main occupation of the Zande is agriculture and they have never owned cattle due to the heavy occurrence of the tsetse fly (sleeping sickness carrier) with which the area is infested.<sup>10</sup> Except where land is scarce the Zande

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<sup>10</sup> J.F.E. Bloss "Tsetse Fly in the Sudan", Sudan Notes and Records, Vol. XXVI, Part I, Khartoum, 1945.

practice shifting cultivation; using a strip of land for five or six years, then abandoning it and moving to another strip, resting the former land from anything up to twelve years or more.<sup>11</sup> In the absence of a rotation system, livestock, or cheaply available artificial fertilizers, shifting cultivation involving grass or bush fallow seems to be the only practical method of maintaining soil fertility. The tribal customs of the Zande allow for such shifting, as land is tribally held and distributed by the household. The allocation of new land requires a chief or other authority to approve the allocation of the land and a rain doctor to bless it and make it more fertile.<sup>12</sup> Several cultivations are held by each household and only hand hoes are used for cultivation.

In order to keep the population away from the tsetse infested streams and facilitate sleeping sickness and administrative inspection, the population of the Zande area were gathered together then set to live in villages along the roads. As roads are frequently built on watersheds, the newly re-settled Zande had to use, in places, the erodable soil on the ridges and their crops have suffered in consequence. In the last few years, however, there has been some relaxing of control in measures and the people are now spreading out again into the forest areas. Erosion is seen in most regions of the tropical area but it is not yet a serious problem. One factor which increases the

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<sup>11</sup> It is interesting to compare the Zande system of shifting cultivation with the process of land fractionation in the extreme northern Sudan, where the riverian people subdivide the scanty fertile land and palm trees ownership according to Moslem laws of inheritance. In some places in the North, the stage has been reached in which the owners are possessed of so small an acreage of land that they cannot support a family on it.

<sup>12</sup> E.E. Evans-Pritchard, Witchcraft, Oracles and Magic Among the Azande, Oxford Clarendon Press, 1st ed., 1937.



danger of erosion is the grass fires made annually by parties of Zande hunters and honey collectors; two activities which help to supplement the otherwise protein deficient diet of the Zande.

The southern Sudan is still very largely an area of subsistence agriculture. At one extreme are those tribes who rely on animal husbandry although complete reliance is rare, at the other extreme are those who rely entirely on crop production. In nearly all the regions, fishing, hunting and gathering the products of wild vegetation, are subsidiary economic activities. All cultivation is carried out by hand using a very limited range of implements; the use of mechanically or animal drawn implements is only found in Government experimental farms and in a few private estates. This sets a limit to the areas that can be cultivated by each family and hinders bush clearance. The lack of implements further increases the amount of labour required to cultivate an acre compared with the northern Sudan and this is seldom compensated by better yields.

In the past, the economy of the southern Sudan, like that of any undeveloped region, has necessarily been based on barely self-sufficient subsistence, not only within each district, but also within each household, with very little specialization or division of labour. There was, therefore, little exchange of goods and produce and markets have been slow to develop. The growth of administrative centres has created some demand for fresh foodstuffs especially meat, and imported goods, which has affected the economy to some extent. There is now some trade in the area between the environmental regions which enjoy relative advantage in certain commodities. For instance, the central rainlands region supplies grain to the flood region while the flood region supplies meat to the tsetse area. However, as the southern

Sudan as a whole is at nearly the same level of development, internal trade inside the region is less important than external trade.

The chief characteristics of the trading system in the southern provinces are - the small scattered units of production, the low total volume of production and the poor transport facilities. Markets exist only at the main towns but they are supplemented by a network of small bush-shops scattered among the centres of population. These bush-shops are too small to function independently and nearly all are owned or controlled by large merchants in the main towns. The local traders either work as agents for the large merchants or work on a profit sharing basis. These shops act as collecting points for the produce of the surrounding country which is bought in small quantities when the cultivators require cash for taxes or for the purchase of imported goods. The produce collected is then forwarded to the central merchants for despatch by steamer to the north. The central merchant in turn supplies stocks of petty consumer goods to the bush-shops, e.g. grain, salt, vegetable oil, beads, clothes, spear heads and implements, etc., usually sold at a very large margin of profit. The large potential market for attractive and useful articles such as mosquito nets, blankets, beds and clothing is not stimulated, because of the lack of stocks, or sporadic stocking and lack of working capital. The lack of competition which amounts to monopoly in many areas, leaves the consumer no choice of market, and allows the system of small turnover at a large percentage profit, to continue.

The three southern provinces of the Sudan are not an administrative entity and therefore no separate records of exports and imports are kept. However, the bulk of traffic in and out of the area is carried by Sudan

Railways Steamers on the white Nile. Figures for this traffic are available but they are by no means a complete record of external trade of the area. It can be generally noted from the available figures that the exports of the southern Sudan are exclusively primary products, groundnuts, sesame, chillies, hides and skins, etc. Imports on the other hand can be divided into two classes, those paid for by individuals which are mainly grain, foodstuffs, textiles, salt, and those financed by the Government including fuel, building material, etc. The latter type of imports increased considerably since the war due to the development sponsored by the Government. Imports of more sophisticated consumer goods and materials, have been expanding considerably recently and there followed an increasing surplus of volume of imports over exports. As the value of imported goods is generally higher than that of the exports, the adverse balance is relatively greater in terms of money than in terms of volume.

Between any two geographical regions in one country, the excess of imports over exports must be balanced by a corresponding movement of capital. In the case of the southern provinces, capital is provided by excess government expenditure, largely on increased social services, over government revenue. The Southern Sudan will thus remain an economic liability until the gap between imports and exports is eliminated by government production of export commodities, or by increased private production and increased taxation.

## II. Economic Problems of the Southern Subsistence Economy:

The problems of economic development in the Sudan, as in other dual economies, arise from the conditions of partial commercialization already discussed. Although the problems facing the subsistence sector are problems of

one part of the territorial economy and therefore cannot be easily separated, yet there are reasons to believe that the southern subsistence economy has unique problems responsible for its comparative arrested development. Moreover, the aim of economic development seems to be the same for the whole territorial economy and not according to regions or sectors. This aim can be broadly stated as raising the standard of living of the population and this implies increasing per capita production. The degree of economic development which is possible within a subsistence economy is extremely limited because in such an economy there is neither the incentive nor the means to produce regular surpluses. There are, furthermore, environmental problems facing the economic development of the southern Sudan; we shall start by discussing these environmental problems.

The environmental problems facing economic development in the southern Sudan are concerned mainly with rainfall and soils but they affect communications, labour, etc. as well. The average rainfall in the southern provinces ranges from 400 mm. in the northmost part of the area to 2200 mm. in the tropical region and the highlands. What is more important than the volume of rainfall, for agriculture, is the duration of the rainy season. In the northmost region the rainy season extends for approximately four or five months while it lasts for eight or nine months in the tropical region. Consequently the length of the rainy season limits seriously the ranges of crops which can be grown in the south without irrigation. Even in areas of maximum rainfall, the dry season, lasting for about three months, is long enough to exclude a number of perennial plantation crops, and make the environmental conditions marginal for many others, e.g. coffee, tea, oil, palm etc. The problem of seasonal variation and very erratic rainfall can be solved only

by irrigation which will supplement rather than replace the appreciable annual average rainfall.

In the southern Sudan there is generally no shortage of marginal land, but land of comparatively high value ~~is~~, at any rate in flood areas, "exploited to the full. Only through major projects of drainage, irrigation and other works can very large areas of fertile land be utilized and these projects will certainly require large capital investment. Also the present distribution of land does not favour the fullest utilization of the crop producing potential. There is very little private individual ownership of land in the southern provinces, but almost all land is subject to grazing, hunting or other rights, and for this reason, development schemes may arouse opposition from the local tribes.

It is ironical that the environmental limitations of the three regions of the southern Sudan are contrasting and in a way supplement each other. So we find that in the central rainlands region low rainfall and a brief rainy season make shortage of soil moisture the most important factor limiting the types of crops grown. While in the flood region, water logging either by heavy rainfall or spill from the rivers limit cultivation to areas of well drained land and since droughts also occur, dura (songhum) is practically the only crop resistant to both flooding and drought. In the equatorial region where rainfall is higher and soils are well drained, the necessity of maintaining fertility - through anti-erosion and anti-fire precaution - is the most important environmental factor.

Apart from the environmental limitations mentioned above, the development of a cash <sup>CROP</sup> ~~economy~~ in the south has been retarded by the great distance from potential markets coupled with poor transport and marketing facilities,

by lack of local capital and shortage of labour. These limitations will be discussed in some detail below. It has been noted before that water is the limiting factor to further agricultural production in the northern and central Sudan, in the south it is scarcity of labour. The average density of population in the area is only 9.3 per square mile unevenly distributed. Not only is the number of hands available for agricultural tasks small, but also the time devoted to agriculture is limited by the time taken in seasonal migrations, periodic shifting of homesteads as well as lack of incentive to great enterprise.

In the case of cattle owning tribes, much time is spent, not only on the necessary daily care of livestock, but also in the annual migrations to grazing grounds often far distant from the cultivation areas - as far as five miles migrations were recorded. In the equatorial region probably an equal amount of time is devoted to the continual movement of homesteads necessitated by the system of shifting cultivation. Other occupations such as hunting, fishing or even road making, take men away from agricultural work. Water carrying and grain grinding are the main time consuming tasks of the women who, in some tribes, provide the major portion of agricultural labour. The time available for crop production is further limited by the extraordinarily high value given to leisure in the area.

The climate of the southern Sudan is not conducive to hard work.<sup>13</sup> The diet of the inhabitants is too low to provide for sustained hard effort. The hunger periods, common at the beginning of the rains in the flood and central rainlands region, coincide with the period when demand for hard

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<sup>13</sup> Douglas H.K. Lee, Climate and Economic Development in the Tropics, Harber Bros., New York, 1957, Ch. V., pp.92-108.

agricultural work is greatest. As regards health, the area is often affected by endemic diseases which affect labour efficiency. Such diseases as malaria, sleeping sickness and leprosy - showing an incidence of 2% in the Zande area, are common in the region.

As far as nutrition is concerned, the people of the southern Sudan can be divided into two sections. The first includes the cattle owning tribes inhabiting the flood region. Their diet is in general satisfactory from the point of view of quality (with the possible exception of Vitamin C)<sup>14</sup> but their food supplies are inadequate in quantity. Some of the cattle owning tribes like the southern Shilluk, Bor Dinka and Toposa only very seldom produce enough grain for themselves and must be classified as "chronically hungry".<sup>15</sup> Others like Aweil and Gagriel Dinka and some Nuer tribes have good years alternating with lean ones, when conditions are often very severe. Almost all the tribes belonging to this group suffer every year from seasonal food shortages in the late dry season and early rain before the new crops become available for consumption. The hungry gap affects crop output since it occurs at the time when demand for labour is at its peak for cultivating and early weeding of the new crop.

The second category of tribes, inhabits the tsetse infested area of the equatorial region. The diet of these people is satisfactory as far as quantity is concerned but requires considerable improvement in quality.<sup>16</sup>

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<sup>14</sup> Jonglei Investigation Team, The Equatorial Nile Project and Its Effect in The Anglo-Egyptian Sudan, Sudan Government, Khartoum, 1954.

<sup>15</sup> J.J. Basinski, Some Problems of Agricultural Development in the Southern Provinces of the Sudan, Ministry of Finance, Pamphlet No. 1, Khartoum, Sudan 1956, p.5.

<sup>16</sup> G.M. Gilwick (Mrs), A Dietary Survey Amongst the Zande of the South Western Sudan, Agricultural Publications Committee, Khartoum, 1950.

These tribes seldom suffer from the starvation since root crops - technically called "hunger crops" - usually provide sufficient food reserves. However, they can be described as "protein hungry" for they lack domestic animals in the area. Some authorities believe that these tribes are probably not so short of animal proteins as has been commonly supposed, but they all display meat hunger, perhaps more the desire for a luxury than the expression of a physiological need.<sup>17</sup>

The lack of incentive to sell cattle by the cattle owning tribes has its economic, social and ritual basis. Cattle is used as a symbol of exchange, in the marital system, for payment of various indemnities for legal wrongs, and it sometimes nearly assumes a supernatural position in some tribes. For these reasons there is an inherent reluctance to part with cattle in return for cash.<sup>18</sup> Cattle however provides a measure of insurance against erratic crop production and periodical shortages of foodstuffs. Equally lacking in enterprise, is the commercial community in the southern provinces. The effect of a non-enterprising commercial community in a rudimentary and largely self-sufficient economy has a particular significance, since demand for imported goods and hence demand for cash, can only be increased by a progressive and sustained market in which suitable goods are in constant supply.

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<sup>17</sup> A.E. Lorenzen, "A Note on Nutrition in the Equatorial Province", In Tothill op. cit., p. 269 and A.G. McCall, "Some Notes on Zandeland", in Food and Society in the Sudan, op. cit., p.243.

<sup>18</sup> "This reluctance is often put down, to what is described very vaguely, as the 'Conservatism of the Pastoralist', but this attitude of mind requires deeper analysis. The social value of cattle and the need to meet claims inherent in the social system, i.e. marriage, divorce, etc. or indemnification of wrongs, is not easily explained in a few words.... Cattle as a symbol of exchange are continuously being passed from one kinship group to another in the intricate network of marital and other relationships. From this springs an emotional attitude towards cattle and a desire to acquire them not for personal prestige or even for economic motives, but in order to meet a wide variety of social obligations. Cattle are owned collectively in the sense that .... while in his possession a man may use them as he pleases, but he may not dispose of them except for purposes of marriage or other social obligations." Southern Development Investigation Team, Preliminary Report, 1954, p. 219.



In a straight line measured along the existing lines of communications the nearest point in the southern provinces, lies nearly 250 miles away from Khartoum and 600 miles away from Port Sudan on the Red Sea. Many areas of potential development lie over 1000 miles from Khartoum and 1200 miles from Port Sudan. (See Table (14)). The great distance of the area from the main market and the seaport, must be considered together with environmental difficulties which make communications far from easy. The southern reaches of the White Nile, the communications artery to the South, are by no means ideal for navigation. The clay soils predominant in a large part of this area are often flooded or water logged during the rainy season. This makes over-land transport extremely difficult, if not impossible, during the wet months. All season roads in this part of the country are prohibitively costly.

The Sudan railways operates regular steamer services to Malakal and Juba and seasonal services to Meshra er Reg, Wau and Gambela. In spite of their high tariffs, these services operate at a loss owing to high labour costs and the slowness of the services. For the sake of comparison, it was found out, that the cost of transport of certain commodities from Juba to Mombasa by East African Railways, would be less than the cost of transporting them to Port Sudan.<sup>19</sup> The complementary road system in the southern provinces is also inadequate. In the central rainlands region roads apart from those running north and south, are mainly no more than cleared tracks. In the flood region, roads are maintained annually with considerable difficulty and are impassable during the rainy season. In the equatorial region all weather

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<sup>19</sup> Southern Development Investigation Team, Natural Resources and Development Potential in the Southern Provinces of the Sudan. Sudan Government, London, 1955, p. 128.

TABLE (14)

DISTANCE OF VARIOUS POINTS IN THE SOUTHERN PROVINCES  
FROM KHARTOUM ALONG EXISTING LINES OF COMMUNICATION  
IN MILES

LOCALITY	K H A R T O U M			PORT SUDAN TOTAL
	ROAD	RIVER	TOTAL	
Renk	..	108	364	807
Malakal	..	311	549	1011
Nasir	130	311	679	1140
Boma Via Bor	253	787	1278	1749
Rumbek via SHARBE	115	457	810	1271
Wau	..	708	946	1407
Raga	207	708	1153	1614
Juba	..	892	1130	1591
Kapoeta	194	892	1324	1785
Yambio	323	892	1453	1914
Sources Yubo	464	892	1594	2055

SOURCE: J.J. Basinski, Some Problems of Agricultural Development in the Southern Provinces of the Sudan, Khartoum, 1956.

of boarding schools, even at the elementary level and for the provision of living conditions which make service in the area tolerable or attractive to teachers from outside the southern Sudan. Another hindrance facing educational development is the multiplicity of tribes and languages in the area which makes elementary education far from easy. There are some forty-eight languages and major dialects in the southern provinces, and instruction is given and literature produced in fifteen of them. Furthermore due to the conservatism of many tribes, the spread of education has been very uneven and in particular girls' education has lagged behind, a factor which causes further difficulties in the organization of education in the south.

The initial stages of overcoming all the above limitations will require, among other things, a huge supply of capital which can only be found from external sources, i.e. from outside the southern provinces. Capital is especially needed to improve trade in the South and the amount required for this purpose is comparatively large, because the time taken from the initial purchase from the producer to the eventual disposal to the consumer is considerable owing to the great distances involved and the delays imposed by poor transport facilities.<sup>22</sup> Unreliability of transport increases capital requirements even further by increasing storage and transport losses. Local credit facilities are severely limited by the lack of banks in the area;

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<sup>22</sup> J.J. Basinski has noticed that the lack of working capital amongst the traders in the south affected the economic development also by causing an appreciable amount of unnecessary movement of grain on an already overloaded transport system. Thus due to the fact that most southern traders cannot afford to lock their limited capital in grain storage, the grain purchased after harvest is often exported. A few months later during the usual seasonal shortage, it has to be brought in again from outside the area, often taking shipping space of essential goods. See his, Some Problems of Agricultural Development In the Southern Provinces of the Sudan, Ministry of Finance, Khartoum, Sudan, July, 1956, p. 17.

there is now only one branch bank in Juba serving an area three times that of the United Kingdom. It is doubtful however, if an increase in banking facilities can be expected until the volume of production and trade increases sufficiently to attract banking firms.

The possibility of capital accumulation by the inhabitants of the southern provinces is extremely doubtful since with the exception of a few, the people live at a bare subsistence level with no margin to save. Savings in the area can be increased by heavier taxation but so little of the present incomes could be sacrificed for future use, that the time required for local capital accumulation will be considerable. The main sources of Government revenue from the southern provinces is from direct taxation in the form of tribute which is theoretically assessed according to the wealth of the individual, but in fact is in most areas assessed according to the relative wealth of the tribal section. Poll tax is usually applied to the very small semi-urban population who have no visible wealth (other than their unassessed earnings) in the shape of animal stocks or cultivations. Other forms of taxation are from Government property, traders or other licences, court fees etc. Revenue from the southern provinces is extremely insufficient to meet even the minimum development requirements of the area. Capital must therefore come from outside, being provided either by the Government, which will inevitably be a burden on the whole country, by private Sudanese or by foreign sources.

As economic development proceeds in the southern provinces another limitation will be faced, namely managerial skill. This factor is not a prerogative of large schemes or firms, it is needed equally by small cultivations or traders. The present system of agricultural production based on

family units is in many ways suitable for the environment and the social systems of the area. There is no sufficient data to judge the efficiency of this system but even in the few cases where a systematic study of local agricultural systems has been carried out, the investigations have been unable to point anything wrong with the present systems or to suggest any modifications.<sup>23</sup> However, economic development must lead to a change in the existing conditions, so that the traditional managerial skills would no longer be sufficient to deal with the new problems. Mental horizons of both traders and agriculturalists are now severely limited to grasp the wider issues of an expanding economy, and the lack of economic intelligence will be a great obstacle in the organization and running of larger agricultural schemes based on specialized labour. Initially managerial and technical skills will have to come from outside the area.

It would be difficult to say which of the above limitations can be considered as the most significant one because they act and react on each other and that leads to more complex problems. The situation is a series of vicious circles, none of which could be treated in complete isolation - e.g. communications can be improved only if there is hope of greater output to warrant the capital expenditure, while greater output cannot be expected without the incentives which better communications may bring. Another dilemma concerns the complex problem of human exertion and enterprise which can only be increased by greater output and hence a better standard of diet, while a better diet cannot be achieved without greater physical effort. Underlying all the above limitations is the important problem of economic and social

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<sup>23</sup> P. De Schlippe, Shifting Cultivation in Africa, The Zande System of Agriculture, Routledge & Kegan Paul, London, First ed., 1956.

disturbance which will be inevitable in the process of economic development, thus adding yet another problem to the many hindrances mentioned above.

### III. Economic Potentials of the Southern Sudan:

The economic potentials of the southern Sudan, which are believed by some people to be unlimited, show quite a different picture on close study. As no mineral resources of immediate economic value have been found in the southern Sudan, any future development of the area will have to come from an increased production of the customary crops so that surpluses are regularly available for sale, or from the introduction of specialized cash crops. The latter method involves greater technical difficulties, since new techniques of cultivation will have to be instructed and supervised, and certain social customs will have to be changed. The greatest economic asset of the southern provinces is that due to certain environmental conditions, they could produce a number of commodities which at present the Sudan has to import from outside, e.g. coffee, sugar, tobacco, tea and rice. (See Table (15)). In view of the great distance of the southern provinces from would-be markets, development of production whenever possible will have to be complementary to that of the northern Sudan.

Although the greater part of the most suitable land in the southern provinces is already utilized with the maximum intensity permitted by the present indigenous farming system, production could still be increased in a number of ways. Production could be increased by opening new areas of fertile land for settlement and the provision of water supplies, roads, etc., or by the cultivation of increased areas of marginal land which is available in abundant amounts. "Even on the assumption that only 10% of the land in the region is potentially suitable for cultivation, there are at present over

TABLE (15)

PRINCIPAL IMPORTS INTO THE SUDAN WHICH COULD BE PRODUCED IN THE  
SOUTHERN PROVINCES

Commodity	Quantity in Tons				Value in Is'000				Percentage of Total Value			
	1954	1955	1956	1957	1954	1955	1956	1957	1954	1955	1956	1957
Tobacco & Cigarettes	...	493	468	506	749	707	662	727	1.7	1.5	1.4	1.6
Coffee	...	5428	7648	7940	1878	1508	1921	2052	4.3	3.2	4.2	2.9
Tea	...	7343	4931	7202	3545	3174	1732	2782	7.3	6.5	3.8	4.9
Sugar	...	80252	114349	106154	3654	3200	4638	5779	7.6	6.5	10.2	8.5
Rice	...	5710	2100	4820	158	207	83	238	0.2	0.4	0.2	0.3
Total	...				9984	8796	9036	11678	16.3	18.1	19.8	16.2

Source: Sudan Government Economic Surveys.

30 acres of this land per tax payer. Only three acres of such land or about 10% of it is now actually cultivated." <sup>24</sup>

The present method of crop production in the southern Sudan is almost entirely based on shifting cultivation, a method sometimes wrongly conceived as a haphazard cropping of the more suitable land. In fact shifting cultivation is a more or less definite system of rotation involving a prolonged bush fallow. Where land is still plentiful, the system conserves the fertility of the soil and prevents erosion and the accumulation of weeds, pests and diseases. "In these conditions, it is a suitable farming system to a subsistence economy."<sup>25</sup> However, the wastage of labour - the main factor limiting agricultural production - involved in the annual opening of new land and periodic moving of homesteads, is considerable. Moreover, shifting cultivation retards social development and inhibits economic progress by preventing specialization of labour. It has also a negative effect on incentives and opportunities for saving and hence prevents the accumulation of capital in the form of perennial tree crops, household possessions, implements and fixtures of all kinds. "It is interesting to note that advanced civilizations in all conditions, have developed only where intensive cropping has replaced shifting cultivation. Ancient civilizations in the tropics were largely established where irrigation (mainly for rice growing) prevented constant shifting."<sup>26</sup>

The grass plains of the central rainland region in the southern Sudan offer opportunities for large scale mechanized production of a considerable

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<sup>24</sup> Southern Development Investigation Team, (S.D.I.T), Preliminary Report 1954, Sudan Government, London, 1955, p. 163.

<sup>25</sup> P. De Schlippe, Shifting Cultivation in Africa, The Zande System of Agriculture, Routledge and Kegan Paul, London, 1956.

<sup>26</sup> S.D.I.T., Preliminary Report 1954, Sudan Government, London, 1955, p. 166.



range of crops. Even partial mechanization will result in a great increase in productivity due to shortage of labour in the region. The position is different, however, in the greater part of the Equatorial Region, because of the necessity for bush clearance and the exhaustability of the soil, which make mechanized cultivation a difficult and an economically doubtful proposition. Moreover although there is no lack of implements designed for the cultivation of grass plains, the development of agricultural machinery suitable for the humid tropics is still in its early stages. Mechanized crop production is also limited by the size of the holding, e.g. the small and medium sized holdings of the richer merchants and chiefs will be handicapped by the lack of workshop facilities and efficient spare parts service, and so it seems that mechanization production will necessarily be restricted to schemes or estates sufficiently large to provide their own services.

In considering the large scale mechanized crop production in the southern Sudan, the high capitalization involved as well as the inflexibility of running costs must be kept in mind. The great distance from markets and the high cost of transport, which lower the revenue from all crops produced in the area, make the introduction of a highly capitalized system, economically difficult. The distance from supply centres and the unreliable communications add also another hazard, since they affect the cost of machinery, fuel, spare parts, lubricants and, moreover, make deliveries of these materials uncertain and hence the inefficient use of machinery. Furthermore, rainfall variability in the region leads to yield variations which when added to these inflexible costs of production make it clear that the risks in agricultural mechanization in the southern Sudan would be considerable.

Small quantities of sugar cane are grown in various areas in the

southern Sudan for consumption as chewing cane. There is need for extending the areas under cultivation because apart from textile fabrics, sugar represents the second largest single import item into the Sudan. In 1957, 106,154 tons of refined sugar were imported into the Sudan at an average C.I.F. price of £54.4 per ton at Port Sudan. Demand for sugar is steadily increasing and it may now be considered essential that the Sudan should produce at least part of its sugar requirements in order to economise on foreign exchange. Cost of production in sugar producing countries has increased considerably recently, and it seems likely that the price of sugar in the Sudan will not fall below £40 per ton (C.I.F. Port Sudan). Sugar produced in the southern Sudan will have to compete at this price. Data on possible cost of production in the Sudan are inadequate, but it must be remembered that initially a sugar factory in the Sudan would have high amortization capital costs which have been completed in the majority of factories in the main sugar producing countries.

Throughout the flood region of the southern provinces, there are areas of land which are flooded annually and which are unsuitable for the production of ordinary crops. The introduction of rice cultivation in these areas would give the inhabitants a crop which would be much less liable to variation in yield in different seasons and which could be a valuable additional food crop as well as a profitable cash crop. It has been estimated that the capital required for an efficiently run, commercial-sized scheme, should be almost £50 per ton of white rice delivered at Khartoum.<sup>27</sup> The average C.I.F. price of imported rice at the time of the estimate was £49.3 per ton at

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<sup>27</sup> The estimates were based on 1954 figures in S.D.I.T., Preliminary Report 1954, Sudan Government, London, 1955, p. 181.

Khartoum. There were, however, considerable variations in prices from different sources. Egyptian rice was sold for £s35 per ton, Italian rice for £s63 per ton, Thailand rice for £s75 per ton and Netherlands rice for £s95 per ton. The future price of rice in the Sudan will have to depend largely on the quantities of Egyptian rice available for import; if these were large, home produced rice will have to compete with them at a price of just over £s 40 per ton delivered at Khartoum.

Wild coffee occurs in many areas of the Green Belt and in the gallery of basin forests in the southern Sudan and small areas of coffee have been cultivated in several places for a number of years. The Green Belt is unfortunately a marginal area for coffee production owing to the occurrence of a well marked dry season with frequent droughts in February and March when rain is necessary for fruit setting. Coffee yields in the area have on the whole proved disappointing and complete crop failures were common except in irrigated areas. In the Zande area bordering the Belgian Congo, there are possibilities for coffee growing; but coffee will not give good results unless carefully cultivated and tended and so until the Zande are firmly settled, coffee growing has no chance of success.

A wide range of tropical fruits can be grown without irrigation in the Green Belt; but elsewhere in the southern Sudan irrigation is necessary if good results are to be obtained. The most important varieties of these fruits are citrus, mango, bananas, pawpaw and pineapples. The development of an export trade of fruits is hampered by difficulties in the transport of a bulky and perishable product, nevertheless, small quantities find their way to the northern Sudan.<sup>28</sup> Citrus fruits are nowhere grown in large

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<sup>28</sup> For a more detailed account of the problems involved in the marketing and processing of fruit in the Sudan, see P. Hammel-Newell, Report on the Production, Handling, Marketing and Utilisation of Horticultural Products in the Sudan, Ministry of Agriculture Publication, Khartoum, 1953.

quantities in the southern provinces and in a way are of a lower quality compared to those grown in the north in rapidly increasing quantities. In the case of mangoes, the crop season in the south comes at a time when no mangoes are otherwise available in the northern markets and it will be possible to develop a steady trade, provided that marketing and transport facilities are improved, and plantations of good quality varieties are established.

"Ceara" rubber grows well in the southern Sudan in the Green Belt. A small plantation was established at Kagelu by the Belgians and it was extended by the Sudan Government. The yields of this type of rubber are low and tapping is difficult. Nevertheless, small quantities were obtained from the old plantation during the second World War, but in normal times, production is far from economic. Rainfall in the southern Sudan is nowhere sufficient for satisfactory growth of Para type of rubber - the only type grown commercially in the world, this is why it is inconceivable that the Sudan should ever become a commercial rubber producer.

Hunting opportunities in the southern Sudan are unique. The area is rich in wild animals; white Rhinos, elephants, buffalos, lions, leopards, hippos and crocodiles can be found in abundance. In spite of these attractions to hunters and tourists, the revenue derived from this source in the Sudan is negligible, while in Kenya it is estimated that hunting and tourist trade is worth £5 million, most of it in American dollars. The hindrances to the development of this industry in the southern Sudan are the inhospitable climate of the region, the lack of specific points of attraction, like the East Africa National Park, and the absence of facilities for tourists, such as hotels, public transport and safari outfitting. Also the shortness of the

hunting season in the Sudan, extending only from January to May, has an adverse effect on the success of hunting and tourist industry.

Cattle are the only livestock in the southern Sudan which can be considered as having economic potentials. As the livestock population is comprised of low milk producing species, it would be unrealistic to contemplate the development of a trade involving milk products. Attention must therefore be confined to the slaughter of cattle, meat products, hides and other slaughter-house by-products. In other African countries including neighbouring Uganda, an appreciable increase in agricultural output has been achieved by the introduction of animal drawn implements. In the southern Sudan roughly three quarters of the population can be classed as belonging to cattle owning tribes, which can use cattle for agricultural work and transport. The ritual position, which cattle occupies in the lives of many cattle owning tribes, makes the idea of using them for work generally unpopular.

Disposal of cattle surpluses by cattle owning tribes, is also limited by the small effective demand for meat in the area. This is now confined to the needs of government and Equatorial Projects Board officials and their families. The Zande area known to be meat hungry and if the means of exchange could be placed into their hands, they could be expected to increase their demand for meat. If the Zande and other tribes in the tsetse fly belt were to consume meat at the rate assumed for the population of the cattle area, the potential demand would be for a further 80,000 heads of cattle.<sup>29</sup> The sum required by a tax payer, if he were to buy meat at this rate, would be about £12.320m/m a year. As the annual income of a Zande is in the neighbourhood

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<sup>29</sup> S.D.I.T., Preliminary Report, 1954, Sudan Government, London, 1955, p. 205.

of ~~Is~~2.000m/m; an expenditure of this magnitude on meat is, obviously unrealistic under the present circumstances. It would seem that little expansion of cattle trade can be expected inside the region. The northern Sudan, however, is a promising market, especially the recently established meat processing factory at Kosti. All this will depend of course on the tribes' willingness to part with their cattle for trade.

#### IV. Development Efforts to Monetize the Subsistence Sector:

Development efforts in the southern Sudan by either the Government or private enterprise were never spectacular. This is due to two main reasons; the shortage of capital in the country and the belief that development in the South is inseparable from that in other regions. Nevertheless, the south has attracted special attention recently. Evidence of this attention is the formation of the Southern Development Investigation Team which submitted its valuable report "Natural Resources and Development Potential in the Southern Provinces of the Sudan", in December 1955. The region however, was the scene of two huge development projects. One of them was planned, studied and discussed but never implemented and so perhaps deserves to be discussed first.

The Equatorial Nile Project better known as Jonglei Canal project, is an enormous scheme proposed by the Egyptian Government for the damming of the East Africa lakes at the outlet of Lake Victoria at Owen Falls (already built) and the transmission of the regulated water <sup>through</sup> ~~passed~~ the Sudd region in the Sudan. The project will necessitate the canalization and the drainage of the Sudd region and the building of a barrage and a canal from Jonglei between Mongala and Malakul to the mouth of the Sobat river, a distance of 175 miles. At present half the water of Bahr el Jebel is lost in the Sudd swamps by evaporation and transpiration. More water would thus be available

as a result of the project, in Egypt and the northern Sudan at the time of year when it is needed. Under the Egyptian proposal the regime of the river will be reversed. High dry<sup>season</sup>/level would result in the inundation of the toiches upstream of the canal at the time when they are required for grazing; in the Sudd area, the fluctuations would be insufficient to produce toich grazing, and on the White Nile the toiches would be reduced by approximately a third. At times of flood escape, great quantities of water would be poured into the then dried out Sudd area, causing incalculable losses if the area has been developed in the meantime.

For good or bad, the Equatorial projects will change the modes of life of many hundreds of thousands pastoral people in the area. The effects of the project was the subject for study of the Jonglei Investigation team, appointed by the Sudan Government. The team reported after seven years of study in the area.<sup>30</sup> The main beneficial effects of the project were found to be the availability of large amounts of water which at present irrigate comparatively useless areas of swamp and which could be used for the controlled irrigation of crops. So far this water has been earmarked for the northern desert, but the team's report showed that, primarily from the point of view of water economy, the same irrigation water could be used more effectively in the southern provinces than anywhere else in the Nile Basin downstream. The drying out of the swamps will be another beneficial aspect of the project, as it would enable large areas to be irrigated. The canal would be a more direct communication route to the south than the present tortuous channel through swamps, which the steamer takes now.

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<sup>30</sup> Jonglei Investigation Team, The Equatorial Nile Project and Its Effects in the Anglo Egyptian Sudan, Sudan Government, London, 1954.

The most important adverse effect of the project would be the reduction in the area of riverian flood plains exposed in the dry season after inundation during the rains. These flood plains are of vital use to the cattle owning tribes of the areas for the provision of dry season grazing, when inland pastures are unpalatable. The difficult social and economic adaptations which these people will have to make can never be a light matter. It will be difficult to persuade a people that alterations in their present ways of life made for the sake of others, are justifiable or desirable even if hopes for alternative advantages can be held out. A further complication arises in that as the various communities are settled on a new ground, there will remain the danger of their being flooded in years of heavy rains, unless, as the Sudan Government insisted, the storage facilities provided by the Great Lakes are on a scale sufficient to allow full control of their outflow. Other important effects of the project will be the considerable reduction in fish reserves and lowering of the water table will make it difficult to dig wells especially in the central Rainlands Zone.

The Jonglei Investigation team set to estimate the costs, remedies and measures to provide alternative livelihood, on the assumption that the Egyptian proposal will be implemented in full. They found that the implementation of the scheme will mean the drastic change in the life of many riverian tribes and therefore the team stood on the principle that, "the Nile is a single hydrological unit and the exploration of its waters must be designed for the maximum benefit of all the people who are in one way or another dependent on it."<sup>31</sup> The Equatoria Nile Project as proposed by the Egyptian Government, obviously does not confer to this principle as far as the

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<sup>31</sup> The principle was expressed in the Sudan Ministry of Irrigation Publication, The Nile Waters Question, Khartoum, 1955.



southern Sudan is concerned. The Jonglei Investigation team has recommended a revised scheme which would obviate many of the difficulties described above and reduce the adverse effects.

Although it took the Jonglei Investigation team seven years to submit their report, their investigation was very rough and further study is clearly required as the project is likely to affect the lives of over a quarter of the inhabitants of the southern Sudan. The preliminary study revealed that the project will have a number of detrimental effects and that without remedial measures, its implementation would lead to economic and social catastrophe in the area affected. To the eyes of the engineers who planned the Equatorial Nile Project, all these difficulties seemed to be secondary and their solution a matter for others to worry about. They are indeed formidable problems and fraught with possibilities not altogether pleasant to contemplate. It is therefore important that development work involving large scale engineering work, or employment of modern techniques, should proceed in an orderly way. The careful investigation stage must be followed by a pilot scheme stage before the original project stage is reached. The failure of Tanganyika Groundnuts Scheme is a well known example of attempts to rush development work.

The second major project in the southern Sudan which was both planned and carried out, received a great deal of publicity outside the country. The Zande Scheme, to put in the words of the person who first conceived it, was "an experiment for the social emergence of indigenous races in remote areas."<sup>32</sup>

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<sup>32</sup> Dr. J.D. Tothill, formerly Director of the Department of Agriculture in the Sudan, in a memorandum with the same title which later became the basis of the Sudan Government's "remote areas economic policy". For more details see J.S.R. Duncan, "The Sudan: A Record of Achievement," Edinburgh, 1952, p. 218.

The scheme, "aimed at nothing less than the complete emergence of the social economic stability of the Zande people".<sup>33</sup> Dr. Tothill predicted in 1946 that the scheme in 30 years would lead the peasantry to a civilized and prosperous if not a rich state. The Zande were chosen for the experiment because of their strong social discipline under chiefs which makes them easy to organise. They are reasonably industrious, possessing no cattle and so more agriculturally oriented. The extreme remoteness of the Zande areas from markets resulted in low returns to the inhabitants from local produce, coupled with high costs of imported goods and hence an extremely low purchasing power. Under these circumstances, a few Azande considered their potential reward worth the extra effort required to increase their output, and many remained too poor to buy such dietary essentials as meat and salt, much less the cheapest and most essential textile goods.

To achieve the "social emergence and economic stability of the Zande", it was planned that the standards of local self-sufficiency be greatly improved and provision be made for a limited amount of trade with the northern Sudan to furnish exchange for these necessities which are impracticable to produce in the Zande area. The scheme has leaned heavily on the highly successful experience of the Gezira particularly in the organizational arrangements. Anthropological and ecological surveys preceded the implementation of the scheme. A nutrition survey was conducted at an early date and agricultural experiments as well as forest training were tackled. The second problem to be solved was that of the scattered and haphazard family plots which made introduction and supervision of new crops impracticable. Over 60,000 Azande have been accordingly resettled in elongated village units of 50 families

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<sup>33</sup> J. D. Tothill, (ed.) Agriculture in the Sudan, Oxford University Press, London, 1952, p. 916.

known as Gbarias.<sup>34</sup> Each Gbaria was put in charge of a paid headman who answers to a chief or sub-chief according to the previous tribal custom. Another similarity between the Zande scheme and the Gezira is the Equatoria Projects Board, the counterpart of the Sudan Gezira Board, and is an independent administrative authority. The scheme was officially launched in 1946 with an appropriation of £1,000,000 for 1946-51 development period.

The agricultural organization of the scheme was based on subsistence crops, similar to those already grown before the scheme, but emphasis was placed on tree crops, in order to conserve the soil and avoid erosion. Each landholder was allotted from 25 - 40 acres laid out in narrow plots. The economic mainstay of the scheme was chosen to be the production of American highland variety of cotton, and the acceptance of a tenancy required the planting of at least one half an acre of this crop plus another tenth of an acre for each additional wife.<sup>35</sup> Some dura (sorghum millet), sesame and peanuts have also been grown as cash crops, partly to supply the needs of northern Sudanese workers in the scheme. A number of specialized agricultural operations were also incorporated in the scheme. These included beef and dairy farms, and cattle (kept under the noses of the tsetse flies by intryeide injections and fed on locally produced oil cake). A small sugar plantation run by the board has been started at Sakure, for the production of jeggery or brown sugar. Production of hemp, jute, coffee and tobacco was tried to supplement cotton as a cash crop.

Forming an integral part of the Zande scheme, are small industrial

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<sup>34</sup> Hugh Ferguson, "The Zande Scheme", Empire Cotton Growers Review, Vol. 26 No. 2, 1949, p. 114. The article has been revised and reprinted as Bulletin No. 14 of the Ministry of Agriculture, Sudan Government, Khartoum, 1954.

<sup>35</sup> William A. Hance "The Zande Scheme in the Anglo-Egyptian Sudan", Economic Geography, April, 1955, p. 151.

establishments. Most important among these is the cotton spinning and weaving unit, hoped to produce an excess of cloth in the south and expected to supply the north with cheap quality textiles, and so to be by far the most important source of exchange as textiles make one of the largest single imports into the Sudan. The first piece of cloth was produced in September 1951 from the Zande scheme textile unit. Other industrial installations by 1952 included : a sugar crushing and evaporating plant at Sakure; cotton seed oil extracting machines; soap making unit; gunny bags from hemp and jute industry; a saw mill and a power station. The scheme is primarily agricultural and the industrial sector is only secondary, employing only 2% of the labour force in the scheme.

An important aspect of the scheme - which was not included in the original plan - is the trading section charged with marketing the products of the scheme as well as selling imported articles. The section helped to market useful goods at the lowest possible costs, thus guarding the inhabitants against exploitation. It also helped to train southerners to be traders and lowered the marketing costs of the scheme's products in an area known for its huge transport costs.

The Zande scheme started off in a very encouraging way. The peasants surpassed all expectations in production. Yields compared favourably with those in Uganda and the Belgian Congo in the first five years of the scheme. It proved later, however, that this enthusiasm was not maintained in the face of lower returns. Some of the experiments did not come off well, e.g. the coffee and gunny bags schemes were discontinued. After a brief period of production the jaggary sugar plant at Sakure closed down.<sup>36</sup> It was also proved that the possibility of export cloth was not very bright as the first

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<sup>36</sup> The machinery at Nzara and Sakure was not interfered with in the violent 1955 Southern Disturbances that swept over Equatoria Province. Many of the Northern staff of the scheme including the Managing-Director were killed in the disturbances.

yards produced were much more expensive than the same type of cloth imported from India or Japan. (Output from a large scale textile factory expected to be constructed north of Khartoum, with American capital, will have serious effects on textile production in the Zande Scheme.) The great merit of the Scheme however, was that it introduced the use of money in the area, and now many Azande have set up their own tiny bush-shops in the remote parts of the Zande area. The scheme represents a pioneering effort in building up a remote area and the scientific way in which social and physical problems were approached was impressive.

## CHAPTER FIVE

### CONCLUSIONS AND POLICY CONSIDERATIONS

#### 1. Historical, Political and Cultural Aspects of the North-South Question in the Sudan:

No ancient history united the medley of tribes which constitute what is now called the Republic of the Sudan. Different tribes were swept by prehistoric upheavals, into one or another of the regions of the country. The Pharaohs of Egypt annexed the northern province of the Sudan and there was a time when the viceroys at their capital Napata, asserted their independence of the potentiate of Thebes and one of them marched with his army and overthrew the ruling family.<sup>1</sup> This Nubian dynasty was only overthrown by the invading hordes of Persia, and the northern Sudan had ever since practically severed its connections with Egypt. The severance of connections with Egypt left the Sudanese, or rather the Nubians, to develop their own civilization and it also resulted in a gradual expansion southwards, where nature was more lenient and especially when trading posts in the extreme north lost their importance. Since that time no real effort to invade and subdue the Sudan was seriously made until the Turko-Egyptian invasion in the nineteenth century.

Christianity found its way to the Sudan through priests trekking from Egypt southwards, and by the 6th century we find that Christianity was the religion of the Nubian kings. After the occupation of Egypt by the early Moslems, the connections between Egypt and northern Nubia were resumed in the form of treaties consequent to wars in which no party claimed an ultimate victory. The part of the treaty that gave the Moslems freedom of movement and worship in Nubia, tended to result ultimately in the gradual ascendancy of Moslem Arabs and the final domination and establishment of Moslem religion.

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<sup>1</sup> See J. A. Arkell, A History of the Sudan to 1821, Athlone Press, London, 1955.

The Sudanese offered little resistance to this process of cultural Arabization, "But though they accepted so much, they modelled it considerably and preserved not only a foundational Sudanese racial element, but their own nationality and their customs, and, in the case of the Nubians and the Beja, their languages."<sup>2</sup> The Arabs found the central belt of the Sudan bearing strong resemblance to their region in Arabia. By the 16th century, they were already strong enough to knock down the already tottering Christian kingdom.<sup>3</sup> The Kingdom of Nubia then disintegrated into small kingdoms and vassals ruling from Dongala, from the banks of the Blue Nile or from the mountains of Darfur, but never was there a common bond, whether of force or sympathy, uniting so much as half the country.

The people of the southern Sudan, however, were pursuing their own way of life with practically no change. But they were gradually pushed southwards, as more Arabs found it to their advantage to go south. Their country together with the Nuba mountains, were hunting grounds for slave raiders but, "it was not a very profitable trade before the use of fire arms in the Turko-Egyptian rule."<sup>4</sup>

The main factors which prompted Mohammed Ali, the Turkish Pasha of Egypt, to invade the Sudan in 1820, were first; to reach the gold which he heard existed in fabulous quantities; he wanted to recruit the strong brave

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<sup>2</sup> J. S. Trimingham, Islam in the Sudan, Oxford University Press, London, 1949, p. 83.

<sup>3</sup> For an account of the Arab penetration in the Sudan see H.A. Macmichael, A History of the Arabs in the Sudan, Vol. I, Cambridge, 1922.

<sup>4</sup> M. Shebeika, British Policy in the Sudan 1882 - 1902, Oxford University Press, London, 1952, p. 4.

Sudanese for his army; to discover and secure the sources of the Nile and to expand Egyptian trade. So Mohammed Ali sent an expedition under his son Ismail which defeated in battle, the forces of the various disunited kingdoms and chieftainships in the Sudan. The invaders lost no time after the conquest to look for gold but they were disappointed to find only limited quantities of it. Recruitment of Sudanese for the army started immediately.<sup>5</sup> The third aim of the conquest, the discovery of the sources of the Nile, was not as earnest as the search for gold. Later on, however, three expeditions were sent to explore the sources of the Nile, they reached the Sudd area, sailed up the Sobat, but never went further. The attempts to strengthen trade relations between Egypt and the Sudan were not as successful as were hoped to be, due to the primitive ways of production and the lack of surplus for trade. The only branch of trade that flourished between the two countries, was slave trade. Slave hunts by Turkish troops and private traders were frequent and women, men and children were cruelly siezed and many sent to Egypt.<sup>6</sup>

The Turko-Egyptian rule did little to improve living conditions of the people, and nothing to stamp out the abuses it created. They achieved, however,

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<sup>5</sup> Even the objective of recruiting able-bodied Negroes was frustrated because the number collected was smaller than Mohammed Ali expected. "This was accentuated by the difficulties of transporting them to upper Egypt and when they arrived there the change of environment was so sudden that they fell victims to consumption and died in hundreds." Shebeika, *Ibid*, p.9.

<sup>6</sup> The traveller Pallme who resided in Kordofan between 1838-1839 wrote, "The Viceroy of Egypt institutes annually once or twice in the course of the year, an actual hunt in the mountains of Nuba and in the bordering countries, and seizes upon a certain number of negroes by stratagem or force.... In the year 1825.... the number of slaves which had been led away into captivity was estimated at 40,000; and in the year 1839, the total number amounted to at least 200,000, without reckoning the thousands stolen by the Beggara and bought by the Djelabi (native merchants)". Quoted by H. Macmichael in his book, *The Sudan*, Benn Ltd., London, 1954, p. 29.



the unification of the country, both in the eyes of its own people and to the outside world. By their cruelty and injustice, the Turkish rulers, united the population in a common detestation of the Turkish regime, and so laid the foundation upon which the power of the Mahdist Revolution rested. By their brutality and encouragement of slave trade, the Turks also attracted the attention of the civilized world to the Sudan. The interest taken by private individuals and voluntary organizations grew on until by 1877 they were strong enough, to influence the British Government to use their good offices with Mohammed Ali Pasha. The result was a convention signed between Great Britain and Egypt in August 1877 for the suppression of slavery and slave trade.

Another curse of the Turkish regime was the elaborate system of taxation and the cruel methods employed in exacting it. The only weakness of the Sudanese people at that time was disunity and loyalty to the tribe alone. Then a leader appeared who gave them unity and a cause to fight for and in which they could sink their differences. The common cause was religious reform, and the leader was Mahdi. The Mahdist revolution that followed the Turkish regime and swept quickly over the northern Sudan, was strictly religious in origin and so it concerned itself very little with the pagan South.<sup>7</sup> Slave trade continued, even after the Turks were expelled from the country by the Mahdist forces. This created a strong feeling of hatred against the northerners by the southerners who regarded them on an equal footing with the Turks. When the Condominion regime began, after the defeat of the Mahdist troops at the close of the 19th Century, the slave trade and practice were stopped and every slave could leave his master, if he wished, by obtaining

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<sup>7</sup> See A.B. Theobald, The Mahdiya, Longmans Green & Co., London, 1951.

an emancipation certificate from the central Government.<sup>8</sup> The Government also in order to protect the southerners and to win their confidence, built up a protective barrier against northern merchants, which later crystallized into what is known as the "southern policy". According to this policy the south became a closed area administered as a separate unit to which no northerner was allowed access without a special permit.<sup>9</sup>

Working in the same direction as the southern policy, in accentuating the division between north and south, were the Christian missionaries. Different denominations of Christian missionary societies began establishing themselves in the south immediately after the reconquest of the Sudan in 1898. In addition to their religious and medical work, they established their own schools, which until 1927 were free from Government supervision and control. From 1927 onwards, because a regular system of subsidies was introduced, these schools came under the supervision of the Education Department. The missionaries not unnaturally, saw a challenge in the religion and the language of the north. The diocese of the Sudan declared in 1946 that "We must put all our strength and energy into christianizing the southern Sudan. The Dinkas, the Barias, the Zande, etc., must be brought to the feet of God."<sup>10</sup> Thus in their campaign to win the South, Christian missionaries have contributed, perhaps unintentionally, to the southerners' suspicion of

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<sup>8</sup> Article XI of the Condominium Agreement stipulated that only the import and export of slaves were prohibited. The case of domestic slavery was recognized to be on a different footing. So they were lenient about it, tackling it gradually. It was realized that any attempt to abolish it by a stroke of the pen would have caused violent upheavals by creating a vast class of unemployed tending to drift into the urban centres.

<sup>9</sup> "We don't want to introduce Arab merchants from the northern Sudan, as they don't know the local languages and are apt to cheat the unsophisticated southerners. We don't allow Indians in this area at all". K. D. Henderson, ed. The Making of the Modern Sudan, The Life and Letters of Sir Douglas Newbold, Faber & Faber Ltd., London, 1953, p. 401.

<sup>10</sup> Christian Missionary Society, Introducing the Diocese of the Sudan, London 1947, p. 67.

northerners. They regarded better communications between north and south a challenge. "Today a channel through the Sudd is cut and regularly cleared", a missionary pamphlet states, "Boats maintain a fortnightly service in each direction over the thousand miles between Khartoum and Juba. The significance is that what prevented easy communications in the past between north and south, and between Moslim and Pagan has now disappeared, and what is a highway for Christian penetration is equally an entrance for Moslim advance and for the inflow of materialism.... In addition to this, an increasing number of southern officials are being sent north for further training to fit them for higher posts in the several Government departments. Practically all these men will be Christians only in name. What a challenge there is here for them to take the Gospel of Jesus Christ to Islam, and what a challenge to us to send boys out from our schools who will be convinced, enthusiastic, and knowledgeable Christians, with a personal faith in the Living Christ which will lend them to witness fearlessly in life and speech, cost what it may."<sup>11</sup>

## II. Recent Developments in South-North Relations:

The result of the above historical factions created a problem between the northern and southern Sudan which in many respects has parallels in Africa, Asia and Europe. It arose in history whenever territorial boundaries came to be drawn in places where religious, cultural and historical conditions were not among the deciding factors. Indeed the boundary between Egypt and the Sudan has been subject to controversy between Egypt and Great Britain on one hand and the Sudan on the other.<sup>12</sup>

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<sup>11</sup> Christian Missionary Society, The Southern Sudan Then and Now, Adventure of Faith Series No. 12, London 1950, p.4.

<sup>12</sup> A recent dispute on boundaries took place between Egypt and the Sudan in February 1958.

When the first steps were taken towards associating the Sudanese with the Central Government of their country in 1944, an advisory council was set up for the northern Sudan only. The deliberations of that council were restricted to the north and no questions referring to the south were permissible, even if they were closely related to the funds derived from the revenues of the north for the economic development of the south.<sup>13</sup> The southern policy, however, remained a guarded secret until 1947. In that year an official document - The Sudan, a Record of Progress, 1898-1947, was released by Sudan Government before the Security Council of the United Nations, which started to hear Egypt's case against the British position in the Sudan. No definite goals were stipulated in the document, but it was clearly shown, that the Sudan Government made their doubts on the propriety of a united Sudan and preferred to see the decision on the ultimate future of the south, made by an international body. Their attitude was clear in the following passage, "Meanwhile the present Government while doing nothing to prejudice the issue, is proposing to associate sympathetic northern Sudanese with the implementation of a policy which aims at giving the south the same chances of ultimate self-determination as have been promised to the north". Some of the missionary-educated southerners strongly believed in the protection idea. A young Shilluk was reported to have said, "The British gave us protection, but still we are ignorant. The north is up and we are down, and we should stay under the British trusteeship until we are on the same level as the north".<sup>14</sup>

The main arguments, behind the southern policy were, to begin with; that the confidence of the southerners in the northerners and in foreigners

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<sup>13</sup> Proceedings of the 4th Session of the Advisory Council for the Northern Sudan, 3 - 8 November, 1945, para. 4472.

<sup>14</sup> John Hyslop, The Sudan Story, The Naldrett Press, London, 1952, p.70-71.

generally has been shattered by the memory about slavery prevalent in the 18th and 19th centuries, when the south was often the victim of slave raids. That there was slavery in the past, none would deny, but it remains a fact that slavery was a common crime. Britain herself, who was adopting the protection idea, did in fact make treaties to slave trade in most parts of Africa, including the whole of the Sudan, north and south. It is common knowledge that by the treaty of Utrecht concluded in 1713, Britain secured a thirty year monopoly of slave trade and thus supplanted all the other European nations. Even the most civilized countries of the world today, have been guilty of these inhuman practices on a scale much higher than those committed by one Sudanese against another. The rapid expansion of education in the Sudan will undoubtedly eradicate the idea of slavery from the minds of every Sudanese and will bring about mutual understanding and a common feeling of citizenship.

Another argument for protecting the southern provinces, was that they lagged behind in political maturity; an argument only of temporary validity, which could not be used for the permanent seclusion of the south. Equally fallacious is the argument - mainly advanced by missionaries - that the gentle savages of the south should be protected from the advance of materialism. The Zande scheme was analysed in the following terms by the Christian Missionary Society, "In all this, the infant church is being more than a little bewildered. Can one wonder! The Church is in fact passing through a crisis caused by this social upheaval of resettlement in part by the influx of money in undreamt of amounts years ago, and in part by the rapid change in standards. Many feel that the greatest danger to the Church throughout the southern Sudan today, is from a spreading materialism".<sup>15</sup>

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<sup>15</sup> Christian Missionary Society, The Southern Sudan, Then and Now, London, 1950, p. 11.

Most of the southern tribes suffer from low standards of diet, disease and lack of education. Any development which gives them more food and better conditions of life should be more than welcome. No people can be kept away from cultural and social influences. If "economic growth comes through change and causes change",<sup>16</sup> as it inevitably does, the duty of the educationist, the administrator and the missionary, is to help the people go through the change with as little disturbance as feasible.

The racial and cultural diversity between the north and the south, as an argument for separating the two regions, was only used recently. It was hampered upon by the rival parties in the Anglo-Egyptian conflict over the Sudan. In opposing the idea of a political union between Egypt and the Sudan and in attempting to sever the pro-British-south from the pro-Egyptian-north and possibly amalgamate the former with British Uganda, the British appealed to the racial and cultural differences between the Sudan and Egypt on the one hand, and between the north and the south on the other. In the course of the Anglo-Egyptian negotiations on July 6th 1951, the Egyptian Minister for Foreign Affairs addressed the British Ambassador in Cairo as follows :

"As to the inhabitants of the south, they are linked with the inhabitants of the northern Sudan and those of Egypt by their Hamitic origin, and this is what we meant when we said that your remarks about difference of race between the peoples of the Sudan lack actual scientific support. I do not want to go into lengthy scientific discussion, but suffice it to say, that several anthropologists, including a number of eminent British scientists, admit that the Sudanese are one race."

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<sup>16</sup> The happy phrase of Professor McCord Wright.

To this the British Ambassador replied:

"It does seem to me, on the basis of what you have just said, that for instance Norwegians and Italians should be regarded as one people. But whatever the anthropological rights or wrongs may be, it is necessary to deal with things as they are today. I cannot believe that the Egyptian Government seriously considers the primitive inhabitants of the southern Sudan to be one people with the inhabitants of the Delta in Egypt."<sup>17</sup>

So race, religion and tribe or culture were an artifice employed negatively by the British to protect the Southern Sudanese from his northern compatriots, and both from the Egyptians. The same artifice was used positively by the Egyptians and Unionist parties in the Sudan to achieve unity in the Nile valley.

For a united Sudan there were three main arguments.<sup>18</sup> The first is that the south is financially dependent on the north. The cost of administration social and economic development is borne by the north. Even those who advocate the creation of a separated south or its attachment to Uganda, are discouraged by this thought, e.g. the authors of a report to the Fabian Colonial Bureau, who consider that the southern Sudan belongs to Central Africa say, "The solution is, however, not easy. Immensely backward in health, education and economic development, (the southern Sudan) is at present, possibly for ever, an economic liability to any country which accepted it. Uganda, the natural neighbour to do so would probably refuse it."<sup>19</sup>

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<sup>17</sup> Records of Conversations and Papers Exchanged Between the Royal Egyptian Government and the United Kingdom Government (March 1950-Nov.1951), published by the Egyptian Ministry of Foreign Affairs, Cairo 1951, p.126-7.

<sup>18</sup> For an outstanding statement of these arguments see Mekki Abbas, The Sudan Question, Faber & Faber, London, 1952, Appendix C, pp.173-183.

<sup>19</sup> Fabian Colonial Bureau, The Sudan, the Road Ahead, London, 1945, p.25-26.

The second motive for a united Sudan, is the dependence of the north on the Nile. What the northerners want to avoid is the control of the vital sources of the white Nile by a different nation. Possibly, they argue, any agricultural development of the south financed by the revenue of the north, may be of value not only to the south, but to the country as a whole. Thirdly, they believe that the mineral wealth of the south, not unknown might turn out to be of value to the whole country. Economically, the north and south may be complementary in the sense that the industrial south and the agricultural north or vice versa might at some future date make a self-sufficient Sudan. This may well prove to be an illusion but it is a feeling which prevails. It is because of these reasons and not because the south is a source of cheap labour and servants as the report of the Fabian Colonial Bureau suggests, that the northerners wanted the south to be united with them.

However, as a result of the incessant criticism of the southern policy on the part of Egypt and the politically conscious elements in the north, the British administration in the Sudan began in 1948 to adopt a new policy towards the south. In that year the administration with the support of the British Government in London, made provisions for the representation of the southern provinces in a legislative assembly for the whole country. Also in 1950, a policy for the cultural unification of both north and south was established by a decision of the Executive Council and Legislative Assembly to introduce teaching of Arabic in all Government schools and in all private and missionary schools above the elementary level. Southerners qualified for higher education started to go to the University College of Khartoum instead of Makerere College in Uganda. These measures fostered mostly by the northern Sudanese, were intended to promote a common outlook and a feeling of citizenship.



A change of Egyptians policy towards the Sudan occurred after the army took over the Government and deposed King Farouk. The Egyptian Government under General Neguib, accepted irrevocably the principle that the Condominium regime over the Sudan is to end and the Sudanese are to be free in choosing their own way into the future; either unity with Egypt or independence. The main political parties in the Sudan signed a mutual agreement in January 1953 in the presence of an Egyptian emissary at Khartoum.<sup>20</sup> The main points of the agreement were: the replacement of the Governor General's special powers to safeguard the south - on which the British insisted - by a formula giving him a wide range of rights to refer to the Condominium for any legislation which he considers unfair to anyone. The agreement also stipulated the formation of a Governor General International Commission; a Sudanization Committee to remove certain British officials before the exercise of self-determination and the withdrawal of British and Egyptian troops before the elections. It was also agreed that the principle of direct elections will be applied whenever possible. Concerning the south, the agreement provided that it will be represented by at least two ministers in the cabinet and by one quarter of members of Parliament. After discussions, amendments and adjustments the final agreement was signed on February 12th 1953.<sup>21</sup> It seemed for a while that the faction between the north and south was solved.

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<sup>20</sup> The emissary was Major Salah Salim, who also paid a rapid visit to the Upper Nile to ingratiate himself with some of the southerners. Photographs of him dancing in his underwear appeared in the British Press on January 13th and his methods have been described by the British Press as "strip tease diplomacy", Daily Mail, London, 13th February, 1953.

<sup>21</sup> For more details, see, P.B. Broadbent, "Sudanese Self-Government", International Affairs, Vol. XXX, No. 3, July, 1954, pp.329-330.

Unfortunately these various forces at work, competing and conflicting in the minds of the southern Sudanese, have together produced a heterogeneous southern party. It provided a platform for the politically active southerners of diverse political allegiance. Some endorsed the northerners commitment to a unitary state. Others advocated a limited autonomy to the north and south within a federated Sudan - a federation supported in the British Press and Parliament.<sup>22</sup> While others supported some sort of a union with Egypt, while a few favoured membership in the British Commonwealth. These conflicting forces, incensed by vested interest within and without the Sudan, exploded in August 1955 when almost the entire southern Corps of the Sudan Defence Force of 1770, British trained Officers and men together with the police, mutinied. Those who mutinied at Torit and elsewhere in Equatoria Province, were 1330 officers and men. At the end of three days fighting about 260 northern army officers and men and 55 southern civilians lost their lives. The Prime Minister of the Sudan complained that the experience of India, Pakistan and Palestine pointed out that some catastrophe often followed the withdrawal of imperial power. "What happened in the south", he added, "was the inevitable outcome of the relics and plottings planned many years ago".<sup>23</sup> The Round Table, a British Commonwealth paper replied that "The fissiparous trends in British controlled parts of Africa were due to the point that the majority of Africans are still tribesmen at heart".<sup>24</sup>

In January 1956 by a unanimous vote of both houses of Parliament, the Sudan was declared an independent republic, comprising all its present

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<sup>22</sup> See for example, Africa Digest, vol. VI, No. 1, July 1958 issue, p.18. The Times, May 23 and 29, 1958 and The New Commonwealth, Vol. 31, May 14, 1958, pp.28 - 283.

<sup>23</sup> Sudan Prime Minister, Sayed Ismail Al-Azhari in a Press Conference, London, September 20th, 1955.

<sup>24</sup> In an article, "African Independence", December 1955 issue.

boundaries. The southern provinces at that time were still under martial law. A prominent Sudanese administrator who served many years in the southern provinces remarked in a Press conference in London that, "The question of north and south is a hackneyed one. It is true that the Nilotics are not of the same stock as the Arabs; but the same applies to the Hedendowa in the east, the Nilus in the north and the people of Kordofan and Darfur in general. If we apply feudalism to the nascent countries of Africa, then there is no end to the theoretically feasible kingdoms you may build up. But the foundation will be so shaky that you will soon have to give it up and allow the melting pot of insurgent nationalism to unify the various elements together".<sup>25</sup> The Sudanese today are determined to live as equals in civil and property rights and that is what really matters to them, a nation or a state is not necessarily physically of one blood. Rather it is a geographical fact and a common desire of a people to live together. It is also a fact, however, that even among enlightened people the word race or tribe still carries emotional associations and provokes strong response, but this is a dying phenomena.

### III. Economic Policy for a Dual Economy:

Proposals for accelerating economic development of undeveloped countries in general and dual economies in particular, have become a major issue in contemporary economic literature. These proposals show a great diversity regarding policy recommendations which in turn indicates the complexity of the problem on hand. Views of economists sharply differ regarding the future of underdeveloped countries and range from cheerful, perhaps too hopeful, views of the optimists to the disheartening views of

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<sup>25</sup> Sayed Mohamed Osman Yassin, in a Press Conference with the Prime Minister, London, 20th September, 1955.

the pessimists and there are, of course, the moderates.

Dr. J. H. Boeke is perhaps one of the few modern economists who, from Malthus to Myrdal, has helped economics to be looked upon as a dismal science. The chances for success of recent efforts to develop dual economies along western lines, and using western policy tools lead Dr. Boeke to his pessimistic views. To him at best these efforts are likely to fail, at worst, they may hasten retrogressions and decay. Perhaps Dr. Boeke's strongest statement of this conclusion is in one of his articles describing the Indonesian situation. We cannot reverse the process of social disintegration in dual societies, he says, because it is not possible to transform the operating forces into the opposite of what they are. The contrast is too all inclusive; it goes too deep. We shall have to accept dualism as an irretrievable fact.<sup>26</sup> The acceptance of social and economic dualism leads Dr. Boeke to two policy conclusions; first that as a rule one policy for the whole country is not possible, and secondly, that what is beneficial for one section of society may be harmful for the other.<sup>27</sup>

Similarly efforts by governments of dual societies to develop their economies are apt to be futile according to Boeke's analysis. Economic development of any kind, to him, is hampered by limited wants, and still by little purchasing power. Either an increase in the supply of foodstuffs or industrializations, will lead to a glutting of the market, fall in prices, and havoc. Furthermore, governments can do nothing to alleviate the problems of unemployment in underdeveloped countries. Here, Boeke distinguishes at least five types of unemployment in dual societies; seasonal, casual, unemployment of labourers, unemployment for white collar workers, and in the

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<sup>25</sup> J. H. Boeke, "Three Forms of Disintegration in Dual Societies", Indonesie, Vol. VII, No. 4, April 1954, p. 284.

<sup>26</sup> J. H. Boeke, Ibid, 289.

case of Indonesia, unemployment among Eurasians. Dr. Boeke does not specifically mention disguised unemployment, but he says that all the types of unemployment he mentioned "are beyond the reach of government help, because dealing with them would entail a financial burden far beyond government means".<sup>28</sup>

Even the improvement of agricultural methods in dual economies may cause retrogression instead of advance in Boeke's scheme, especially if mental attitudes of farmers did not change in the process. Foreign experts trying to attain their objectives mainly by technical outside means can result only in an accelerated increase in population which makes the problem more insoluble than ever. As for industry, eastern barriers will always present obstacles for its expansion. "Technical progress along western lines is impossible and there is no question for the eastern producer adapting himself to western example technically and economically. Indeed, if eastern enterprise endeavour to imitate western methods, they will merely lose their competitive qualities."<sup>29</sup>

Dr. Boeke is perhaps, "the only economist of repute who projects Rudyard Kipling into his analysis of colonial economic policy".<sup>30</sup> He suggests that the line of demarcation between east and west is so sharp, that the application of western policy to eastern economies is not only wrong, but it can also be dangerous. Dr. Boeke, however, has little to suggest in a way of positive policy as a substitute for the technical -

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<sup>28</sup> J.H. Boeke, Economics and Economic Policy of Dual Societies, as exemplified by Indonesia, Institute of Pacific Relations, New York, 1953, p.318-319.

<sup>29</sup> J.H. Boeke, Economics..... p.193-194.

<sup>30</sup> R.K. Hazari, "Plurality and Underemployment", Indian Economic Review, Bombay, vol. VI, No. 1, July 1958, p. 75.

capital assistance approach, which he deplores. However, his idea seems to be, that any industrial or agricultural improvement in dual economies must be a slow process, small scale and adapted to a dualistic framework. "The conclusion to which this argument about industrial as well as agricultural reforms leads us, can be no other than the one already expressed, to wit, that social and economic dualism, far from being considered a passing phase, the termination of which may be hastened considerably by a western policy of integration, must be accepted as a permanent characteristic of a large number of important countries, permanent at least within a measurable length of time".<sup>31</sup> No concrete lines are spelt out by Dr. Boeke. "I will expose no plans", says Dr. Boeke, "except to stress the need for village revival of the rural gentry, but must follow democratic ways". Just how all this is to be accomplished, Dr. Boeke does not say; "but the sphere of action must be small, the time slow, and the goal won by faith, charity and patience; angelic patience".<sup>32</sup>

If one follows Dr. Boeke's conclusions literally then valuable time and a great deal of money are wasted every year in a vain attempt to develop the underdeveloped countries, by providing expertise and capital from the richer countries. Current efforts to persuade governments of the have-nations that such assistance should be greatly enlarged and be granted without military or political strings attached, would be misdirected. Although Dr. Boeke rightly emphasizes the social and cultural aspects of determining economic policy in dual economies, research on these aspects is at its infancy, and his word could not be the last one. His insistence on slow evolution through village restoration is undoubtedly defeatist and indeed

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<sup>31</sup> J.H. Boeke, "Three Forms of Disintegration in Dual Societies", Indonesia, Vol. VII, No. 4, April 1954, p. 293.

<sup>32</sup> J. H. Boeke, "Western Influence on the Growth of Eastern Population, Economic Internationale, Vol. VII, No. 2, May, 1954, p. 369.

dangerous, because economic growth will inevitably cause change which Dr. Boeke is trying to avoid.

In defending the capital-technical assistance approach Professor Higgins rightly points out, that development of dual economies requires primarily large amounts of capital investment especially in the underdeveloped sector. Such investment will be on a scale and of a type that will only be possible through joint efforts of underdeveloped countries and those advanced countries which are able to provide large scale capital and technical assistance. In so far as possible this investment should be accompanied by improvement in techniques that are labour absorbing rather than labour saving. Professor Higgins admits, however, that capital is not the only scarce factor in underdeveloped areas. Managerial and labour skills are also in short supply, but these can be provided for in the short run by foreign experts and in the long run by manpower training programmes under technical assistance. In short, what is required according to Professor Higgins is more of the same kind of capital and technical assistance that is already being provided to the underdeveloped countries. The trouble is not that it is of the wrong type, but that it is on far too small a scale.

The picture of underdeveloped countries leads Professor Higgins to more optimistic views than Dr. Boeke's. He agrees with Dr. Boeke that barriers to economic progress in these countries are forbidding, "but if a truly ambitious programme of technical and capital assistance were undertaken, with the fullhearted and sympathetic cooperation of the underdeveloped countries themselves, there is a good chance that the social and cultural obstacles may disappear without being attacked directly".<sup>33</sup>

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<sup>33</sup> B. Higgins, "The Dualistic Theory of the Underdeveloped Areas", Economic Development and Cultural Change, Vol. IV, No.2, Jan. 1956, p. 114.

Such an extreme contention about attacking the social and cultural barriers to economic development, is only matched by the enormous scale of development programmes which Professor Higgins suggests. "Nothing", he says, "But a development programme so big and so bold both to produce a 'shock treatment' and to turn the present large big scale disguised unemployment into an asset, seems likely to succeed".<sup>34</sup> The task is not merely to sustain or direct growth already underway, but to launch a process of growth that can get the economy over the "hump", where cumulative growth becomes possible. "The programme must be as big in relative terms (measured let us say in terms of the rate of per capita capital accumulation or the rate of increase in man hour production) as was the Industrial Revolution in Europe, which means in view of the much larger population in the now underdeveloped areas, that it must be very much greater in absolute terms, than anything that occurred in Europe in the 18th century or in the United States of America in the 19th or 20th centuries."<sup>35</sup> What Professor Higgins does not mention is the practical aspect of his suggestion; the availability of such an enormous quantity of capital and skills for aiding the have-not countries, and the willingness of the have-countries to grant it.

The culmination of the capital-technical aid approach to economic development reaches the peak of its hopefulness in a recent book by Messrs. W.W. Rostow and Max F. Millikan.<sup>36</sup> In their "proposal", they stress the fact that no two underdeveloped countries are alike in their problems of growth, but none the less, there is emerging from the intensive working of social

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<sup>34</sup> B. Higgins, "Development Planning and Economic Calculus", Social Research, Vol. XXIII, No. 1, Spring 1956, p. 51.

<sup>35</sup> B. Higgins, "The Dualistic Theory of Underdeveloped Areas", Economic Development and Cultural Change, vol. IV, No. 2, Jan. 1956, p. 114.

<sup>36</sup> M.F. Millikan and W.W. Rostow, A Proposal, Key to an Effective Foreign Policy, Harper and Brothers, New York, 1957.



scientists on the development problem, a recognition that there are common elements in the patterns of development of different countries which have implications for development policy everywhere. Since the proposal and its policy recommendations grew out of the conception of some of these common elements and stages of growth, it is important to try to summarize them below.

1. Development of economies starts by establishing the pre-conditions including education and changes in attitudes to suit modern economic activity, mobility of savings and risk taking and also institutions for mobilizing capital appear. Basic capital expenditure is directed notably to transport, communications and raw materials for export. But all this activity proceeds within an economic and social framework still characterized by traditionally low productivity, old values and institutions. Virtually all output is required at this stage to keep the population alive. In good years, however, it is possible to set aside a small part of output for future use; but any impetus it gives to growth is likely to be wiped out by a few bad years. Even if capital is available from outside at this stage, the capacity to absorb it in many sectors of the economy is very low. Technical assistance is more urgently needed at this stage as substantial foreign capital can be productively used in only a few fields like communications, irrigation and power.
2. Following the preconditions there comes a second stage during which the country makes the complex transition to a position where sustained economic growth becomes possible. Under the impact of particular stimulus the economy "takes off". The forces of economic progress which up to now have yielded limited bursts of activity expand and

become decisive factors. The rate of savings rises from say 5% of the national income to 10% or more. New Key industries, and better techniques develop and a class of entrepreneur emerges and acquires control over the decisions determining the use of savings. Trade of the country expands, backlogs of techniques and natural resources are exploited. At this transition stage, opportunities for productive investment spread to various outlets for foreign capital. But there continue to be sharp limits on how much capital can be absorbed.

These limits on the amounts that can be productively used, technically termed the "technical absorptive capacity" are set by such factors as the technical and managerial capacity available, the size stability and the motivation of the non-agricultural labour force, the levels of skills, the development of markets and basic transport facilities.

3. Thirdly comes a long period of regular if fluctuating progress. Some 10% or 20% of the national income is steadily ploughed back into the expanding productive capacity. The structure of the economy changes continuously, sometimes painfully as techniques improve. The economy also becomes more intimately related to the international economy and may incur from time to time balance of payments troubles. As rapid growth provides the margin of resources from which additional investment can be made, the need for capital from abroad slackens. Ultimately it ceases entirely and domestic savings become so abundant that they begin to seek profitable employment abroad. In this third stage the technical absorptive capacity ceases to be a limiting factor.

The policy conclusions of the Proposal are that the United States and European countries should help underdeveloped countries in establishing the pre-conditions for growth (mainly through technical assistance) and to assist

them with capital especially in the decisive period of transition. The objective is to help the underdeveloped countries into a stage of self-sustained growth. When one of these countries passes through the transition stage and takes off, it should be in a position to operate on its own and to acquire external capital from private or other orthodox sources.<sup>37</sup>

The basic weakness of the proposal is its implied notion of growth as an automatic mechanical process advancing in stages. This streamlined concept of growth may lead to programmes which may well not succeed. Then if the "promised growth" does not eventuate, that may have disastrous effects both on the promised and promising nations.

Another weakness of the proposal is that it assumes a homogeneity of culture, which is not proven by observation. It assumes, for example, that what is good for the United States of America is good for everybody else, from the British Isles to the Isles of Micronesia. If steel mills are significant in the American Economy, they should be good for Nigeria. American agricultural techniques should be of interest to the melon growers in Iran and the Yam farmers of Africa. Margaret Mead, the anthropologist, has pointed out that such a simple innovation as an iron plough may have catastrophic consequences for agricultural countries like India. It throws the carpenter out of work, it requires heavier drawing animals, which in turn need more fodder. The wooden plough is light and can be carried from one plot to another, and as a farmer may have several widely scattered plots or strips, the iron plough makes necessary a general rearrangement and consolidation of holdings.

The hazards of accepting the "take off thesis" literally, can be best

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<sup>37</sup> M.F. Millikan and W.W. Rostow, "Foreign Aid: next phase", Foreign Affairs, XXXVI, April, 1958, p. 429.

illustrated from the Afghan experience. "In 1950 the Afghanistan government activated by the economic development theories of the foreign aid programmes and aided by an Export Import Bank loan, embarked on an ambitious scheme of water control and land reclamation in the Helmand Valley. This became eventually one of the largest American financed and constructed developments in Asia. The project while it has its defenders has not proved a success, partly for lack of trained administrators, partly because of engineering defects, but largely it appears because it failed to take into account the reluctance of the tribes to leave their traditional nomadic life for the sedentary life of tillage. The failure of this attempt at environmental conditioning has not only put grave strains on the Afghan economy, but has threatened the political stability of the country. From reports to the New York Times from correspondents who visited the country in 1956,<sup>38</sup> the Helmand Valley Project, "instead of being a boom to Afghanistan, has today placed a dangerous strain both on the Afghan economy and on the nation's morale. Some Western observers in Kabul reason that the recent Afghan-Russian trade agreement and the Afghan acceptance of \$100 million Soviet credit represent a partial attempt to mitigate this plight".<sup>39</sup>

It is sometimes suggested that for a foreign aid programme to be a success the lending country must take over the management of the economy bodily and reconstruct it from top to bottom. There are strong political objections to this argument. The political leadership of most of the underdeveloped countries is in the hands of the "elitist" groups who are resentful of the west because of their recent colonial past. Furthermore, to the social distance of the leaders from the masses, together with the embryonic character of local democratic institutions, all make use of

<sup>38</sup> New York Times Magazine, March 18, 1956, p. 56.

<sup>39</sup> Quoted by Elgin Groseclose, in his "Diplomacy of Altruism", in J.A. Wiggins ed. Foreign Aid Re-examined: A Critical Appraisal, Public Affairs Press, Washington, D.C., 1958, p. 37.

totalitarian methods more acceptable to them than to Western European governments. Thus, one is liable to agree with Professor Brzezinski, that the moment may have arrived for a radical shift (of Western foreign aid policy) from the position of an active external "doer" (so characteristic of the United States policy since the great success of the Marshall Plan) to that of a sympathetic observer willing to engage in such activities, as will benefit both parties, without exacerbating the present unfavourable trends.<sup>40</sup>

It could also be argued against the non-interference idea as does Prof. D. McWright by supposing that the receiving government mismanages the investment. Or supposing that the government does its best, but that the people are just not sociologically ready with the attitudes and preconditions needed for social growth. What happens then? "If the lending countries intervene then they are colonialist imperialists". If they do not intervene, "the programme fails, popular expectations are disappointed and the communists can drum up admiration for the superior efficiency of communism".<sup>41</sup>

The answer to the foreign aid dilemma seems to be neither a large programme operating without political considerations nor a programme of masterful inactivity; it is something in between.<sup>42</sup> One can argue whether foreign aid is appropriate or not, and what form it should or should not take, but it still remains a fact that the underdeveloped countries do not have their economic future in their hands and that "in the absence of aid from external sources there would only be pessimistic expectations with respect

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<sup>40</sup> Professor Z. Brzezinski, "The Politics of Underdevelopment", World Politics, October 1956.

<sup>41</sup> Professor D. McCord Wright, "Take-off where?" Business Horizons, Vol. 1, No. 4, Fall, 1958, p. 49.

<sup>42</sup> Professor Edward Mason, "Competitive Coexistence and Economic Development in Asia", in International Stability and Progress, The American Assembly, Columbia University, New York, June 1957, p. 95.

to the economic future of most of the underdeveloped countries."<sup>43</sup>

Once the home grown pre-conditions are developed and if capital becomes available, there is a certain amount of agreement among economists on investment policies. In dual societies, in particular, social and economic policy must be devoted to the simultaneous development of the "Northern" and "Southern" sectors so as to make them converge towards a common focus of prosperity. Major attention must be devoted to the improvement of agricultural productions, where subsistence agriculture is significant as a part of the economy, and in general to the encouragement of small industry and commerce. There are dangers, however, (especially stressed by Professor A.O. Hirschman), that the initial advance of the western oriented, market sector (the north) instead of spilling over the subsistence sector (the south), may affect it adversely. Professor Hirschman supposes three possibilities :

1. If the North Industrializes;

Some southern handicraft industries may become depressed as a result of competition. Real incomes in the south may also fall as northern manufacturers producing behind newly created tariff walls, replace similar goods imported from abroad at lower prices. Moreover, economic expansion in the north may attract the more enterprising young men from the south, as well as whatever capital is generated there.

2. If the north specializes in manufactures and relies on the south for primary products:

This sequence cannot continue for long. In view of the low supply elasticity characteristic of the south, the increasing demand for

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<sup>43</sup> J. Viner, International Trade and Economic Development, The Clarendon Press, Oxford, 1953, p. 119.

foodstuffs and materials in the developing North, will turn the terms of trade sharply against the latter. In this way either the advance of the north is going to be halted by rising labour and material costs, or the South is going to be spurred into becoming an efficient producer; in both cases the gap between the two sectors will be narrowed or closed.

3. But if the North possesses within itself a productive agricultural area or is able as a result of expanding exports to supply its needs of primary products from abroad:

Under such circumstances it is easy to see that the South could indeed remain in the "backwater of subsistence agriculture",<sup>44</sup> almost cut from any beneficial effects of economic progress in the North.

None of these alternatives is an easy one to adopt because expanded production will inevitably lead to inflation in this case. The prevalence of inflation in a dual economy seems partially to arise from the implicit realization that in order to stimulate a flow of resources from the subsistence sector, policies must be followed which tend to be somewhat inflationary.<sup>45</sup> Programmes for economic development of dual societies would certainly be inadequate, if they did not provide for dealing with and nursing the strains of unrest and violence due to change, which have been all too apparent in the last hundred years or so.

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<sup>44</sup> A.O. Hirschman, "Investment Policies and Dualism in Underdeveloped Countries", American Economic Review, Vol. 47, Sept. 1957; and his Strategy of Economic Development, Yale University Press, 1958, Ch. 10.

<sup>45</sup> S.P. Schatz, "A Dual Economy Model of an Underdeveloped Country", Social Research, Vol. 23, Winter 1956, p. 432. See also his Inflation in Underdeveloped Countries, American Economic Review, Vol. XLVII, No. 5, Sept. 1957, pp. 571 - 593.

#### IV. Development Policy Considerations and Proposals:

The study of economic planning in underdeveloped countries is still in its infancy in spite of the pioneering efforts of some prominent economists.<sup>46</sup> Such policy requires re-examining the body of economic theory which has grown up in the more advanced countries and avoiding both inappropriate analogies and irrelevant experiences. As no alternative form of analysis has yet been developed from which concrete policy proposals could be derived, the best course for the underdeveloped countries to follow is to make "tailor-made" development plans in terms of the conditions ruling in each individual country. Indeed, any economic policy derives its meaning and direction from the aspirations of the society within which it operates. It all depends on what sort of development the people want. Do they want continuing change and growth, or are they out, in the words of Professor Wright, "to reach a given set level of output and then go fishing?" The desire of the Sudanese people for economic progress has manifested itself in many ways; in their nationalistic upsurge for independence, which was in turn a desire to administer their own affairs and to exploit to the utmost the resources of the country. The political instability that followed the first years of independence had its economic reasons too. It was a search for a government which will leave aside political manoeuvres and make a positive contribution to development. The Sudanese army took over the reins of government on November 17, 1958.

During the colonial rule and up to 1945 economic development was sporadic and sketchy. Such projects as the Gezira Scheme, the Alternative Livelihoods Scheme, the Gash Delta and Khor Abu Habi irrigation schemes were examples of

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<sup>46</sup> Especially J. Tinbergen, Economic Policy: Principles and Designs, Amsterdam, 1956 and The Design of Development, I.B.R.D. Economic Development Institute, Baltimore 1958. H.B. Chenery, "Economic Policies and Programmes", UN (ECLA) Economic Bulletin, vol. iii, No. 1, March, 1958.



the concept of development held by the colonial administrators. They believed that in a stationary society, as the Sudan was, it would probably be easier for individuals with good knowledge of the key economic inter-relations to pick out the areas where basic services will contribute significantly to the growth of total output. Results, they suggested, can be achieved by simply concentrating the main effort to removal or widening of successive bottlenecks; in fact this approach - so called bottle-neck planning, has a number of advocates.<sup>47</sup> It shows the discomfort of economists regarding their role in economic policy. Being faced with problems which cannot be solved with tools provided in the standard kit, some economists tend to agree with the above opinion and limit themselves to "trouble shooting" or project planning.<sup>48</sup>

The last few years have brought a concentrated attack on the above mentioned approach of "gradualism" or "incrementalism" as an approach to economic development policy. It is now believed that any successful economic development under the present conditions, particularly in the face of gross backwardness, requires a "minimum effort" or a "big push" to overcome the original inertia of the stagnant economy and start it moving towards higher levels of productivity and income. To explain this basic concept M.I.T. economists resort to an analogy, "launching a country into self-sustaining growth is a little like getting an airplane off the ground. There is a critical ground speed which must be passed before the craft can become

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<sup>47</sup> See E.F. Aglen, "Economic Limitations to Future Development, in Food and Society in the Sudan, op. cit., p. 290; and V. Salera, "On Investment in Basic Services", Inter-American Economic Affairs, vol. vii, No. 4, p.58.

<sup>48</sup> The views were expressed at the Conference held at M.I.T. Center for International Studies in the Fall of 1954, quoted by B. Higgins in his Economic Development, op. cit.

airborne".<sup>49</sup> This "critical minimum effort" thesis developed by Galenson and Leibenstein<sup>50</sup> is supported on historical grounds by Professor Gerscheukron who wrote, "In viewing the economic history of Europe in the 19th Century the impression is very strong only when industrial development could commence on a large scale, did the tension between pre-industrialism and the benefits that may be expected from industrialism become sufficiently strong to overcome the existing obstacles to liberate the forces that made for industrial progress<sup>51</sup>." The development plan approach thus appears to have gained acceptance as a promising guide to policy in underdeveloped countries.

The first Five Year Development Plan in the Sudan was started in 1954 and aimed at promoting "balanced progress between economic development and social services."<sup>52</sup> The plan was drawn up by the governors of provinces and heads of departments at the request of the Governor General. A special committee assisted in selecting the most urgent projects. "Priority was given to revenue-producing schemes in order that increased recurrent costs in support of education and health may be borne at the end of the period."<sup>53</sup> Out of the envisaged capital expenditure of £11,484,470 the United Kingdom Government granted £2 million over a four year period in support of the programme. The major portion of the grant however was earmarked for education. The allocations of the programme budget were as follows:

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<sup>49</sup> (M.I.T.) The Objectives of the United States Economic Assistance Program, Washington, D.C., 1957, p.70.

<sup>50</sup> Especially in their "Investment Criteria, Productivity and Economic Development", Quarterly Journal of Economics, vol. LXIX, No. 3, August, 1955.

<sup>51</sup> "Economic backwardness in Historical Perspective" in B. Hoselitz (ed), The Progress of Underdeveloped Areas, Chicago, 1952, pp.7-9.

<sup>52</sup> United Nations, Economic Development in Selected Countries, Lake Success, October, 1947, p. 237.

<sup>53</sup> Ibid, p. 238.

		<u>Egyptian Pounds</u>
Central Government		
Agriculture & Forests		1,846,170
Irrigation		1,575,000
Veterinary Services		84,800
Public Works		1,722,500
Postal Services telegraphs)		
telephones and wireless )		665,000
Broadcasting		71,000
Aviation		250,000
Railways		2,500,000
Health		716,000
Education		986,500
Miscellaneous		13,500
TOTAL		<u>10,430,470</u>
Local Government		<u>1,050,000</u>
GRAND TOTAL		<u><u>11,480,470</u></u>

SOURCE; U.N. Economic Development in Selected Countries, Lake Success, October, 1947, p. 238.

Beside these there were separate departmental and provincial development budget programmes, e.g. Department of Agriculture and Forests, Public Works and Equatoria Province Board. The second development programme started in 1946, one year after the inception of the first one with slightly bigger provision of £E 14.6 million but it was not completed until June 1957.

The size of the programmes was enlarged since 1951. The 1951-56 programme, for example, has a provision of £s 45.5 million and is scheduled for completion in June 1958. The Managil Extension Project which has a separate budget is to run through 1955 - 1961 with an estimated cost of £s 35.7 million. (See Table 16).

TABLE (16)GOVERNMENT CURRENT ACCOUNT, DEVELOPMENT  
EXPENDITURE AND BALANCE OF PAYMENTS

1954 - 1958

Ls 000000

YEAR	CURRENT ACCOUNT			DEVELOPMENT EXPEND.	NET SURPLUS (-) or (-) DEFICIT 5=(3)-(4)	BALANCE OF PAYMENTS (6)
	REVENUE (1)	EXPENDITURE (2)	SURPLUS 3=(1)- (2)			
1954	38.1	30.6	7.5	8.1	-3.9	-8.5
1955	42.1	31.8	10.3	10.1	-8.3	-4.3
1956	37.5	34.4	3.1	12.4	-5.6	-17.5
1957	45.6	40.4	5.2	13.6	-8.4	-14.0
1958	38.9	38.3	0.6	13.6	-13.0	-13.0
IMF: The Sudan : An Economic and Social Survey, p. 52.						

An interim programme for 1957-58 with a provision of Ls 19 million is now in progress pending a decision on the new Five Year Plan for 1957-1962 which will cost in total some Ls 80 million and in which both the Maragil Extension and interim programmes will be incorporated. Actual development spending in 1957-1958 is at the rate of £ 13.6 million a year, compared with Ls 12.4 million in the previous year and Ls 1.4 million ten years ago.<sup>54</sup> (See Table (16))..

<sup>54</sup> United Nations, Structure and Growth of Selected African Economies, New York 1958, p. 198.

TABLE (17)  
ALLOCATION OF PROGRAMMED INVESTMENT  
PERCENTAGE OF TOTAL

ALLOCATION	DEVELOPMENT PROGRAMMES				
	1946- 1951	1951- 1956	MANAGIL EXTENSION	1957- 1958	ROSERES DAM AND KANANA EXTENSION 1958 - 1964
PRODUCTION	35.7	16.8	(a)80.4	55.0	
RESEARCH AND INVESTI- GATION	0.3	27.3	-	3.3	
SOCIAL SERVICES	10.0	26.8	-	8.0	
COMMUNICATIONS	10.7	13.4	18.6	16.2	
PUBLIC UTILITIES	42.3	13.8	-	9.0	
ADMINISTRATION	1.0	1.9	-	8.5	
TOTAL	100.0	100.0	100.0	100.0	
TOTAL PROGRAMME (£s millions)	14.6	52.5	20.0	37.5	29.0
SOURCE : Sudan Government Development Budget Estimates					
(a) Including management by Gezira Board.					

The Sudan has so far had experience with only one type of development planning, the sector or project type. Investment programmes for the whole economy or all resources controlled by the government are constructed by adding up the high priority projects in each sector. The sector approach is generally recognized now to be inadequate as a basis for development policy because it provides neither a test for the consistency of decisions made in each sector, nor a way of comparing high priority projects in one sector

with those in another.<sup>55</sup> This approach has nevertheless been the principal basis for development policy in the Sudan and some other under-developed countries. The defects of such a method are less serious in a primary producing economy than in those which have reached a high degree of industrialization and hence have more interdependence among the various sectors. It now remains for the Sudan to try a "big push" overall development programme.

The allocation of most of development expenditure in the programmes reviewed above is directed to cotton production, followed by communications through basic utilities. Social and educational services including technical training are also emphasized. (Table (17)).

The direct production effect of these programmes is mainly from the additional area in the Gezira Scheme. It is expected for example that the Managil Project will double, in four years, the government and private income from the Gezira and will increase the country's cotton production and exports by 60 per cent. The expected financial gains from the Managil are even higher. Against the capital cost of £35.6 million the gross proceeds after the completion of the project would amount to £20 million a year and it has been estimated that the capital cost will be recovered in less than three years. The high capital output ratio of the scheme, about 3:1, points to the great advantage in cotton plantation. Nevertheless there is an urgent need for diversification to reduce the extreme dependence of the economy on cotton exports. The argument for diversification in the Sudan is stronger than elsewhere because it will not only stabilize the economy but it is a requirement for growth. If a country wants to increase its output at a

faster rate than the world market is expanding it cannot be content with retaining its share of world markets. It is sometimes argued that in the Sudan cotton production should be supplemented rather than replaced by other cash crops because at present no alternative cash crop is as re-enumerative as cotton and there is experience and research grown around cotton which cannot be thrown over.<sup>56</sup> All these arguments make industrialization a virtual necessity because even if supplementary cash crops are found their future will be as doubtful as that of cotton now.

An industrial programme for the Sudan must take place within the limits of natural resources of the country. In this respect it is handicapped by its meagre natural resources and in all probability, therefore, the existing trend in industrial policy, namely the encouragement of light industries will have to continue.<sup>57</sup> The government will have the choice between starting, at once and at the same time, a large number of new industries, thus following the "multiple development" or "balanced growth" thesis, or resort to "shock treatment". The first alternative sounds logical but it is difficult to implement simply because the initial resources for simultaneous development on many fronts are generally lacking.<sup>58</sup>

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<sup>56</sup> S. Fawzi, "Problems of Economic Development in the Sudan", Presence Africaine, op. cit., p. 35.

<sup>57</sup> See Sudan Government, Industrial Policy, a statement published in Sudan Weekly News, vol. 2, No. 5727 1955. c.f. The Philippines Five Year Plan of 1950 where priorities were given to industries which (a) would earn or save foreign exchange (b) could be brought quickly into production (c) act as stimulants to other industries (d) use more local than imported materials (e) could operate economically on the basis of fulfilling the requirements of the domestic market. "Development Planning in the Philippines", International Labour Review, Vol. LXXI, No. 2, Feb. 1955, p. 187.

<sup>58</sup> The criticism is developed in Hans Singer, "Economic Progress in Underdeveloped Countries", Social Research, vol. 16, March 1949, pp. 7-8, and "The Concept of Balanced Growth and Economic Development, Theory and Facts", Malayan Economic Review, October 1958, pp. 1-13.

Professor Hirschman provides the extreme view on unbalanced growth. He advocates that governments should get involved in establish steel industries even when they are not capable of keeping the roads in passable conditions or teaching the people how to read and write. The wake of economic activity that follows, power and transportation shortages appear, and inadequacies in education become more apparent than before, so the government is impelled to improve its performance in these fields. The division of the government activities into these two inducing and induced or unbalancing and balancing seems useful to Professor Hirschman, in a variety of ways. For the government may learn now how to maintain a highway system by building a steel plant and secondly the construction and operation of the plant and its contribution to industrialization may build up the kind of pressures that will help the government correctly to discharge its "proper" functions - thanks to having first undertaken an "improper" one. Hirschman concludes that it is not suggested that the government should appoint a "Minister for Initiating Growth" and a "Minister for Restoring Balance"; but to think in terms of these two tasks may perhaps serve to give ministers and governments a clear conception of their role within the development process."<sup>59</sup>

Another aspect of choice facing the economic planner is whether to invest in productive equipment or to invest in "people". In a given situation of capital scarcity like in the Sudan what priority is to be given to schemes of social amelioration e.g. health, housing, education, etc.? Clearly, the two kinds of investment have to march side by side, for productive equipment is useless unless the people are healthy and educated enough to operate them; but the proportions will depend on a number of factors which may prove extremely

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<sup>59</sup> A. Hirschman, The Strategy of Economic Development, op. cit., p. 204-5.



difficult to "add up". Professor Schultz concludes from his experience in Latin America that, "A great deal of effort and capital.....to programmes which improve the quality of the people as productive agents, through health services and education ..... the rates of return on what is being put into these programmes.....are much higher than the rates of return on capital used to increase the stock of reproducible goods."<sup>60</sup>

The dualistic nature of the Sudan economy although it has its socio-logical and political stresses, has some compensating advantages and represents in a way the attempt by the economy in making the best of its resources during the transitional phase. Interest in the southern Sudan was expressed by the colonial rule although for quite ulterior motives. The tasks of economic planners in the free Sudan are greater. They must provide the south with what Hirschman calls "equivalents of sovereignty". The most important of such equivalents is a reaction against the feelings of despondency and self-designation so often encountered in lagging regions, and the mobilization of its energies through regional institutions and programmes. Naturally the channelling of large-scale expenditure towards the south contains the danger of misguided investment. The most obvious and least risky course is to endow the south with just as good a system of transportation, electric power stations and other social overhead capital facilities as available in the north. The railway line recently extended to Nyala should be extended southward as planned to Wau and later even further to tap the resources in the central and western parts of Equatoria Province. Improvement of roads complementary to any future railway system as well as improving steamer services, is clearly essential. It seems that the further improvement of roads to all weather or

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<sup>60</sup> T. W. Schultz, "Latin American Economic Policy Lessons", American Economic Review, Vol. XLVI, No. 2., May, 1956, p. 431.

even to all season standards especially in the clay soil of the Flood Region, would be prohibitively costly, though the strengthening of bridges and ramps to carry diesel transport is strongly recommended as a measure of immediate importance. The often-discussed project of Cairo-Cape Town road, if materialized, will be of great help to the region.

All this may not be the most efficient method of inducing growth in the south because of the weakness of its entrepreneurship and the purely passive attitudes. Although some investment in public utilities may be indispensable, the essential task is to endow the south with some ongoing and actively inducing economic activity of its own in industry, agriculture or services.<sup>61</sup> The development of such crops as sugar, rice and coffee will be ultimately faced with competition from old established producers. It may therefore require at least in the initial stages, some protection in the form of import duties or quotas. Such protection would certainly mean higher prices on the internal market or, in the case of sugar, decreased government revenue. However, the development of production of these crops would also mean a considerable saving in foreign exchange. These policies will insulate the south sufficiently so that it may undertake certain industrial and export activities independently of the north but at the same time, the complementary relationships that make the south a supplier of the north, must be preserved and intensified. Thus closing the gap between the two regions requires policies which would ordinarily be thought of as disruptive to the very integration they are designed to achieve. The purpose of these policies should be to cut down the "polarization effects" but care must be taken not to interfere with the efficacy of the "trickling down" effects.

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<sup>61</sup> For this reason, the building of a steel mill in Colombia's Oreinte and the founding of the new Brazilian capital in the long-neglected interior will probably turn out to be effective government development moves. Hirschman, Strategy, op. cit., p. 195.

A good development plan is not always the secret of success because such a plan may be poorly implemented by an inefficient planning executive organization. Until 1950 there was no exclusive body entirely concerned with formulation and execution of development in the Sudan. The whole matter was left for the initiative of departments and provinces. A crude form of organization, lacking in co-ordination, existed after the Second World War. By 1950 development projects were considered and decisions on them were taken by the following bodies: (1) Capital Expenditure Standing Committee; (2) Rural Water Supply and Soil Conservation Board; (3) Public Works Board; (4) Roads and Communications Board; (5) Board of Economics and Trade; (6) The Air Advisory Board, as well as Provincial Boards.<sup>62</sup> The Executive Council considered projects submitted by any of the above mentioned organizations and initiated, very rarely, projects of its own. The organization was obviously inadequate in many ways; it lacked co-ordination and long-term planning and it was also inefficient due to overlapping membership.

Since 1954 the Council of Ministers set up a ministerial Development Committee composed of the Minister of Finance as Chairman and the following ministers as members: Agriculture, Education, Public Works, Health, Communications, Commerce, Industry and Supplies. The secretary of the Development Committee is a full-time Commissioner for Development who is responsible for presenting to the Committee projects submitted by government units and to co-operate with these units in preparing their development budgets. He is

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<sup>62</sup> Development Branch, Ministry of Finance, Organization of Development Effort in Selected Countries, Pamphlet No. 4, Khartoum September 1956, pp.19-20. The situation was comparable only to the Philippines which had a National Economic Council, a National Planning Commission, an Economic Planning Board, a Community Development Planning Council and Investment Assistance Commission, a Cabinet Commission on Unemployment and a Council for United States Aid. It has been sardonically remarked "that confusion has been avoided only by the relative inactivity of both agencies in the area of duplicated responsibility", Steve and Associates, Public Administration in the Philippines, Manila, 1955, Chapter XII.

also to ensure co-ordination at the development budget state when the execution of a development scheme requires action by more than one unit. The Commissioner's office also watches over the progress of approved development schemes, it sanctions pre-budget expenditure and over-expenditure. An often neglected task of the Commissioner's office is to collect and lay before the Committee information required for the formulation of general long-term development plans.

The present organization of the Development Committee is appropriate for the sector or project planning so far pursued in the Sudan. If a long-term general plan is adopted, drastic alterations will have to be made in the development machinery. The general plan will require a body for surveying, drafting and adjusting the new programme. If these functions are split up among a number of different bodies, the intellectual continuity that successful planning requires becomes difficult to achieve. Such a body should not be allowed to take policy decisions nor to immerse itself in the executive process.<sup>63</sup> No expense should be spared to staff the planning organization with highly trained personnel who should reflect the component parts of the plan itself. Thus the planning team must include some experts in general economics and statistical analysis related to economic development. Planning also requires knowledge of particular problems related to development such as fiscal policy, monetary policy, balance of payments problems and the like.

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<sup>63</sup> The Indian Government Resolution of March 1950 laying down the tasks of the Planning Commission is a good example to copy. These tasks were as follows: (1) Assessment of material capital and human resources, and investigating the possibilities of augmenting those found deficient. (2) Formulating a plan for the most efficient and balanced utilization of the country's resources. (3) Determination of priorities and definition of stages with suggested allocation of resources at each stage. (4) Indicating the factors retarding economic development and suggesting remedies. (5) Determining the nature of machinery required at each stage. (6) Appraising of progress and recommending adjustments. (7) Making interim or auxiliary recommendations. Government of India, The First Five Year Plan, p. 9.

The planning organization also needs expert knowledge of particular sectors and industries such as agriculture, transport, light industries, etc. All these expertise need not be represented directly in the planning agency if it is available in other government departments. The relationships between the planning team and other government agencies must be clearly defined to make their expert advice available regularly and systematically to the planning agency. If possible, the planning agency must be placed close to the centre of political power to ensure that its demands for information are promptly met and that its advice is properly considered. For the coherent execution of the plan a well devised machinery of inter-agency co-ordination is required. A full-time co-ordinating agency would be ideal to carry out the daily working relationships and direct lines of contact with the units to be co-ordinated.<sup>64</sup> Finally planning should be regarded as a continuous process. "Once for all planning" decisions are practically impossible. Adjustments must therefore be made constantly, through a section of the planning agency responsible for checking, measuring and appraising the results of the development plan. The above criticism and proposals can be summarized as follows:-

- (1) To prepare an effective development plan, it is necessary to have extensive and intensive knowledge of natural and human resources of the country. Information is usually at its worst in the field of statistics which cries for improvement.

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<sup>64</sup> In the absence of such an agency a situation is likely to develop similar to the one thus vividly described by the International Bank Mission to Ceylon: "The various aspects of development are undertaken by individual ministries each with a justifiable pride in its work and anxious to make a good showing. There may be some general interchange in the Cabinet, but many projects meet each other for the first time on the floor of parliament, in the course of that body's regular and voluminous business. Inevitably decisions rest upon such extraneous factors as the skill and vigour with which a particular minister presents his case, the relative strength of the various claimants for funds and the like." Pp. 69-70.

- (2) The sector and project planning so far adopted in the Sudan, must be extended into an overall plan. A multi-purpose plan, as suggested, should aim at lifting the whole network of production, consumption and services to higher levels. Thus broad surveys of natural resources are required to estimate costs and envisage alternative courses of action. The plan must be detailed enough to permit adjustments and comprehensive enough to cause a "big push" in the economy. It must be consistent, efficient and workable.
- (3) A General Development Agency is needed to survey, draft and adjust the plan. The Agency should be entirely advisory. The execution of the plan depends largely on the administration of the government system and the operation of various executive agencies such as ministries, departments and semi-autonomous bodies. It is particularly important that the final programme responsibility should be centralized and that all economic agencies should be subject to the authority of a responsible body through a co-ordination branch. Since the structure of the economy is constantly being changed and the information for analysis is constantly being improved, the planning agency should cater for the revision of programmes and policies.
- (4) It is not enough to avoid destabilization through the development plan, because, if well constructed, the plan itself can be a positive stabilizing force. In the case of the Sudan it is not merely that stable growth is better than unstable growth, but experience has shown that the Sudan must have stability in order to have growth at all. As no alternative crops can replace or supplement cotton, industrialization becomes a virtual necessity.

- (5) Should investment be concentrated on accelerating growth on the growing points or leading sector and region or should investment be made in the lagging sector or region? From both the theoretical and practical experience, the answer is both. Concentration of investment in the advancing sector will ultimately aggravate the problem of dualism. At the same time the lagging regions should be given the "equivalents of sovereignty" encouraging a separate pattern of development from, but complementary to, that in the leading region.
- (6) In the face of recent set-backs concerning export incomes and government surpluses in the Sudan, and the fact that so far the government has been able to draw upon accumulated liquid resources for development, it is deemed necessary that a considerable part of the development plan will have to be financed by foreign loans and aid from international institutions and friendly nations.
- (7) Each of the above aspects of planning has a contribution to make and efficient planning cannot ignore them. But none of them - not even all of them can guarantee economic development. An often neglected factor is the importance of regimenting public interest and participation in the process of economic growth. A development plan is prepared and implemented by the people and it will not succeed unless the people want it. Public support for a development plan has its responsibilities; it should imply public readiness for sacrifice and the acceptance of change as a normal and continuous process and the belief that the road to economic development is "steep and thorny" and it has no "primrose path".

APPENDIX IGLOSSARY OF ARABIC TERMS

Baggara	A group of several cattle owning nomadic tribes centred mainly in Kordofan Province.
Dukhu	Burlush millet - <i>Pennisetum typhoideum</i> .
Dura	Great millet - <i>Sorghum vulgare pers.</i>
Hafir	A pit or reservoir dug to collect rain water.
Hariq	A type of cultivation involving burning off an old stand of grass before sowing.
Howāsha	A holding of land, in the Gezira a tenancy of 10 feddans.
Kharif	The rainy season.
Lubia	The term used mainly for the pulse crop or for the cowpea.
Sagia	Native wheel worked by animals for lifting water for irrigation.
Seluka	A digging stick provided with a foot rest.
Shaduf	A hand operated device for lifting water for small irrigated areas - a seesaw arrangement whereby a leather bucket is counterbalanced by a lump of clay.
Sheil	Advances in cash or kind against crop prospects.
Simsim	Sesame - <i>Sesamum orientale</i> .
Sudd	A barrier - locally the vast bog or water prairie between Lake No and Bor.



- Toich                      A Dinka word for the annually flooded clay grazing lands along the water courses draining into the Sudd.
- Ushur                      Locally an indigenous land tax amounting to one-tenth of the total yield of the crops.

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