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INDUSTRIALIZATION IN THE SUDAN

ISSUES AND POLICIES

A THESIS

submitted by

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SUMMARY

In view of the sluggishness in foreign demand for primary products, nearly all developing countries have actively embarked on a deliberate policy of industrialization in an endeavour to reduce the risk resulting from the excessive dependence on the exports of primary products, and to broaden the basis for growth. The urge to industrialize is further strengthened by the benefits that could be derived from industrialization e.g. creation of employment, enhancement of capital formation, development of talents and skills etc. etc.

Generally, in most of these countries the pattern of industrial development is directed towards the production of import substitutes, especially of light consumer goods. This line of policy is dictated not only by the availability of resources, but also by the existence of trade barriers which stand in the way of pushing the exports of manufactured goods by the developing countries. However, in spite of the criticism which is usually launched against import-substituting industrialization, it is our contention, in view of the above, that it is the main open path for the developing countries, and that if it is carefully planned and built on an economically sound

basis, it is bound to bring good results which would pave the way for further development.

Sudan, as a primary producing country and being heavily dependent on a single cash crop namely the extra long-staple cotton, has followed the same line of policy i.e. the development of light manufacturing in an endeavour to diversify the structure of production. The first serious attempt towards industrialization occurred after the country attained its independence in 1956. Since then there has been a steady expansion in the manufacturing sector. Most of the industries installed are initiated by the private sector. Direct government participation is confined to industries for which private capital has not been forthcoming. To induce both foreign and domestic private capital to invest in the field of manufacturing, the government has enacted incentive legislations embodying a range of concessions and facilities with varying degrees of effectiveness in stimulating the desired investments.

CHAPTER I

MOTIVES FOR INDUSTRIALIZATION

In nearly all low-income countries where agriculture is the dominant activity, there has been a strong tendency on the part of policy makers to favour and seek a deliberate policy of industrialization as the key to economic growth and to the improvement of the material welfare of their population. So at the outset it is worthwhile to involve ourselves in considering the reasons which led those countries to embark on a policy of industrialization rather than adhering to their traditional field of activity which is highly concentrated on the production of a few primary products for the export markets.

The reasons are quite obvious. First of all most of these countries specialize in the production of primary products (i.e. farm products, fishery and forest products and minerals), the exports of which constitute a very high proportion of their national incomes and account for about 85-90 per cent of their total export earnings. As a consequence of this lop-sided specialization and the heavy dependence on foreign markets the economies of these countries are bound to

suffer in the event of price fluctuations.⁽¹⁾ It is worth mentioning in this respect that all the efforts which have been made to reduce the effects of such fluctuations, whether in the form of buffer stock schemes or any sort of compensatory financing, have made little progress and have met with some practical difficulties e.g. the conflicting interests of producing and consuming countries and a host of administrative difficulties.⁽²⁾ This being the situation as far as international action is concerned, the remedy at the disposal of these countries is to make themselves less vulnerable to such fluctuations by diversifying their sphere of activities, thus making their production structure more flexible. Since most of these countries are specializing in the production of a small range of crops, it may be argued that the effects of such

-
- (1) For counter arguments, see MacBean, A., *Export Instability and Economic Development*, London, Allen & Unwin 1966; Sir Sydney Caine, *Instability of Primary Product Prices: Protest and a Proposal*, *Economic Journal*, Sept. 1954. However, in spite of the empirical studies presented, there is no doubt that as a result of such fluctuations the process of planning is bound to be distorted.
- (2) See for example, H. Johnson, *Economic Policies Towards Less Developed Countries*, Washington D.C. The Brookings Institution 1966, Chapter 5, and J. Pincus, *Trade, Aid and Development*, McGraw - Hill Book 1967, Chapter 7.

fluctuations can be mitigated by broadening the basis of their exports through the introduction of a greater number of crops, instead of seeking industrial growth - a field in which their comparative advantage is considerably less. However, although the diversification of agriculture can provide some degree of security in the short run, and hence ought to be encouraged, it will not by itself constitute a permanent solution to the problem that these countries encounter, since nearly all agricultural production is characterised by such fluctuations, whether in volume or prices, plus the fact that due to natural limitations the desired diversification might well be inhibited.

Moreover, primary products with the exception of oil and some metals are faced with a sluggish foreign demand compared to manufactures.⁽¹⁾ Table I below shows the value and volume of world trade in primary products and manufactures, while Table II shows the imports of major primary products by some of the major industrial centres. Both tables reflect the slow growth of primary exports. The reasons for this

(1) For detailed discussion see Rangar Nurkse, Patterns of Trade and Development, Wicksell Lectures, Stockholm 1959, pp. 19-26 and Raul Prebisch, Towards a New Trade Policy for Development, U.N. New York 1964, Chapter II.

TABLE I
 VALUE, PRICE, UNIT VALUE AND VOLUME OF WORLD TRADE
 IN PRIMARY PRODUCTS AND MANUFACTURES 1953 = 1957 =
 1965

	1953	1957	1958	1959	1960	1961	1962	1963	1964	1965
Value of World exports (000 million dollars (F.O.B.))										
Total	78.3	109.7	105.7	113.6	126.1	131.9	139.0	151.7	169.8	184.0
Primary Products	41.8	53.2	49.8	52.2	56.2	58.0	59.7	65.1	70.1	(74)*
Manufactures	35.6	55.3	54.7	60.0	68.6	72.4	77.9	84.6	96.7	(108)*
* Unit value of W. Exports (Indices 1953 = 100)										
Total	100	103	100	99	100	99	99	100	102	103
Primary Products	100	101	96	93	93	91	90	92.5	95	(94)*
Manufactures	100	104	103	103	105	105.5	105	105	107	(109)*
Volume of W. Exports (Indices 1953 = 100)										
Total	100	136	135	146	161	170	179	194	213	228
Primary Products	100	126	124	134	144	152	158	168	178	(188)*
Manufactures	100	149	149	164	183	195	208	226	254	(278)*

SOURCE PEP, Trade Policy Towards Low-income Countries 1967 Table I p. 30.

* Provisional * Excluding Eastern bloc.

TABLE II
Imports of Major Primary Products
by Western Europe, the United
States and Canada

	Annual Average, Million Dollars		Percentage annual rate of growth
	1952 - 54	1962 - 64	
	1	2	3
All commodities	46,430	90,109	6.9
Non-primary	13,923	45,320	12.6
Primary	32,507	44,789	3.3
Livestock	188	605	12.4
Fish	394	983	9.6
Corn	347	801	8.7
Feeding-Stuff	363	832	8.6
Iron Ore	548	1,176	8.0
Meat	1,052	2,187	7.6
Fresh Fruits	873	1,697	6.9
Mineral fuels	5,251	10,063	6.7
Wood	1,323	2,120	4.8
Cooper	1,113	1,714	4.4
Tobacco	504	762	4.2
Dairy Products	774	1,064	3.2
Oil Seeds	720	957	2.9
Sugar	1,026	1,384	2.7
Hides	349	455	2.6
Vegetable Oils	468	572	2.0
Tea	377	453	1.8
Rubber	897	832	-0.8
Coffee	2,188	1,916	-1.4
Wool	1,602	1,368	-1.6
Wheat	921	740	-2.2
Cotton	1,362	1,009	-2.9
Other Primary	8,792	9,655	1.0

Source: B.I. Cohen, The Less Developed Countries' Exports of Primary Products, The Economic Journal June 1968 p. 339.

phenomenon are numerous. First of all, the income elasticity of demand for primary products especially foodstuffs⁽¹⁾ is relatively low. The consumption level for some items in some parts of the world has already reached its saturation point, for example, it has been pointed out that in spite of the considerable growth in both per capita income and population, the consumption of wheat, in absolute terms, in the United States has not increased since the beginning of this century.⁽²⁾ Indeed in that country the income elasticity of demand for food items is generally around 0.25 or even less.

Secondly, due to technical progress and technological improvements, the industrial countries are now capable of increasing the volume of their output without a proportionate increase in their requirements for raw materials.⁽³⁾ In this connection it is worth drawing attention to Professor Schultz's paper, "Economic Prospects of Primary Products", submitted to a conference held by the International Economic

(1) According to Engel's law, the income elasticity of demand for foodstuffs is generally lower than the income elasticity of demand for non-food items especially in the advanced countries.

(2) Prebisch, Towards a New Trade Policy, p. 11.

(3) See Yates, P.L., Forty Years of Foreign Trade, George Allen & Unwin, 1959, p. 39.

Association, in which he has shown that in spite of the very large increase in the real per capita income in the United States during the period 1904-50 the consumption of raw materials in relation to the gross national product dropped from 22.6 per cent to 12.5 per cent (see Table III below). The situation is summed up by Schultz's concluding remark, "Indeed none of the major classes of raw materials increased as rapidly as gross national product, although minerals and fuels came close to keeping pace. By contrast forest products not only fell in value but also dropped most sharply relative to gross national product."⁽¹⁾

Thirdly, the development and wide use of synthetics has affected to a great extent the market for natural raw materials. Synthetics consumption has been expanding at a rapid rate throughout the post-war period; it has been pointed out that in the major industrial centres man-made materials accounted for about 15 per cent of the total volume of raw materials used in manufacture in 1955, against less than 3 per cent in the period before the Second World War.⁽²⁾ In addition research

(1) Schultz, T.W., "Economic Prospects of Primary Products", Economic Development of Latin America, Economic Association, Edited by Ellis, H.S., London 1961, pp. 311-312.

(2) GATT, International Trade, Geneva 1956, p. 12.

TABLE 111

Production and consumption of raw materials and gross national product in the U.S.A. 1904 - 1950

Period	Total raw materials except Gold		Total raw materials except Gold & Agricultural Foods		Total Agricultural Materials	
	Value	% of G.D.P.	Value	% of G.D.P.	Value	% of G.D.P.
1904 - 13	9.9	22.6	4.4	10.0	6.8	15.5
1914 - 23	11.3	19.9	5.1	9.0	7.6	13.4
1924 - 33	13.0	17.6	5.6	7.6	8.9	12.0
1934 - 43	14.7	15.0	6.6	6.7	9.9	10.1
1944 - 50	18.6	12.5	8.7	5.8	12.2	8.2

Source: Schultz op. cit. Page 326.

in this field is still going on very actively, and new synthetic products are being brought to the market quite frequently. Thus as far as the future prospects for natural raw materials are concerned, a further element of uncertainty has been added and hence the need for a diversification of domestic production has become imperative.

In addition to the foregoing we may now move to the question concerning the terms of trade. According to a United Nations report on the "Relative Prices of Exports and Imports of Under-developed Countries", "From the latter part of the nineteenth century to the eve of the Second World War there was a secular downward trend in the prices of primary goods relative to the prices of manufactured goods. On an average a given quantity of primary exports would pay at the end of this period, for only 60 per cent of the quantity of manufactured goods which it could buy at the beginning of the period.⁽¹⁾ (See Table IV below.) Also,

(1) UN Department of Economic Affairs, "Relative Prices of Exports and Imports of Underdeveloped Countries", New York, December 1949, p. 72. See also Raul Prebisch, "The Economic Development of Latin America and its Principal Problems", ECLA, Economic Bulletin of Latin America, Vol. VII, No. 1, Feb. 1962, pp. 1-6, and Hans Singer, "The Distribution of Gains between Investing and Borrowing Countries", American Economic Review Papers and Proceedings, May 1950, pp. 475-479.

according to Oskar Lange, "in the period from 1953 to 1958 raw material prices fell by 7 per cent, while industrial prices rose by 4 per cent."⁽¹⁾

Although this issue regarding the terms of trade has been the subject of much debate among economists and experts, yet, the statistical evidence however shaky it may be, reflects that the trend of prices is not moving in favour of primary products, but on the contrary, their prices tend to decline in relation to those of manufactured goods, and even if it is conceded that the prices of primary commodities regained momentum during certain periods, the argument still remains that the terms of trade were not favourable enough to meet the development needs of those countries which are wholly dependent on the exports of such products. So, if the terms of trade dictum is taken to be valid, as it is, it is all the worse for the underdeveloped countries to concentrate excessively on the production and export of primary products,

(1) Oskar Lange, "Economic Development Planning and International Co-operation", Monthly Review Press, New York 1963, p. 31. See also United Nations Statistical Year Book 1964 (New York 1965, according to which commodity terms of trade fell from 109 in 1954 to 100 in 1964, p. 496.

TABLE IV

Ratio of Prices of Primary
Products to those of
Manufactured Goods (Average
Import and Export Prices,
according to Data of the Board
of Trade)

(1876 - 80 = 100)

Periods	Amount of finished products obtainable for a given quantity of primary commodities
1876 - 80	100
1881 - 85	102.4
1886 - 90	96.3
1891 - 95	90.1
1896 - 1900	87.1
1901 - 05	84.6
1906 - 10	85.8
1911 - 13	85.8
- -	- -
1921 - 25	67.3
1926 - 30	73.3
1931 - 35	62.0
1936 - 38	64.1
- -	- -
1946 - 47	68.7

Source: Prebisch The Economic Development of Latin
America and its principal problems, page 4.

although it is quite true that at the early stages of development the export of such commodities is very important in starting the process of development.

However, from what has been mentioned in the preceding paragraphs, it is not meant to undermine the role which has been and can be played by agriculture in the process of economic growth. There is no doubt that the development of agriculture must be considered as a prerequisite for the development of the other sectors of the economy, and its contribution, in that respect, is notable in various ways e.g. as a supplier of food and raw materials, as a source of foreign exchange, as a base for industrialization and as a source of both manpower and capital.⁽¹⁾ But while all this is appreciated, the argument still holds, that too much dependence on agriculture alone is lop-sided and ought to be rectified by promoting the growth of the other sectors of the economy, namely, the manufacturing sector, thus avoiding the danger of "putting one's eggs into one basket".

(1) See F. Johnston and John Mellor, "The Role of Agriculture in Economic Development", *Leading Issues in Development Economics*, Edited by Meier, Oxford University Press 1964, pp. 291-297.

Although what has been mentioned so far is quite applicable to Sudan as a primary producing country,⁽¹⁾ nonetheless, it is desirable to be more specific by having a brief look at the Sudanese export sector and its main constituents with the view of assessing its future prospects.

The Sudan export sector is powerfully dominated by one agricultural commodity namely, the extra long staple cotton which constitutes about 96 per cent of the total volume of cotton produced in the country, and whose share in total export earnings averages about 60 per cent. (See Table V a and b below.) However, apart from the short term fluctuations in yields, grades and prices typical of agricultural production the demand for cotton in the world markets is facing a declining trend. This is mainly due to the severe competition arising from the wide use of synthetic fibres, the further development of which will have serious repercussions on the future prospects of cotton.

(1) Sudan is an agricultural and pastoral country; about 95 per cent of the total value of exports is derived from these activities.

TABLE Va.
 SUDAN EXPORTS IN LS (MILLION) 1950 = 1967
 (LS 1 = £1. 3s. 11d.)

YEAR	COTTON* (LINT & SEED OIL)	GUM ARABIC	GROUND NUTS	SESAME	CATTLE HIDE & SKIN	DURA (SORGHUM)	OTHERS
1950	24.8	2.7	0.2	"	1.8	"	3.6
1951	49.3	3.5	0.8	0.4	2.0	"	6.8
1952	31.5	2.5	1.1	1.3	1.3	"	5.1
1953	30.0	3.0	2.0	1.5	1.6	"	6.3
1954	24.9	3.8	1.1	1.6	2.4	"	6.6
1955	33.8	4.7	2.4	1.8	1.9	"	5.9
1956	46.9	5.4	3.8	2.1	2.6	"	6.1
1957	28.8	4.7	4.7	3.0	3.1	0.6	7.1
1958	23.8	5.2	3.4	2.2	2.4	0.8	6.4
1959	45.0	5.2	3.6	2.8	2.3	0.9	8.1
1960	36.3	7.0	4.5	4.6	2.5	2.8	8.9
1961	34.7	6.1	5.4	4.2	2.5	1.9	9.3
1962	48.5	4.6	6.7	5.7	1.8	1.5	10.1
1963	49.3	5.7	6.4	4.8	2.3	1.5	8.6
1964	33.2	6.7	9.1	6.4	1.7	1.5	9.7
1965	33.1	7.5	8.6	4.7	3.2	2.4	8.4
1966	36.1	7.2	7.3	5.6	3.4	1.9	9.2
1967	41.9	8.3	6.5	6.5	3.3	"	7.5

SOURCE: Department of Statistics and Various issues of Sudan Economic Survey, Ministry of Finance and Economics, Khartoum.

* The short staple variety constitutes a small percentage of the Cotton exported and is mainly used by the local textile mills.

TABLE V b

THE PERCENTAGE SHARES OF VARIOUS PRODUCTS IN THE
SUDAN EXPORTS

YEAR	COTTON	GUM	GROUND NUTS	SESAME	CATTLE AND HIDES	DURA	OTHERS
1950	75	8.2	0.6	"	5	"	11.2
1951	78.2	5.6	1.3	0.7	3.2	"	11
1952	73.6	5.8	2.5	3.3	3.3	"	11.5
1953	67.5	6.8	4.5	3.4	3.6	"	11.2
1954	61.6	9.3	2.8	3.9	6.0	"	16.4
1955	67.0	9.2	4.8	3.6	3.8	"	11.6
1956	70.1	8.1	5.7	3.1	3.9	"	9.1
1957	55.3	9.0	9.0	5.9	6.0	1.0	13.6
1958	53.8	11.8	7.7	5.0	5.4	1.8	14.5
1959	66.2	7.7	5.4	4.1	3.4	1.3	11.9
1960	54.5	10.5	6.8	6.9	3.8	4.2	13.3
1961	54.0	9.5	8.4	6.6	4.0	3.0	14.5
1962	61.5	5.9	8.5	7.2	2.3	1.9	12.7
1963	62.7	7.3	8.2	6.1	2.9	1.9	10.9
1964	48.7	9.7	13.3	9.4	2.5	2.2	14.2
1965	48.8	11.0	12.6	6.9	4.8	3.5	12.4
1966	51.1	10.1	10.4	7.9	4.8	2.7	13.0
1967	56.6	11.2	8.8	8.8	4.5	"	10.1

SOURCE: Calculated from various issues Sudan Economic Survey. Ministry of
Finance and Economics, Khartoum.

According to the FAO Bulletin on "Synthetics and their Effects on Agricultural Trade", world production of man-made fibres increased from 1.7 million tons in 1952 to 3.9 million tons in 1962. As far as their consumption is concerned, it accounted for more than a quarter of total world consumption of all apparel fibres in 1962 against less than 17 per cent in 1952. Comparing the rate of expansion in the consumption of both natural and man-made fibres between 1952-1962, the report runs as follows, "The advances in man-made fibre consumption were much more rapid than in the case of the natural fibres. Consumption of synthetics increased nearly sevenfold, while rayon consumption rose by 78 per cent. By comparison, cotton and wool each made gains of only about 35 per cent. As a result, the shares of the market held by cotton and wool have fallen from 73 per cent to 65 per cent, and from 10 per cent to 9 per cent, respectively. On the other hand, rayon's share has increased from 15 per cent to 18 per cent, and the synthetic's from 1.4 per cent to 7.4 per cent."⁽¹⁾ (See Table VI.) However,

(1) FAO Commodity Bulletin Series 38; "Synthetics and their Effects on Agricultural Trade" Rome 1964 pp. 31-32. See also Table VII which reflects the declining share of cotton in total apparel fibres consumption in the major industrial centres.

TABLE VI

WORLD CONSUMPTION OF COTTON, WOOL AND MAN-MADE
FIBRES IN THOUSAND METRIC TONS 1952 - 1962.

YEAR	COTTON	WOOL	RAYON			OTHER SYNTHETICS	TOTAL
			FILAMENT YARN	STAPLE	TOTAL		
1952	7,670	1,088	831	773	1,604	151	10,513
1953	8,221	1,220	947	930	1,877	164	11,502
1954	8,534	1,182	926	1,111	2,037	225	11,978
1955	8,728	1,226	1,047	1,237	2,284	302	12,540
1956	9,081	1,322	1,021	1,362	2,383	356	13,142
1957	9,396	1,360	1,057	1,421	2,478	467	13,701
1958	9,483	1,276	964	1,317	2,281	478	13,783
1959	10,150	1,446	1,098	1,426	2,524	663	14,783
1960	10,455	1,471	1,139	1,468	2,607	818	15,351
1961	10,522	1,493	1,153	1,539	2,692	906	15,613
1962	10,386	1,475	1,225	1,637	2,862	1,177	15,900
			PER	CENT			
1952	73.0	10.3	7.9	7.4	15.3	1.4	100.0
1953	71.5	10.6	8.2	8.1	16.3	1.6	100.0
1954	71.2	9.9	7.7	9.3	17.0	1.9	100.0
1955	69.6	9.8	8.3	9.9	18.2	2.4	100.0
1956	69.1	10.0	7.8	10.4	18.2	2.7	100.0
1957	68.6	9.9	7.7	10.4	18.1	3.4	100.0
1958	70.2	9.4	7.2	9.7	16.9	3.5	100.0
1959	68.7	9.8	7.4	9.6	17.0	4.5	100.0
1960	68.1	9.6	7.4	9.6	17.0	5.3	100.0
1961	67.4	9.6	7.3	9.9	17.2	5.8	100.0
1962	65.3*	9.3	7.7	10.3	18.0*	7.4*	100.0

SOURCE: *ibid.* Page 32.

TABLE VII

Shares of Cotton in Total apparel fibre consumption in the industrial countries 1953 - 63 and Projections for 1975. (Percent of total fibre consumption in terms of values at constant (1960 - 1) Prices.

	1953 - 57	1960 - 61	1962 - 63	1975
United Kingdom	31	25	21	15-17
E.E.C.	36	30	25	19-21
Other Western Europe	40	37	33	28-30
United States	47	40	34	24-26
Canada	38	33	30	27-28
Japan	38	29	23	16-17
Total	41	34	29	20-24

Source: A. Maizels, "Exports and Economic Growth of Developing Countries," Cambridge University Press 1968 p. 333.

even if it is conceded that in absolute terms the market for cotton has been expanding too, the question which still poses itself, is whether such an expansion is likely to continue in the future. To me there is much doubt in that, mainly owing to the wide popularity of man-made fibres on the part of both consumers and manufacturers, and their lower prices in comparison with those of natural fibres, substantial increases must be expected in the consumption of such materials in the very near future.⁽¹⁾

As regards the future prospects of the extra long staple cotton, for which the Sudan is well known, it should be borne in mind that in terms of prices the ELS cotton faces competition from both the short and medium varieties as well as man-made fibres. In this connection the International Bank for Reconstruction and Development made the following remark, "With the continued rapid increase in synthetic fibre consumption, the growth in consumption of ELS in traditional markets (especially fine and strong yarns) can not be expected to expand. Unless ELS cotton competes with other

(1) In addition to clothing, synthetic fibres are favoured in various other uses, e.g. medical applications, upholstery, belting, etc. etc.

cotton for use in the 1960's, and coarser years, consumption of ELS would not expand even with a larger population and higher level of economic activity."⁽¹⁾ Thus to sum up it appears that the future prospects of extra long staple cotton are beset with a degree of uncertainty and that even if there will be an increase in demand the expansion will be too small to warrant such a great dependence on a single cash crop.

Second of importance in the Sudan package of exports are the oil seeds, taking the position formerly held by gum arabic, in which the Sudan has a virtual monopoly since it produces about 85% of total world output. Although foreign earnings from this commodity are increasing, yet, its market is to some extent weakened by the wide use of synthetic resins. However, coming back to oil seeds, they consist mainly of groundnuts, sesame, cotton seeds and to a lesser extent of castor oil seeds. Production of these varieties has been expanding rapidly since the Korean war and apart from the short term fluctuations, whether in output or prices, foreign proceeds from oil seeds and oils have

(1) IBRD, Report on ELS 1969, see YASSIN paper, submitted to the Annual Conference on Agricultural Development in the Sudan. Edited by D.J. Shaw. Vol. II, Khartoum 1966, p. 138.

shown a steady increase since the beginning of the fifties (e.g. foreign earnings from groundnuts alone have increased from less than a quarter of a million in 1950 to about 9 million pounds in 1964). With regard to the future prospects of oils and oil seeds in world trade, it should be borne in mind that in spite of the FAO commodities projections for 1975, which contemplate a substantial increase in world requirements of oils and oilcakes,⁽¹⁾ the prospects for this commodity in the export market is to a great extent determined by the following factors: first, as the present policies in the industrial countries favour the importation of oil seeds rather than processed oils (e.g. E.C.C. tariffs on oils range between 10-15 per cent against non-tariff on oil seeds) the growth of imports from developing countries will very much depend on whether the industrial countries are willing to modify their tariff structure, so as to allow the imports of oils on the same basis as the imports of oil seeds. Second, due to the enormous expansion in the production of soybeans in recent years in the United States, the prospects of oil seeds of tropical

(1) FAO, "Food and Food Products Industries". Prepared for the International Symposium on Industrial Development, Athens 1967, p. 30.

origin will largely be affected by the American policies regarding production, price support and distribution (under P.L. 480) of the soybeans. A third factor that determines the share in trade of a particular variety is the degree of substitutability between the various varieties of oil seeds and fats. Finally, as far as Sudan is concerned, its share in world trade of this commodity will depend upon the ability of the Sudanese exporters to compete with the West African countries, and in particular with Nigeria and Senegal by the breeding of better varieties and the adoption of better marketing methods.

Apart from cotton (and to a lesser extent gum arabic) whose market is weakened by the advent and development of synthetic substitutes, man-made materials have invaded another field of some importance to the Sudanese economy, namely, the market for hides and skins. However, the share of hides and skins in the total value of Sudan exports is negligible at present. But since future plans envisage an increase in foreign exchange proceeds from this source, it is worth pointing out that due to the wide use of synthetics in footwear production (in shoe soles particularly in women's and children's footwear) and other articles such as travelware and upholstery materials, the market for

leather has been shrinking since the Second World War. Moreover, another serious threat facing natural leather is the recent introduction of a new synthetic material which is intended to displace leather in the production of footwear uppers. Should the application of this material turn out to be economical the consumption of leather would further be reduced.⁽¹⁾ Thus, to sum up, it appears that the prospects for leather are beset with a great measure of uncertainty. According to FAO, "As world production expands, and the rate of growth of consumption in the developed areas is retarded by continued substitution by synthetic materials, a downward secular pressure on prices is likely to develop, particularly for cattle hides. It therefore seems unlikely that the export earnings of the developing countries from the sale of hides and skins will be very much higher in real terms, in 1970 than they were in 1959-61 and they could well be very much less."⁽²⁾

This being the case in Sudan, it can be argued that, since the economy is dependent on a very small

(1) See A. Maizels, "Exports and Economic Growth of Developing Countries", Cambridge University Press 1968, pp. 376-382.

(2) FAO, Commodity Bulletin Series 38; "Synthetics and their Effects on Agricultural Trade" Rome 1964, p. 59.

range of exportable commodities, policy should be directed towards the promotion and diversification of agricultural production as a measure to hedge against the hazards and instability resulting from such a narrow specialization. However, as it has been mentioned earlier, although such a measure may provide some degree of security and therefore ought to be pursued, there is much doubt that it could offer - by itself - a way out of the dilemma.⁽¹⁾ But leaving this issue aside, and turning our attention to Sudan, with the firm belief that at this stage of development the country should diversify its agricultural production, we find that the chance is rather meagre. The working party in their "Interim Report on the Main Gezira Scheme" in reviewing the possibility of diversification has reached the following conclusion, "A review of research results and market prospects indicates that the number of

(1) According to Professor Nurkse, "Diversification of exports alone may provide some help, since many countries are dependent on a too limited range of export commodities, but it does not go to the root of the problem. Industrialization is the 'structural' solution " Nurkse, "Trade Fluctuations and Buffer Policies of Low-Income Countries", Agriculture in Economic Development. Edited by Eicher & Witt, McGraw Hill Series in INT. Development 1964, p. 315.

crops for which there is sufficient evidence to justify their serious consideration in the Gezira is relatively limited."⁽¹⁾ Commenting on this conclusion the then Director of the Department of Agriculture made the following remark, "Although this statement was made with special reference to the Gezira Scheme, I maintain that it is also relevant to many other irrigated areas in this country."⁽²⁾ Yet, in spite of this, it should be borne in mind that agricultural research in Sudan is still in its infancy; its tools have not yet been fully exploited and the government expenditure in this field is quite meagre in comparison with the expenditure of other countries. So, provided that adequate funds are made available for this purpose, it is the task of the agriculturalists in co-operation with those responsible for the commercial policy to investigate the possibility of introducing new crops with good prospects in world markets, thus reducing the danger of over-dependence on a single cash crop.

(1) The Working Party, "Development of Agriculture in the Main Gezira Area; Interim Report".

(2) Hassan Mutwakil, "Diversification of Agriculture in the Sudan: Its Potential and Problems" Annual Conference on Agricultural Development in the Sudan. Edited by D.J. Shaw, Vol. I, Khartoum 1966, p. 48.

Moreover, apart from this drive for diversification for the export markets, diversification should also be sought with the aim of satisfying the requirements of local consumption in basic foodstuffs. Such commodities as wheat, sugar, rice, tea, coffee, spices and fruits are still major items in the Sudan package of imports (imports of these items average about 15 million pounds per annum) and hence the local production of at least some of them will not only save foreign currency, which can be utilized for other purposes, but will also provide great relief during difficult times.

Moreover, commercial policy should play a major role in pushing forward the exports of the country. Although it is true that the extent of the market for a commodity is determined by the over-all demand for that particular commodity, it is also equally true that the degree of competitiveness plays an important role in allocating the shares of the different suppliers. It is therefore essential that those responsible for commercial policy pay special attention to ensure that export products are well graded, that their quality is maintained, that they conform to prescribed minimum standards and finally, that their quality is advertized abroad through various promotional efforts.

Thus, to sum up, it is quite evident from what has been portrayed in the preceding paragraphs that the Sudan economy, like other similar economies, is passing through critical economic conditions. It suffers from instability in its export proceeds resulting either from a sluggish foreign demand, price fluctuations or crop failures. Its export prospects are encompassed by a great degree of uncertainty and the scope for a more diversified agriculture is to a large extent very limited. So, in view of all this, and due to the urgent need for a balanced production structure to broaden the base for growth, and bearing in mind the dynamic role of industry in the creation of a sound economy, it was necessary for the Sudan to industrialize with a view to reducing its dependence on foreign markets for the procurement of basic consumer goods as an immediate target, and the pushing of its industrial goods in the world markets as the ultimate goal.

Benefits to be derived from Industrialization:-

Apart from the desire to mitigate the risks of over-dependence upon the export of primary products, and hence the desire to broaden the base for growth (either through production for the home market or for the export markets or for both) the drive to

industrialize (on the part of developing countries) is further motivated by a variety of other additional factors, the most important of which are the following:

1) First of all, while it is true that the contribution of agriculture to industry is notable in various ways, it is also equally true that the development of manufacturing industry contributes immensely to the development of agriculture, by raising and diversifying the demand for farm products, whether in the form of raw materials for industrial use, or in the form of foodstuffs to satisfy the rising needs of the growing urban population.

2) Secondly, the industrialization process is an ultimate solution to the problem of the excessive under-employment in agriculture prevalent in most developing countries.⁽¹⁾ Not only that, but, as the

(1) Most developing countries have about 60% or more of their population engaged in agriculture while such countries as Denmark and New Zealand - often described as agricultural - have only about 30% or less of their population employed in agriculture. This would reflect either agricultural over-population, in which case industry can absorb the surplus labour on the land, or if it reflects an inefficient agriculture industry can also provide employment for the freed labour when agricultural productivity rises through the use of new techniques.

proportion of people employed in industry increases, the proportion of population engaged in occupations other than agriculture, particularly in trade and transport, also increases.

3) Thirdly, the opening of an opportunity to invest in industry - accompanied by appropriate incentives - may give a stimulus to small savers to pool their savings (which will otherwise be hoarded or channelled into unproductive investment avenues) and set up industrial ventures.

4) Fourthly, industrialization even of high cost industries is sometimes considered desirable because quoting Dr. Singer, "... the most important contribution of an industry is not its immediate product and not even its effects on other industries and immediate social benefits but perhaps even further its effect on the general level of education, skill, way of life, inventiveness, habits, store of technology, creation of new demand, etc. And this is perhaps precisely the reason why manufacturing industries are so universally desired by under-developed countries; namely, that they provide the growing points of increased technical knowledge, urban education, the dynamism

and resilience that goes with urban civilization, as well as the direct Marshallian external economies."⁽¹⁾

(1) H. Singer, "The Distribution of Gains Between Investing and Borrowing Countries", American Economic Review, Papers & Proceedings, May 1950, p. 476.

CHAPTER II

IMPORT SUBSTITUTION AS AN
INDUSTRIALIZATION POLICY

Industrialization through import substitution, particularly in the field of consumer goods,⁽¹⁾ is often criticized as a bad policy that cannot give momentum to the economies of the recently emerging nations. Yet complete reliance on the exports of primary products is risky and cannot by itself, in view of the limited prospects for a considerable expansion in that field, guarantee these nations a rate of growth compatible with their development needs (see Chapter I). But at the same time, and as far as export-oriented industrialization is concerned, it is argued that the day is far off for such countries to compete effectively in the export of manufactures with the advanced countries, because of the initial high cost of production of the newly established industries on one hand, and of the existing trade barriers on the other hand. It is further argued that the remarkable success of such countries as Hong Kong and Puerto Rico in the field of export of manufactures

(1) Import substitution might also be understood as including the production of capital goods or material inputs previously imported.

cannot in any way be advanced to the other developing countries, mainly because of the special relationship that those countries have developed; free mobility of resources and goods between Puerto Rico and U.S., and Commonwealth preference in the case of Hong Kong.⁽¹⁾ Thus given the above assumption "import substituting industrialization" avails itself as an important tool of development policy.

However, it is worth stressing at the outset, that while we are not claiming that import substituting industrialization that starts with the production of consumer goods is the open sesame to higher economic growth, yet we firmly believe that it is the main open path for the developing countries and that if it is carefully planned and built on an economically sound basis it is bound to bring good results that could pave the way for further development.

That is so, because for countries without a substantial industrial base, the development of industry is a "filling-in" process which starts (apart from material-oriented industries) with the establishment

(1) See for example H. Myint, "The Economics of the Developing Countries", Hutchinson University Library. Second Edition 1965, pp. 157-159.

of light industries mostly in the field of consumer goods, firstly, because at the initial stage and at low income levels the consumption pattern tends to be concentrated on such goods as food and clothing, and secondly, because the flow of imports reflects to potential entrepreneurs the existence of a market for the same. S.B. Linder has put the point in the following way "..... the decision to take up production of any particular goods is likely to be generated by clearly discernible economic needs. In a world of imperfect knowledge, entrepreneurs will react to profit opportunities of which they are aware. These would tend to arise from domestic needs. Perhaps a need that an entrepreneur has himself experienced has provided the idea on which his entrepreneurship is based."(1)

It is also necessary to draw attention to the fact that in spite of the restricted size of the national markets of most developing countries, consumer goods industries are likely to score a great deal of success, because compared to other lines of production e.g. capital and intermediate goods, the demand for their

(1) S.B. Linder, "An Essay on Trade and Transformation" Almquist & Wiksell, Stockholm 1961, p. 88. See also A.O. Hirschman, "The Strategy of Economic Development", New Haven 1958, pp. 120-125.

products is much more significant and contrasted with the latter they require fewer doses of capital, fewer skills and technical knowledge, generate more employment and in many of them the optimum size is much lower and the question of scale is of minor significance. This, however, need not be interpreted as saying that all developing countries should start their industrialization by the production of consumer goods only, because for some of the largest such as India, Brazil and Mexico the possibility of establishing capital goods, and in particular material inputs industries, is still there, but for most other developing countries (e.g. Sudan) manufacturing has to be restricted, at least at the earlier stages, to the more simple lines of production which are typical of consumer goods industries. However, as industrialization proceeds and new skills and organisational abilities are acquired, while the market becomes larger and more diversified, other lines of production can then be undertaken until the gap is eventually closed. Thus this process in itself indicates the vital role which can be played by import substitution (starting with the production of consumer goods) in generating the possibilities of establishing other complementary industries for

whose products a market is brought into existence.⁽¹⁾ It can, however, be argued that if the establishment of both capital and intermediate goods industries is delayed, this is bound to introduce an element of rigidity in the import policy because the range of imports which can be eliminated becomes much more restricted. Yet while this is true to some extent, and while the simultaneous establishment of intermediate and capital goods industries together with consumer goods is desirable, at least from the balance of payments point of view, the argument can never justify the setting up of such industries not only for which the skills and resources are lacking, but also for whose products the domestic markets are very restricted and the export possibilities are strictly limited.

A further point in support of industrialization that starts with the manufacture of consumer goods, is that the increase in the supply of such goods induces farm producers especially where subsistence farming is fairly widespread (e.g. as in Sudan) to increase and market their supplies firstly to acquire the

(1) See A.O. Hirschman, "The Political Economy of Import Substituting Industrialization in Latin America", *The Quarterly Journal of Economics* Vol. LXXXII, February 1968, No. 1, pp. 13-17.

manufactured goods in exchange, and secondly to meet the increasing demand for farm products induced by the growing urbanisation. A process is thus created where the increase in the supply of manufactured goods stimulates the production and marketing of farm products, which in turn enlarges the market for industry, which further increases the demand for farm products.

Finally, producing for the home market also helps to pave the way for a successful export trade. This is so because, by capturing the local markets, firms are more apt to succeed in reducing their costs, and the better they are suited - because of the learning gained - to improve the quality of their products than those firms which have to face their foreign competitors while they are still infants. Hirschman has expressed the view in the following way, "..... There are many industries which started producing for the home market and eventually spilled over into foreign markets. Prior, successful acceptance of a manufactured commodity in the home market has been considered to be a pre-requisite

for successful exporting."⁽¹⁾

It is, however, always argued that the process of import substitution as it was, and is being carried out in most developing countries, e.g. in some Latin American countries, has proved to be both inefficient and costly. Protection, it is claimed, has not only resulted in high prices and low quality goods, but has also killed the incentive to motivate, modernise and compete in foreign markets.⁽²⁾ But here it is worth noting that protection is not the invention of today's developing countries. On the contrary it has been the common practice among most developed countries during the early phase of their industrialization e.g. United States, Germany and France have all followed this line of policy and yet managed to compete in the world

(1) A.O. Hirschman, "The Political Economy of Import Substituting Industrialization"
Vol. LXXXII, February 1968, p. 25. See also S.B. Linder who pointed out that, "It is a necessary but not a sufficient condition that a product be consumed (or invested) in the home country for this product to be a potential export product." Essay on Trade and Transformation, Stockholm 1961, p. 87, and Charles Kindleberger, "Foreign Trade and the National Economy", New Haven 1962, p. 58.

(2) See e.g. G.M. Meier, "Import Substitution and Industrial Protection", Leading Issues in Development Economics; Oxford University Press 1964, p. 303.

markets mainly because at that time trade-barriers were either non-existent or very low.⁽¹⁾ It appears therefore that it is protection on the part of today's developed countries⁽²⁾ that has confined the process of industrialization to national markets and has led to the alleged inefficiency and high-cost domestic industry.

It is needless to say that if the process of import substitution is carried out on an extensive scale, even in the field of consumer goods, it is bound to stretch the country's resources whether physical or human over too many tiny and uneconomical plants. Feasibility studies are therefore required for all potential projects with the view to establishing a scale of priority among them.⁽³⁾ Criteria to be used in the selection of projects may be based on the following:

(a) The size of the import bill; although in this respect great care should be taken in using

(1) Prebisch, Towards a New Trade Policy, p. 20.

(2) See B. Balassa, "Economic Development and Integration," Chapter III, 1965.

(3) S.B. Linder, Trade and Trade Policy for Development, Pall Mall Series on International Economics and Development, London 1967, pp. 94-95.

customs' records because it is quite common to find many items lumped together (e.g. in the case of cosmetics) thus giving a misleading picture of the size of the bill for the items concerned.

(b) The foreign exchange requirements of the project in both stages of construction and operation.

(c) The extent of the use of local material and contribution to employment.

(d) The saving in foreign exchange and in this respect a comparison should be made between the foreign exchange expenditure on material inputs used in the production and the cost of imports.

Measures to Combat the Foreign Exchange Constraint:-

Since import requirements, whether in the form of capital goods or material inputs or both, tend to rise with industrialization, a temporary balance of payments problem might be encountered until the new investments have matured. So, in order to mitigate this foreign exchange constraint the following policies should be pursued:-

First of all, despite the sluggishness in foreign demand for primary products, developing countries

should exert greater efforts to expand their agricultural exports, either to traditional markets or under bilateral trade agreements with the centrally planned economies. The latter economies have not only great import potentialities but they are also capable of supplying developing countries with the kind of goods that they can use for development purposes e.g. capital goods. Moreover, it appears that the higher the diversification of agricultural output and the greater the degree of processing⁽¹⁾ of primary products, the larger are the earnings in foreign exchange.

Another possible measure to ease the strain on the balance of payments is through the expansion of farm products, particularly foodstuffs for domestic consumption. Chudson has pointed out that "something like 17 per cent of African imports consist of food, beverages and tobacco products."⁽²⁾ This is also applied to many countries such as India, Indonesia and others which could ease their foreign exchange

(1) However, the success of this drive will depend to a greater extent on the cooperation of the advanced countries i.e. to modify their tariff structure regarding the entry of processed materials.

(2) Chudson, W.A., "Comparative Costs and Economic Development: The African Case", The American Economic Review, LIV, No. 3, May 1964, p. 406.

problem if they managed to increase farm production to reduce their dependence on food imports.

Thirdly, the foreign exchange constraint can also be mitigated by various measures of controls directed towards the total prohibition of consumer luxury goods, thereby freeing more resources in foreign exchange, which can be used for the importation of capital goods and material inputs. However, in this respect strict measures have to be taken to prevent the rechanneling of these resources into the local production of such goods. Of course it is arguable that the total elimination of luxury goods might hamper the incentives of the rich who can afford to buy these goods. But here two points are in order. Firstly, such controls can be introduced as a temporary measure which can be relaxed if the situation improves, and secondly the pattern of consumption of these people can easily be changed in favour of certain "skill intensive" traditional goods.

Finally, a substantial increase in foreign earnings can be obtained through the development and expansion of the tourist industry e.g. Kenya.

Export of Manufactures:-

From the foregoing it is not meant to show that import substitution can do magic nor is it implied that the conquest of foreign markets is of minor significance in the earlier stages of industrialization. On the contrary, there are two main reasons why developing countries should do their utmost to develop and expand their exports of manufactured goods. Firstly, the expansion of such exports will greatly reduce the risk resulting from the high dependence on the exports of primary products. In the second place, the enlargement of the market through these exports will have a favourable effect on the process of import substitution by making possible the establishment of industries in which the question of scale is of prime significance.

What types of manufactures should the developing countries seek to export?

In view of the shortage of capital and the lack of technical skill that characterize most developing countries, it seems that any comparative advantage that these countries may have in exporting manufactures is likely to be in industries that require larger inputs of relatively unskilled labour, and fewer doses of both physical and human capital i.e. labour intensive

industries. These include industries such as textiles, clothing, lumber and wood products, furniture, leather and leather goods, chinaware and pottery, ceramic tiles, handicrafts, paper and paperboard containers and various kinds of printed matter. They may also include canned and preserved fruits and vegetables, "on the basis that in these cases the material inputs themselves as well as the processing of the materials are labour intensive."(1)

Export Promotion:-

However, one of the most important means of stimulating the exports of manufactured goods is related to the improvement of the conditions under which developing countries are selling such manufactured products abroad. Linder, referring to a study made by the Swedish Importers and Wholesalers Organisation on the problems encountered when importing from developing countries, gave the following summary of their findings: "The exporters regularly ask for payment under confirmed letters of credit, but often do not accept the right of reclamation. Pricing

(1) Lary, "Imports of Manufacturers from Less Developed Countries", National Bureau of Economic Research, New York 1968, p. 23.

policies do not recognise the need for especially low prices during the introductory stage of a product..... Finish, patterns, colours and packing could be made more attractive. Deliveries are often not according to samples. Delivery dates are not kept and continuity in deliveries is not good enough. Finally information abroad of potential export products is poor." (1)

Measures on the part of developing countries to rectify the situation and enhance the promotion of exports may include the following:

- (1) Credit facilities to exporters,
- (2) Transport facilities and freight concessions,
- (3) Priority in securing raw materials and fuels,
- (4) Quality control and standards,
- (5) Use of trade missions,
- (6) Participation in trade fairs,
- (7) Up-to-date publication and publicity.

However, all these measures are of limited value without the cooperation of the advanced countries. If they are willing to modify their tariff structure so as to reduce the effective rate of protection⁽²⁾

(1) Linder, Trade and Trade Policy for Development, p. 37.

(2) See Table I.

TABLE 1
Estimated Effective Rates of Protection
on Products of special interest to
Developing Countries in Four Major
Markets, 1962 (per cent)

Item	U.S.	U.K.	E.E.C.	Japan
Textile Fabrics	50.6	42.2	44.4	48.8
Hosiery	48.7	49.7	41.3	60.8
Clothing	35.9	40.5	25.1	42.4
Other Textile Articles	22.7	42.4	38.8	13.0
Shoes	25.3	36.2	33.0	45.1
Wood Products & Furniture	26.4	25.5	28.6	33.9
Leather	25.7	34.3	18.3	59.0
Leather goods other than shoes	24.5	26.4	24.3	33.6
Rubber goods	16.1	43.9	33.6	23.6
Plastic Articles	27.0	30.1	30.0	35.5
Synthetic Materials	33.5	17.1	17.6	32.1
Chemical Products	19.5	19.8	16.0	28.8
Ingots & other primary steel forms	106.7	98.9	28.9	58.9
Metal Manufactures	28.5	35.9	25.6	27.7
Non-electrical machinery	16.1	21.2	12.2	21.4
Electric Machinery	18.1	30.0	21.5	25.3
Bicycles & Motorcycles	26.1	39.2	39.7	45.0
Sports goods, toys, Jewelry	41.8	35.6	26.6	31.2

In addition to the above there are quantitative restrictions and other non-tariff barriers.

Source: B. Balassa, Tariff protection in Industrial Countries, Journal of Political Economy, Vol. 73, December 1965, pp. 573 - 594, J. Pincus, Trade & Development, McGraw Hill 1967, p. 193.

on products of interest to developing countries, or introduce a system of preference in favour of them, there would be a considerable expansion of manufactured exports from such countries. According to Professor Balassa, the elimination of tariffs by the industrial countries on imports of manufactures from developing countries would increase the volume of such imports by 38.2 per cent for the U.S.A., 39.9 per cent for Japan, 30.9 per cent for the United Kingdom and 28.2 per cent for the Common Market countries.⁽¹⁾ Of course it is true that if the developing countries are allowed to increase their industrial exports this would imply a change in the industrial structure of the advanced countries, but it should be noted that such a structural change is relatively minor and is frequently being made as a result of technical change e.g. the contraction of the Lancashire cotton industry in Britain.⁽²⁾

(1) B. Balassa, "Tariff Protection in Industrial Countries". *Journal of Political Economy*, Vol. 73, December 1965, pp. 573-94.

(2) See Nurkse, *Patterns of Trade and Development*, pp. 36-41.

CHAPTER III
REVIEW OF INDUSTRIAL DEVELOPMENT
IN THE SUDAN

Prior to the Second World War the bulk of the industrial activity in the Sudan was limited to the production of handicraft products such as the making of ivory and wooden products, carpets, rugs, baskets, pottery, cloth, leather and leather goods etc. etc. The rest of the industrial activities which also existed, were based on the primary processing of agricultural products e.g. cotton ginning and oil milling. Thus industry in its modern sense was non-existent. This was mainly due to the low level of income and to the attitude of the people towards the various economic activities. As Myrdal has pointed out, "Profits tend to be invested in land or else hoarded or transferred abroad There is a low propensity to save and to invest productively in new enterprises." (1) Commerce and trade have also attracted much of the capital available, firstly, because they yield quick rewards and secondly, because the risk involved is very little.

(1) Gunnar Myrdal, "An International Economy", New York, Harper & Brothers, 1950, pp. 202-203.

However, the first stimulus to industrialization was given as a result of the outbreak of the Second World War when the country began to experience shortages in the supply of consumer goods previously imported. Thus the need for developing local industry became evident and the prospective investors were eager to capture the opportunity and ready to finance and promote local industries. Industries producing vegetable oils, soap, perfumes, cloth, glassware, confectionery, syrup and tomato puree were installed, and in spite of the high cost and poor quality which characterized the production, all of these industries have succeeded to flourish during war time mainly because of the difficulty of obtaining goods from other sources. However, immediately after the war the picture changed greatly. There was not only a downward trend in the industrial activity, but most of the war-born industries, lacking the proper planning and operating at extremely high cost, had to close down as soon as imports were resumed.

However, a stronger impulse towards industrialization occurred after the country gained its independence in 1956. The Independent Government being aware of the imbalance in the national economy and fully realizing the importance of industrialization in the creation of a

sound and diversified economy, enacted the "Approved Enterprises (Concessions) Act 1956" which embodied several concessions and facilities to be accorded to industrial ventures initiated by the private sector. The act applied to both domestic and foreign investment. In spite of the shortcomings of the various provisions of the above mentioned act (which will be dealt with later) it can safely be said, that since its enactment the country has witnessed a noticeable activity in the field of industry.

Present Structure of Manufacturing Industry:-

Although the manufacturing sector in the Sudan has been expanding steadily since independence, the share of the industrial output does not yet represent a significant part of the gross domestic product. Using manufacturing to include both the craft and the modern industries, the industrial sector accounted for only 5.7 per cent of the gross domestic product in 1964-65. However, using a narrower definition, by excluding the handicraft industries, the contribution of the modern manufacturing sector to the gross domestic product was only 2.5 per cent for the same period. (See Table I). Detailed figures for the succeeding years are not available, but it has been

GROSS DOMESTIC PRODUCT (OUTPUT METHOD)
 1955 = 56 = 1964 = 65
 CURRENT PRICES L S MILLION

ACTIVITY	55/56	56/57	57/58	58/59	59/60	60/61	61/62	62/63	63/64	64/65
AGRICULTURE	105.6	127.5	95.1	115.3	123.4	116.0	148.7	133.5	125.9	146.6
LIVESTOCK	32.3	32.7	33.9	34.4	36.3	37.3	39.0	40.9	42.8	44.9
FORESTRY PRODUCTS	28.3	29.3	30.7	31.4	33.3	31.6	33.2	34.7	36.4	37.7
FISHING AND MARINE PRODUCTS	6.5	6.7	6.9	7.1	7.3	7.5	7.8	8.2	8.6	9.0
TRANSPORT AND DISTRIBUTION	37.6	37.4	49.9	38.1	48.8	52.0	58.5	62.7	68.7	62.7
MINERALS	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3
MANUFACTURING	2.8	3.2	3.7	4.3	5.0	5.7	6.4	8.0	9.2	11.0 *
CRAFT INDUSTRIES	9.8	10.1	10.4	10.7	11.0	11.3	11.8	12.4	12.9	13.5 **
PUBLIC UTILITIES	1.0	1.2	1.3	1.4	1.6	1.7	2.0	2.3	2.1	2.3
BUILDING AND CONST.	16.2	17.7	22.1	21.4	21.1	22.9	21.6	25.8	33.0	25.4
BANKS	1.3	1.4	1.9	2.0	1.6	2.5	2.9	3.3	4.0	3.6
NON-GOVT EDUCATION	0.6	0.7	1.0	1.1	1.2	1.5	1.8	2.0	2.3	2.6
DOMESTIC SERVICES	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.9	1.9	2.0
MISC. SERVICES	15.1	15.7	16.1	16.8	17.3	16.8	17.6	18.4	19.2	2.3
GOVERNMENT OWNERSHIP OF BUILDINGS	17.2	18.8	24.0	23.3	26.6	28.0	34.0	36.6	38.6	45.1
TOTAL	284.2	312.7	307.9	318.5	346.1	346.8	397.7	401.7	417.1	438.6

SOURCE: VARIOUS ISSUES SUDAN ECONOMIC

SURVEY: MINISTRY OF FINANCE, KHARTOUM,

* 2.5%

** 3.2%

shown that in 1966/67, 12.6 per cent of the gross domestic product accruing from the modern sector of the economy^(*) was derived from industries - broadly defined, to include building and civil engineering activities.⁽¹⁾

Apart from the traditional craft shops and cottage industries, the present structure of industry in Sudan can be divided into two main categories. On the one hand there are those industries which are based on the processing of locally produced raw materials, usually referred to as resource oriented industries. Such activities include cotton ginning, grain milling, extraction of vegetable oils, sugar milling, vegetable and fruit canning and saw milling. The other main category of industries is largely oriented to produce import substitutes; examples of which include beverages, cigarettes, textiles, clothing, footwear, furniture, metal products, packing materials, printing and publishing.... etc. etc. While most of the

(*) On average the modern sector contributes about 50 per cent of Total Gross Domestic Product while the traditional sector accounts for the other half.

(1) "Review of the Economy". A supplement to the 1967-68 Budget, Ministry of Finance and Economics, Khartoum.

industries in the first category are initiated and undertaken by governmental agencies, all of those in the second category are owned and managed by the private sector. Comments on the major branches of industry are provided in the following pages by way of evaluating their general performance.

Manufacturing in the Public Sector:-

Sugar Factories:-

Two Government-owned sugar plants based on locally grown cane and each with a capacity of 60,000 tons per annum are now operating in the country. The two plants are capable of meeting about two thirds of the country's current requirements for sugar when operating at full capacity. The first factory which was established at Guneid on the Blue Nile about 100 miles south of Khartoum⁽¹⁾ with a total fixed investment of Ls 5,500,000, went into production in November 1961. About 1,800 workers are employed in the factory and 2,500 on the farm. Although the plant is based on an input of 4,000 tons of cane per day which for a milling season of 120-150 days and on an estimated sugar output of 10 per cent, could give

(1) The land was formerly under cotton cultivation.

a production of about 60,000 tons of refined sugar,
actual production figures were as follows:-

Season	Cane input in tons	Sugar output in tons	Working days	Percentage of sugar content
1962/63	142,250	13,260	137	9
1963/64	238,000	19,590	199	8.2
1964/65	194,560	16,600	172	8.5
1965/66	169,760	16,030	126	9.5
1966/67	230,560	22,856	126	9.8
1967/68	340,000	32,824	131	9.7

Source: Industrial Development Corporation

From the above table it is quite clear that in spite of the noticeable rise in production in 1967/68, the factory has only achieved about 54% of the maximum capacity. Not only that but the cost of its produced sugar, at the official exchange rate, was considerably higher than the world market price for the commodity. Figures for the cost of production were as follows:-

<u>Year</u>	<u>Cost of Production per ton</u>
1963/64	LS 91
1964/65	LS 109
1965/66	LS 105
1966/67	LS 63
1967/68	N.A.

However, this lack of success is mainly attributed to the agricultural part of the project. Cane yield per acre is very low (averaging about 19.5 tons per acre compared with 41.5 tons in the Girba Scheme); sugar content in the cane is relatively modest (only 9 per cent).⁽¹⁾ This is so because sufficient research was not undertaken to determine whether the land, which was formerly under cotton cultivation, would be suitable for cane production, nor were sufficient experiments conducted on the various varieties of cane to test their suitability under local conditions. Had such investigations been carried out, there is much doubt that the Guneid area would have been recommended as suitable for sugar cultivation. Thus it seems that the whole venture was stimulated by political motives rather than by technical and economic considerations.

Construction of the second plant at Khashm El-Girba on the Atbara River was completed in the last quarter of 1965, with a total investment of about 5 million Sudanese pounds. Total employment, both in the factory and the farm, reaches about 4,500 workers. Production figures were as follows:-

(1) Normally the sugar content in the cane ranges between 12 to 15 per cent.

Season	Cane input in tons	Sugar output in tons	Working days	Percentage of sugar content
1966/67	462,200	48,020	195	10.2
1967/68	401,950	*42,090	124	10.5

Source: Industrial Development Corporation

Although conditions at Khashm El-Girba appear to be more favourable as regards both cane yields per acre and sugar content in the cane than at Guneid, yet the cost of the produced sugar (figures are not yet released) will probably be higher than world market levels, and thus it is doubtful whether a reasonable profit could be obtained from the investment.

Tanning:-

In a country like the Sudan where the cattle population is fairly large and where the demand for footwear and other leather goods is growing rapidly, tanning and leather manufacture is of great importance. In the recent past, much of the tanning was carried out by small and primitive tanneries scattered over various parts of the country. The leather produced

* This figure represents production until 14.4.68. Lately, it was reported that production has reached the maximum capacity.

was of poor quality, and it was mainly used by the existing cottage industries. The bulk of the hides and skins produced in the country was therefore exported in raw form, while good quality leather mostly for the use of government units such as the railways was imported from abroad. This being the case and as the number of modern shoe factories began to multiply, the need for the establishment of a modern tanning industry to cater for the rising domestic requirements for finished leather and to provide for exports, whenever possible, became evident.

Thus in 1961 a government-owned tannery was erected. It was financed under credit supplied by the government of Yugoslavia.⁽¹⁾ It has a capacity for processing 5,000 tons of hides annually and provides employment for 400 workers, including the personnel and technical staff.

As far as its performance is concerned, there is no doubt that on counts of both profitability and efficiency the tannery has achieved a considerable measure of success compared to the other public enterprises. Besides meeting all the domestic demand

(1) The loan amounted to 400,000 Sudanese pounds used for the purchase of the plant.

for leather, thus saving the foreign currency which would have been spent on leather imports, it has also succeeded in exporting some of its output, which resulted in more foreign earnings by the amount of value added. This is clearly indicated by the following figures which show the significant increases in both the amounts produced and the sales effected.

* Production 1961/67

Year	Finished upper leather sq.m./ day	Finished sole leather Kg/day	Other industrial leather Kg/day
1961	200	50	50
1962	300	120	70
1963	450	200	70
1964	600	300	70
1965	750	400	70
1966	900	500	70
1967	1200	500	100

Source: Dr. Suleiman, Paper on "Leather and Leather Goods Industries in the Sudan", submitted to a Conference at Erkowit, 22-26 September 1967.

* Production also includes the pickling of an average of 15,000 dozen sheepskins per year for export.

Sales 1961/62 - 1965/66

Year	Local sales in LS	Foreign sales in LS	Total in LS
1961/62	56,152	549	56,701
1962/63	197,244	45,281	242,525
1963/64	199,354	98,273	297,627
1964/65	262,939	128,935	391,874
1965/66	424,516	112,988	537,504

Source: Industrial Development Corporation

However, since 1966 it became evident that the present tannery is no longer capable of satisfying the local demand for finished leather. This is mainly due to the significant expansion in the home production of footwear⁽¹⁾ and other leather goods and to the readiness of the cotton ginneries, after recognizing the high quality of the locally produced leather, to procure their requirements (costing more than 60,000 pounds in foreign currency per year) of leather beltings from the local production. This being the case, and since both the government tannery and the other small tanneries in the rural areas absorb only about 40 per cent of the hides and skins produced, the enlargement of the present tannery as well as the establishment of others has become a necessity.

(1) Production of leather shoes amounted to more than 1.5 million pair of shoes in 1966 compared to less than $\frac{1}{4}$ of a million in 1960/61.

Moreover, to increase profitability, facilities for the full utilization of by-products should be installed to undertake the production of such items as glue, gelatin and hair and wool products all of which are imported at present.

Cardboard Factory:-

A government cardboard factory at Aroma (in the Eastern Province) was established in 1963⁽¹⁾ with a production capacity of 4,000 tons of cardboard sheets per year which exceeds the present requirements of the country. It is based on the utilization of cotton stalks as its basic raw material, these being obtainable from the nearby Gash Cotton Schemes.

However, at the start of production it became evident that the factory was neither capable of producing the specified quality of cardboard sheets nor the quantities required. Since 1964 it has been operating with only 5 per cent of its full capacity. This is again mainly because insufficient investigations were carried out to establish whether it is technically feasible to manufacture the

(1) Like the tannery, it was also financed under credit from the government of Yugoslavia amounting to Ls 300,000.

required quality of cardboard from cotton stalks. It is, however, lately reported that the government has sought the help of a United Nations expert to investigate the matter and give his advice accordingly. But it seems that it is too late now, because even if it is proved that cotton stalk is the proper raw material, the factory can no longer depend on a nearby supply. This is so because the Gash Board has already replaced cotton cultivation with castor oil seeds; an incident which reflects a lack of co-ordination on both sides and short-sightedness on the part of the authorities responsible for the firm. So research has to start again on the castor stalks to determine their suitability for the production of good quality cardboard sheets.

Food Processing Industries:-

Two factories for canning fruits and vegetables, one at Karima in the North and the other at Wau in the South, an onion dehydrating factory at Kassala in the East and a dry milk plant at Babanusa in the West were installed under credit extended by the government of the Soviet Union in 1961. Although some remarks on each are provided below, it is worth noting that the establishment of these factories was not preceded by thorough and careful studies to determine whether

the present availability of raw materials, with regard to both quantity and quality, is adequate for the scale of production envisaged. This, however, need not be interpreted as saying that the establishment of these factories is basically unsound. On the contrary in a country like the Sudan with great agricultural potentiality, the initiation of processing industries offers considerable advantages; in addition to converting the surpluses (which would otherwise be wasted) thus prolonging the consumption season, they are also an important means of increasing export earnings or substituting imports.⁽¹⁾ But the point is, that in planning a food processing industry, the agricultural side of the project should be planned simultaneously in order to ensure that the raw materials will be available in sufficient quantities and in good quality. Unfortunately in the above mentioned case - maybe due to over-assessment of the supply of raw materials - the plants were installed and ready to operate, whereas the planning of the agricultural produce was not given the attention it deserved, with the result that most of these factories

(1) Imports of fresh and preserved vegetables and fruits, milk and milk products in the Sudan average about $1\frac{3}{4}$ million pounds per annum.

are now facing shortages in the supply of raw materials with regard to both quantity and quality.

Kassala Onion Dehydration Factory:-

Construction of the plant was complete at the end of 1965. It is designed to process 50 tons of raw onions per day during its working season which lasts for six months. Trials started early in 1966 with the processing of pink onions which are grown in the area. However, since production whether in powder or flakes is mainly intended for export and since foreign markets demand products from the white varieties of onions, a number of different white onion seeds were imported from the U.S.A. for trials under local conditions. Four of these were actually cultivated in 1966, but the results obtained were not encouraging mainly because they proved to possess a low percentage of solid matter (about 5 per cent) which makes them unsuitable for the purpose of dehydration. Thus production in 1966/67 amounted to only 224 tons of which about 60 tons were exported. However, of all these varieties only one (which compared favourably with the rest) was cultivated during the 1967/68 season and production was expected to reach 450 tons (which amounts to 25 per cent of the full capacity). Yet research is still going on to

find the varieties suited for dehydration; something which ought to have been done from the beginning. In this connection it is worth noting that even if suitable varieties of onions become available, the possibility of introducing other ranges of crops maturing in different seasons should also be investigated so as to keep the plant busy all the year round.

Vegetable and Fruit Canning:-

Construction of the two canneries at Karima and Wau was completed in 1966 and 1967 respectively. Each factory is designed to produce 3,000,000 tins of canned vegetables and fruits which are equivalent to about 1,200 tons annually. Production figures for Karima factory were as follows:

Products		1966/67	1967/68
Tomato:	Puree Tins	404,190	1,685,526
	Juice "	6,449	27,982
Mango:	Juice "	17,276	145,204
	Jam "	-	4,887
	Puree "	112,308	263,224
Grape Fruit:	Puree "	37,350	88,394
	Jam "	97,519	150,837
Beans	"	122,786	155,734
Horse Beans	"	95,690	166,442
Peas	"	5,809	43,187
Total		899,377	2,731,417

Source: Economic Survey, Ministry of Finance and Economics, Khartoum, August 1968.

As is reflected in the table above, the remarkable increase in the amounts produced in 1967/68 in comparison with 1966/67 was mainly due to the expansion in the production of tomatoes (previously grown in small quantities for local consumption in the area) which became possible after the factory had succeeded in concluding contracts with farmers under which they were assured of a guaranteed price for the product.

The Wau factory which began production in April 1968 has only produced 405, 701 tins of canned vegetables and fruits mostly mango juice during its first season of operation. Again difficulty in obtaining raw materials in adequate quantities and suitable qualities was the main reason behind operating far below full capacity (about 13 per cent only). However, this shortage in the supply of raw materials is likely to be encountered during the coming few years until the factory is successful in contracting with the farmers or in establishing its own production units.

Babanusa Milk Factory:-

The Babanusa Milk Plant which is still under construction is planned with a capacity of processing 50 tons of milk per day to give an output of 5 tons of milk powder and about 700 kilos of butter daily.

However, difficulties in obtaining sufficient and continuous supplies of fresh milk, in order to keep the factory in operation as long as possible, are likely to be encountered due to the prevailing nomadic husbandry, and hence the lack of livestock concentrations, especially in the dry season. So unless ways and means are developed to collect and transport the milk (through the provision of cold storage containers) to the plant from the various points of concentration, it is doubtful whether it can be assured of dependable and regular supplies.

Major Branches of Manufacturing in the Private Sector:-

Textiles:-

This industry is now represented by two large modern spinning and weaving mills. The first, the Sudan Textile Industry, with 54,400 spindles and 1,680 looms and using more than 50,000 bales* of raw cotton annually (of the short staple varieties which are mainly grown in the Nuba mountains) is the largest private industrial enterprise operating in the country. The present structure of the factory which started production in late 1961 is shown in the following table:

* 1 bale is equivalent to 420 lbs. of lint

CAPITAL IN LS		NO. OF PERSONS EMPLOYED		MAXIMUM CAPACITY	ACTUAL PRODUCTION	TYPE OF PRODUCTS
Domestic	Foreign	Indigenous	Foreigners			
100,000	8,900,000	3,643	37	80 M.YDS.	69.3 M.YDS.*	Mainly grey and bleached sheeting and some poplin and khaki
* Valued at LS 4,727,000 (current prices)						

Source: Ministry of Industry and Mining

The other firm, Khartoum Spinning and Weaving Co. Ltd. which went into production in July 1964 is equipped with 20,000 spindles and 700 looms. The present structure of the mill is also given below:

CAPITAL IN LS		NO. OF PERSONS EMPLOYED		MAXIMUM CAPACITY	ACTUAL PRODUCTION	TYPE OF PRODUCTS
Domestic	Foreign	Indigenous	Foreigners			
723,640	412,840	1,504	-	32 M.YDS.	30 M.YDS.*	Grey and bleached sheeting
* Valued at LS 1,770,000 (current prices)						

Source: Ministry of Industry and Mining

With the amount of production given above, the two factories are now capable of satisfying the country's current requirements for the types of product produced and consequently the imports of such items have been declining fairly steadily since 1962. The

table below shows this trend with respect to the imports of grey sheeting.

Year	Quantities in tons	Value in LS
1961	14,557	4,871,138
1962	12,528	3,996,891
1963	9,896	2,970,008
1964	2,577	855,538
*1965	3,036	1,024,133

Source: Department of Statistics

However, despite the impressive progress so far achieved, the industry still faces a number of difficulties chief among which are the following:

1) In planning both projects the amounts allocated for working capital were insufficient for the scale of operations envisaged. This being the case and due to the absence of industrial financing institutions,⁽¹⁾ the factories are forced to seek borrowing from the existing

* By 1965 the imports of this item could have been deleted from the import bill, had it not been for the government policy of allowing some quotas to be imported under bilateral agreements. Unsold stocks, of which grey sheeting accounted for an appreciable percentage, amounted to 30 million yards in 1966.

(1) The Industrial Bank of Sudan extends only long and medium term credits for the purpose of fixed investments.

commercial banks which extend only short term loans (suitable for commercial transactions) and at a relatively high rate of interest, and even if such credits become revolving they still bear high interest rates thus adding to the financial burdens of the firms. "The situation is aggravated by the fact that due to certain local circumstances, the needs of the industry for working capital have become unreasonably inflated. Thus, unlike the practice in other countries, the industry in the Sudan has been forced to purchase and pay on delivery for a whole year's requirement of raw cotton ostensibly because the Government who is sole supplier of such cotton, could not, for financial and other reasons, agree to supply on any other terms. Another factor which contributes to inflating the needs of working capital by the industry is the fact that because of the difficulty of obtaining the necessary supplies of spare parts and accessories and the long period of waiting involved in their importation, the industry finds itself with no alternative but to carry stocks of such items which may represent the requirements of eight months or more." Moreover, "The sensuality of marketing the industry's products and the credit which the industry must offer to its customers are

also added factors which lead to increasing the needs of the industry for further amounts of working capital."⁽¹⁾

2) Another problem facing the industry is the difficulty of building up a permanent labour force. Although there is no problem in recruiting unskilled labourers who can eventually be trained, the difficulty often encountered is how to keep these trainees. This is mainly because the bulk of the labour force is usually drawn from the countryside, most of whom have left the village either for the purpose of acquiring some knowledge about urban life, or some savings and then return home. This state of affairs does not only raise the cost of training per retained employee, but also constitutes a serious waste of resources.

Production of other textiles such as knitwear is now undertaken by six modern factories producing annually more than 400,000 dozens of knitted goods which are more than the present requirements, but only about 50 per cent of the full capacity of these factories. Efforts are now directed in search of export outlets so as to utilize the remaining capacity and keep the industry running on an economical basis.

(1) "Textile Industry in the Sudan", by M. Mekawi Mustafa, General Manager, Khartoum Spinning and Weaving Co. Ltd. August 1966. p. 16.

Footwear:-

Manufacture of footwear is undertaken by six modern factories, but the major company which is foreign-owned (Bata)⁽¹⁾ accounts for a large percentage of the production. Most of the footwear is made from rubber, plastic and canvas, but since the establishment of the Government Tannery, the production of leather shoes has been expanding considerably (production in 1967 reached 1.5 million pairs against less than 0.25 million pairs in 1961). However, since 1962, production of all types of footwear has been expanding rapidly; from 3,000,000 pairs in 1962 to 11 million pairs in 1967 (at this level of production the industry satisfies about 90 per cent of total annual consumption), and consequently the share of imports has been declining fairly steadily. See table below.

Year	Quantity/pairs	Value LS
1962	7,568,342	1,296,628
1963	7,543,923	1,167,859
1964	2,983,400	393,873
1965	3,933,081	552,433
1966	2,866,644	543,000
1967	1,106,333	396,000

Source: Department of Statistics

(1) It started production in late 1962.

Oil Mills:-

About 20 oil mills, crushing cotton seeds, sesame, groundnuts and castor oil seeds, are today operating in the country. Annual production amounts to 48,000 and 196,000 tons of oils and oilcakes respectively, which represents about 96 per cent of the full capacity. At this level of production the industry is capable of meeting the local consumption requirements of edible oils, in addition to supplying the soap industry with a large percentage of its oil needs, and providing a surplus for export. For example, in 1965 exports of oil and oilcakes amounted to LS 1,145,398 and LS 3,957,879 respectively. However, as was noted earlier, one of the main obstacles which stands in the way of expanding oil export is that while both oil seeds and oilcakes enter duty-free, vegetable oils are subject to an import duty in the main importing countries e.g. The Common Market.

Soap Production:-

Soap manufacturing is carried out by seven enterprises which are capable of producing good quality toilet and laundry soap. Total annual output is about 29,000 tons which exceeds the local demand, but represents about 50 per cent of the

full capacity of these factories. At the moment efforts are directed to utilize the remaining capacity and export the surplus.

Flour Milling:-

The largest flour mill which was erected with an investment of LS 250,000 started production in September 1961. Annual production is 120,000 tons which is equivalent to the maximum capacity of the mill, but which represents about 50 per cent of the total domestic requirements. At the beginning of its production the mill was heavily dependent on imported wheat, as local output was insufficient. But due to earnest efforts by the government to step up the production of wheat (traditionally grown in the Northern Province), new areas in the Gezira and Khashm El - Girba schemes were brought under wheat cultivation. As a result, production rose from 26,000 tons in 1960/61 to 111,352 tons in 1967/68; an amount which meets a large percentage of the mill requirements for wheat. Milling of other cereals is undertaken by numerous small mills scattered throughout the country.

Brewing of Beer and Distilling of Spirits:-

Brewing of beer is carried out by a modern brewery which is mainly foreign-owned with a total capital of Ls 734,000. At present annual production amounts to 82,000 hector litres which is equivalent to 82 per cent of the full capacity and satisfies total annual consumption. The brewery employs 336 persons of which only 4 are foreigners. For raw materials dura is used, while malt and yeast are being imported mainly from the U.A.R.

Two distilleries using molasses obtained from the local sugar mills and locally grown dates as raw materials, are today operating in the country. They currently produce about 3,300 tons of liquor per annum, including brandy, gin, zabib, sherry and some wines.

Cigarettes:-

Cigarette production is undertaken by two companies, currently producing 612,000,000 pieces per year which represents about 50 per cent of their full capacity. At present the two companies use imported tobacco leaves which are blended with locally grown varieties, but measures are being taken to step up the production of good quality tobacco leaf

in both Jebel Marra area in the West and in Equatoria in the South.

Cement:-

At present there is one cement factory operating in the country, with a productive capacity of approximately 200,000 tons annually. Current production amounts to 150,000 tons per annum, which meets a large percentage of the country's current requirements. Construction of another plant with a capacity of approximately 100,000 tons annually has been completed and is expected to start production very soon.

Paints:-

Manufacture of paints is carried out by two factories, currently producing about 1,500 tons per annum (about 50 per cent of the full capacity), and satisfying the requirements for those types of paints which are used in larger quantities, while other types which are needed in smaller volumes are still being imported.

Refined Petroleum Products:-

An oil refinery established by Shell-BP, costing Ls 4,800,000, went into production in 1964. It is operating on imported crude oil and has a capacity of 990,000 tons of petroleum products. Current output amounts to 600,000 tons which is meeting most of the country's requirements for refined products, such as kerosene, gasoline, gas oil and fuel oil.

Other important industries which deserve mentioning are those producing confectionery, biscuits, macaroni and vermicelli, aluminiumware, enamelware, plasticware, steel and wood furniture, air conditioning and refrigerator units, packing materials, matches, pharmaceuticals, perfumery, batteries, nails, buttons, etc.

Minerals:-

Mining activity at present is of limited significance. Iron ore, copper and chromite as well as some other non-metallic minerals such as mica, graphite, asbestos, gypsum and limestone are mined in small quantities. Both petroleum and coal (the primary source of power)⁽¹⁾

(1) At present power is obtainable from thermal stations (steam or diesel) and hydro-power generated at Sennar Dam.

have not yet been discovered. Although the preliminary geological investigations carried out so far, have shown that the country is not well endowed with mineral resources, this by no means implies that efforts in this direction be deterred or discouraged. On the contrary they need to be intensified in an endeavour to explore the country's mineral resources.

Handicrafts:-

Handicrafts are still an important source of livelihood in the country. In 1964/65 they accounted for 3 per cent of the gross domestic product. The most important products are leather goods, wood and ivory carvings, pottery, handloom weaving, embroidery, silver work and other household items. A small proportion of the production is destined for the tourist trade while the bulk is for domestic consumption. But since most of these products can now be produced more cheaply by modern methods, the handicraft industries have lost part of their market share to modern industry. Attempts to find export outlets have met with little success mainly because of the competition from similar machine-made products.

To sum up, it is quite evident from the foregoing that industrial development in Sudan is still in its infancy; the size of the industrial sector is rather small in relation to the size of the other sectors of the economy; its share in total employment is hardly more than 5 per cent (about 80 per cent of the economically active population is still dependent on primary activities for their living); and its contribution to exports is negligible. Nevertheless a start has been made. The country has already attained self-sufficiency in a number of basic consumer goods, while the production of others is approaching that end. The shortcomings whether in the form of unutilized productive capacities or low productivity can, however, hardly be attributed to the pattern of industrial development adopted, as they were the inevitable consequences of insufficient planning, inadequate preparatory studies and lack of market research. However, needless to say that the rate of industrial development in Sudan, as in other developing countries, is much hampered by the low level of capital accumulation, insufficient domestic market, inadequate transportation facilities, as well as lack of skilled labour and scarcity of managerial personnel.

CHAPTER IV

INDUSTRIAL POLICIES

The Sudan government being aware of the vital role which can be played by private capital in the process of development, immediately after independence introduced "The Approved Enterprises (Concessions) Act 1956". This Act, which embodied several concessions to be accorded to domestic as well as foreign capital, was designed to stimulate investment in the field of manufacturing industry which is considered as essential for the orderly development of the economy. It was in operation until 1967. Meanwhile the authorities were reviewing its provisions with the aim of determining their effectiveness in inducing the desired investments. The study culminated into the enactment of a new law cited as "The Organisation and Promotion of Industrial Investment Act 1967", which cancelled the first Act and became effective in March 1968. Compared to the old code, the new Act contained a wider range of concessions. However, before analysing the various provisions embodied in the two laws, it is useful to deal firstly with the general framework of government policy towards the field of industry.

According to the preamble of the "Approved Enterprises (Concessions) Act 1956", and this also stands in the new code, the field of manufacturing industry is to be left to private initiative. Direct participation by the state is to be confined to a few cases e.g. when the industry is deemed essential for strategic or security reasons, or when the industry is considered of high-priority for the orderly development of the economy, but for which private initiative is lacking.

For a long time there has been controversy regarding the desirability of private industry over government undertakings in the recently emerging nations. But unfortunately much of this debate has been greatly influenced by theoretical and political considerations rather than by an objective investigation of the unique situation in which a country finds itself. In Sudan, for example, the decision that the industrial field is to be left to the private sector, is a wise one. This is not only because of the higher efficiency of private enterprise but also because the government is quite realistic and well aware of its limitations. It has rather limited resources, whether physical or human, and even lesser outlets to increase its revenue from domestic sources without encountering strong political opposition. With its limited budgets

(see table below) it has to perform a set of basic duties in such fields as health, education, communications, and on top of that to provide a host of other services and facilities for the promotion of industry itself, such as the provision of power, water, training centres for specific industries and the expansion of the existing technical schools etc. etc. So what government quoting Mr. Eugene Black, ex-president of the World Bank, "faced with these great tasks, has the capacity, financial and administrative, to pre-empt the directly productive sector as well? Democratic governments, responsive to popular pressure, have rarely succeeded in operating directly productive industries, particularly in the consumer goods fields, without squandering resources or failing to produce what the consumer wanted to buy. Efficient business operation depends upon using the various factors of production in the most economic fashion. Where is the incentive for government officials or government appointee to reduce labour costs if that might arouse political opposition? Where indeed is the incentive for a government official to take the calculated business risk involved in introducing new or changed

ACTUAL REVENUE AND EXPENDITURE IN GOVERNMENT BUDGET IN L S (MILLION)

	1957/58	1958/59	1959/60	1960/61	1961/62	1962/63	1963/64	1964/65	1965/66
CENTRAL BUDGET									
REVENUE	47.3	41.9	67.4	64.08	60.34	74.47	78.64	73.85	78.07
EXPENDITURE	41.3	41.4	44.9	48.19	51.60	58.51	50.83	62.94	72.11
SURPLUS	6.0	0.5	22.5	15.89	8.74	15.98	17.81	10.91	5.96
DEVELOPMENT BUDGET									
	14.8	15.0	12.3	17.27	23.91 [*]	33.6 [*]	40.5 [*]	23.5 [*]	23.4 [*]
OVERALL SURPLUS or DEFICIT	-6.8	-14.5	+10.2	-1.40	-15.7	-17.65	-22.69	-12.59	-17.44

SOURCE VARIOUS ISSUES SUDAN ECONOMIC SURVEY.

* FIGURES DO NOT INCLUDE DEVELOPMENT EXPENDITURE BY PUBLIC CORPORATIONS.

products."(1)

Now let us leave this aside for the moment, and turn our attention to the private sector in Sudan, with a view to assessing its potentialities, which can be geared into productive investments. Prior to 1955 statistics concerning the respective shares of the government and the private sector in the field of domestic investment were not available. However, the first statistics issued in 1956 revealed that in 1955/56 total gross domestic investment was equivalent to Ls 19.1 millions. The share of the government and the government entities amounted to Ls 11.4 millions while the share of the private sector (modern sector only) accounted for the rest. Thus the government share was only 59.7 per cent while that of the private sector was 40.3 per cent; in 1956/57 the shares were 53.3 per cent and 44.7 per cent respectively. The following table also shows the contribution of the private sector to gross fixed investment in subsequent years.

(1) Eugene R. Black, *The Future of Economic Development in Private Investment: The Key to International Industrial Development*. James Daniel (Ed.) McGraw-Hill Book Company Inc. New York 1958, p. 5.

FINANCING OF GROSS FIXED INVESTMENT (L S MILLION)

GROSS FIXED INVESTMENT	1956/57	1957/58	1958/59	1959/60	1960/61	1961/62	1962/63	1963/64	1964/65	1965/66
PUBLIC SECTOR (X)	12.6	21.3	22.9	22.9	26.0	40.5	48.5	58.7	34.0	32.0
PRIVATE SECTOR (XX)	10.2	16.0	10.8	13.1	17.8	22.1	17.0	22.3	17.7	13.0
TOTAL	22.8	37.6	33.7	36.0	43.8	62.6	65.5	81.0	51.7	45.0

SOURCE: VARIOUS ISSUES, ECONOMIC SURVEY, MINISTRY OF FINANCE AND ECONOMICS.

(X) INVESTMENT OF THE PUBLIC SECTOR INCLUDES IN ADDITION TO THE DEVELOPMENT BUDGETS, INVESTMENTS BY PUBLIC CORPORATIONS, INVESTMENTS AGAINST CHAPTER III OF CENTRAL AND LOCAL GOVERNMENT AND INVESTMENTS AGAINST U.N. & U.S. AID PROGRAMME.

(XX) MODERN SECTOR ONLY.

N.B. GOVERNMENT INVESTMENT FROM 1960/61 to 1963/64 MARKEDLY WENT UP DUE TO THE SIMULTANEOUS EXECUTION OF A NUMBER OF HUGE PROJECTS SUCH AS WADI HALFA RESETTLEMENT, ROSEIRES DAM AND SUBSTANTIAL RAILWAY INVESTMENTS.

In view of the foregoing, it would seem that the weight to be given to the private sector is very crucial not only in the field of industry, but also in formulating any plan for the development of the country. However, it can be said that in spite of the significant share of the private sector in the total investment outlays, the fact still remains that much of this investment has been directed into unproductive avenues e.g. land speculation, luxury construction, etc. But our point is meant to throw light on the potentialities of this sector which can be channelled into productive investments if a favourable environment is created. "It may also be of interest to note that total investment in the manufacturing sector during the period 1955/56 - 1961/62 reached a level of Ls 27.8 m. The contribution of the private sector alone was Ls 21.8 m. This figure indicates beyond any doubt the leading role played by private enterprise in the development of industry in the Sudan and this predominance remains as one of its basic characteristics."⁽¹⁾

Of equal importance is the role to be assigned to private foreign investment. In addition to supplementing domestic investment, it also provides

(1) M. Mekkawi Mustafa "Active Encouragement for Industry" Financial Times, London, May 7, 1968, p. 21

the recipient country with a host of other non-financial contributions in the form of ideas, know-how, skills and industrial promotion in general.⁽¹⁾

However, as regards those industries (high-priority industries) for which private initiative is not forthcoming, because of the high cost and hence the great risk involved, the government should not resort to the one alternative, that such industries have to be launched by the state. There is still another alternative open to the government i.e. the alternative of developing mixed forms of organisations together with the private sector. Such a policy may prove to be very appealing to both domestic and foreign capital because, in addition to reflecting the goodwill and good intentions of the government, it will also help in lessening the financial and risk burden. And the government should have learned from its recent experience (see Chapter III) that the establishment of wholly public enterprises is not the only answer since it has proved to be very costly. This is so because the majority of our public enterprises, have, unfortunately, fallen into most of

(1) For the advantages and disadvantages of private foreign investment, see G.M. Meier, "Private Foreign Investment", Leading Issues in Development Economics, Oxford University Press, New York 1964.

the "seven deadly sins of public enterprise in developing nations", as viewed by H. Siedman:

- "1) Uneconomic and largely unplanned growth;
- 2) Sacrifice of long-run economic advantages to short-run political and social gains;
- 3) A bewildering and complete variety of forms of ownership, control and organisation with no logical and orderly pattern for their use;
- 4) Excessive control of administrative and fiscal minutiae and almost complete license with respect to major matters of public policy;
- 5) Confused lines of authority and responsibility;
- 6) The blight of perpetual inspection;
- 7) Shortages of skilled managers and excessive rates of turnover in key posts." (1)

Thus the device of combining the activities of both public and private sectors may prove to be very successful, and the government may well be advised to try such a course of action. In this connection Professor Tinbergen made the following remark, "... the choice need not be a black-or-white choice between wholly public or wholly private ownership. Mixed ownership may sometimes

(1) International Development 1965, Oceans Publications Inc., p. 96, New York. See UNIDO ID/CONF. 1/3 May 1967.

afford a means of combining private efficiency with a desirable direct public control."⁽¹⁾

Now let us turn to the various concessions provided by the two mentioned Acts with a view to determining their effectiveness in channelling resources into the field of manufacturing industry.

Under the "Approved Enterprises (Concessions) Act 1956, an enterprise must fulfil the following conditions in order to be entitled to the concessions.

- " 1) Its promotion must be in the interest of the general public.
- 2) It must have reasonable prospects of successful development.
- 3) Its field of activity must not be already covered in Sudan.
- 4) It must have sufficient capital and managerial resources to enter upon its proposed activities. "

Concessions to be granted after an approved status has been awarded are:-

- 1) Profits up to 5 per cent of the capital employed are exempted from taxation; while those in excess are taxed at half the standard rate.

(1) Jan Tinbergen, "The Design of Development", The Economic Development Institute, IBRD, The Johns Hopkins Press, 1958, p. 67.

- 2) Depreciation is allowed at double the normal rate.
- 3) Losses incurred over the period of relief are considered as losses incurred during the last year of such a period.

The period of relief varies according to the amount of capital employed; two years if the capital employed is less than Ls 20,000; three years if it is more than Ls 20,000; five years if it is more than Ls 100,000. An approved enterprise may also be given one or more of the following concessions: reduction of import duties on raw materials, protection through the imposition of tariffs on similar imported articles and some other facilities such as preferential railway freights and entry of foreign technicians. Foreign investors are entitled to transfer their bona-fide profits to their countries and are assured of fair compensation in the event of nationalization.

According to the new code, an enterprise is entitled to the concessions if one or more of the following conditions are fulfilled:-

- "1) Will be of defence or strategic importance;
- 2) Utilizes local materials or encourages the production thereof;

- 3) Will make a partial or full import substitute or assist partially or fully in exportation and saving of reasonable sums of foreign exchange;
- 4) Employ directly or indirectly a large number of Sudanese employees and will train them to replace foreigners serving in the enterprise;
- 5) Has sufficient and reasonable capital and a reasonable executive body;
- 6) Will assist in the establishment of new industries in the Sudan;
- 7) Will assist in increasing the National Income."

Concessions which are provided under this Act include the following:-

- "1) Total exemption from payment of the Business Profit Tax for a period of five years calculated from the date of the commencement of production, and, in the case of an enterprise with an employed capital of one million pounds or more, in the fifth year it shall be exempted from half the tax for another period of five years;
- 2) Losses incurred during the initial five years of operation shall be considered as a loss incurred during the last year of that period;
- 3) Exemption from present and future custom duties of all machinery, equipment and spare parts and reduction of such duties on raw materials;

- 4) Protection either through tariffs or restriction or prohibition of imported competing commodities;
- 5) Repatriation of profits;
- 6) Repatriation of imported capital in case of liquidation."

First of all, in considering the two sets of criteria, provided in the two Acts, it is quite evident that the new law in this respect is more specific in the selection of eligible industries than the old code whose criteria (e.g. the industry must have a reasonable prospect of successful development) is quite vague and offers little help in identifying the projects to be chosen. Secondly, as far as the concessions under the two acts are concerned, our attention will be concentrated on those provisions which from our point of view are more important as incentive tools.

Income Tax Exemption:-

Income Tax exemption whether partial or total is one of the most common devices in the field of financial incentives. Its objective is that by enhancing the profitability of the business, it is bound to induce local investors to venture into the field of industry, and to attract foreign capital to the country offering the incentive. In this connection Teodoro Moscoso, the

administrator of the Economic Development Administration of Puerto Rico remarked, "Most governments have at their disposal, in addition to the various powers of regulatory agencies, a most powerful tool in the management of fiscal policy. Puerto Rico's experience with tax exemption has demonstrated that tax incentives can be a powerful inducement to investors, like those in the United States who would otherwise be subject to heavy taxation. We believe also that incentives can help break down local traditional preference for investment in real estate and trade."⁽¹⁾

On the other hand a number of objects are put forward against this device. It has been claimed that the incentive is of doubtful value, makes the tax system inequitable and constitutes a loss of revenue, thus making the government unable to finance its needed expenditures.

However, to determine the effectiveness of this device and to give a judgement on whether it involves a revenue loss or not, let us take three hypothetical situations. First of all, for those industries which

(1) T. Moscoso, "Industrial Development in Puerto Rico", The Annals of the American Academy of Political and Social Science, Philadelphia, January 1953, quoted by M.D. Bryce, Policies and Methods for Industrial Development, McGraw-Hill 1965, p. 204.

anticipate that they cannot make profits during the period of the exemption, the incentive is of no value. At the other extreme, for those industries which can make high profits without the tax exemption, the incentive is unjustifiable and in this case involves a loss of revenue to the state, because the investment would have taken place anyway. In between these two cases there are those industries where the anticipated profits are considered as insufficient without the incentive, but which become reasonably adequate when an exemption is granted. So it is only in this last case that the device can be of help and that the revenue to be foregone is an illusory one, simply because the business would not have been established in the absence of the incentive.⁽¹⁾

This being the case, it can, however, be argued that since the effectiveness of this device is only confined to those industries in the last category, and that since in most developing countries the experience of potential investors is confined to the traditional sector of the economy, such as commerce and agriculture, and above all since in those countries manufacturing

(1) See U.N., Economic Bulletin for Latin America, Vol. 9, New York 1964, p. 105.

costs are usually more difficult to assess than in the more advanced economies, the possibility of persuading local investors through this device is rather doubtful. While this may be true to a certain extent, it is also equally true that the incentive may have a strong psychological effect which makes those investors more optimistic in assessing their profits.

On the other hand where the capital in question is foreign, income tax exemption alone is unlikely to be effective. This is so because the existence of "double taxation" arrangements would certainly act as a deterrent to foreign capital, for tax not paid in the importing country must be paid in the country of origin, unless an agreement is reached between the two countries concerned. But unfortunately, "capital exporting countries have entered into income tax agreements among themselves to a much greater extent than they have with capital importing countries. They have thus tended to reduce the occurrence of "double taxation", to facilitate the movement of businessmen and others, to ensure more equitable administration and to achieve greater tax certainty for transactions among themselves than for transactions with developing countries. In this sense the existence of tax arrangements among capital exporting

countries may adversely affect investment in developing countries."⁽¹⁾ Then it may be said, what about the experience of Puerto Rico where this incentive proved to be very effective in attracting capital from outside. However, the experience of Puerto Rico cannot be advanced as an example to the other developing countries, mainly because of the special relationship it has developed with the United States. And even in Puerto Rico itself, and in spite of the study conducted by Milton Taylor in 1955, to investigate the effectiveness of this device in attracting foreign capital, in which 57 per cent of the firms interviewed cited income tax exemption as the primary incentive, one should be very careful in drawing conclusions. By giving such a favourable response, it is quite probable that other motives were masked, and Taylor himself made the following remark, "When these firms were considering the island as a location, tax exemption was probably one advantage among several assets and liabilities that

(1) "Fiscal Incentives for Private Investment in Developing Countries", Report of the OECD Fiscal Committee, 1965, Para. 37, p. 22.

were apparent to a prospective investor in Puerto Rico. At the time of the interview, on the other hand, the grantees had a vested interest as beneficiaries of the tax programme. And since the statute exempting these firms terminates in 1962, it is to be expected that the subsidy would be somewhat over-emphasized by the interviewees for purely pragmatic reasons, in the hope that their answers would encourage an extension of the subsidy."⁽¹⁾

Now let us move from the general to the particular and try to assess the value of this device as it is laid down in the two abovementioned Acts. Under the old Act the exemption was only partial and for a short period, varying from two to five years according to the amount of capital employed. However, despite the desirable results obtained since the promulgation of the Act, yet it can hardly be claimed that this incentive by itself - being of such a magnitude - has played any role in inducing the investments which have occurred.⁽²⁾ This is so because there is much

(1) M.C. Taylor, "Tax Exemption as Compared to Other Factors in Operating and Locating New Industrial Firms in Puerto Rico", Social & Economic Studies, Vol. 4, No. 2, U.C.W.I. 1955, p. 129.

(2) Protection is usually cited as the primary incentive behind these investments.

doubt that in such a short period, an industry facing so many disadvantages can make sufficient profit. Moreover, by giving undue emphasis to the amount of capital employed, the device has ignored the fact that the optimum plant size differs from one industry to another. Not only that but a small enterprise with a capital of less than Ls 20,000 might be more beneficial to the economy than an industry whose capital is more.

While the new Act is more liberal in respect of this device (giving full exemption for a period of five years irrespective of the size of capital employed, and a further relief from half the tax for those enterprises with a capital of one million pounds or more), yet it can still be said that the incentive is not attractive enough compared to the practice in several other developing countries. For example, Ghana gives 4-10 years, Liberia 5-10 years, Senegal 8 years, Chad and Congo (Brazzaville) 10-15 years, Niger and Uruguay 10 years, Toga 5-25 years⁽¹⁾ and Puerto Rico on top of all the advantages it has, offers an exemption of 10 years. It can, however,

(1) IMF, Staff Papers, Tax Incentives for Investment in Developing Countries (Lent), Vol. XIV, No. 2, July 1967, pp. 268-269.

be argued that if the exemption is extended for a longer period, it will be very costly in terms of revenue sacrifice, but against this it can be said that if the incentive proves to be effective this loss will be more than compensated for in the long run when these industries, which otherwise might not have existed, become taxable after the expiry of the concession.

Although the new Act is very recent and still remains to be tested in practice, some brief comments in connection with this incentive are in order. First of all, in designing any incentive scheme the aim of the legislator should not only be confined to persuading people to channel their resources into desirable activities, but his aim should also be to deter them from investing in other fields which are deemed to be less essential or unproductive. In short he should utilize both tools, incentives and disincentives. In Sudan it is now widely claimed that the private sector is investing heavily in building, whether in the form of luxury construction or commercial premises. This is so, not only because they are considered as safe investments, but also because according to the Business Profit Tax Ordinance, the returns from these investments were

not subjected to a tax until 1964, and in that year when a tax was imposed it was very low. Moreover it was introduced as a revenue tax rather than as a penalty device. So as to deter people from investing in such passive forms of investments, a high penalty tax should be imposed on rents, or otherwise, the income tax concession will be of little value, as long as there are safe and more profitable outlets open to the investors.

Secondly, the benefit from the exemption, as is laid down in the Act, is confined to new firms only. But as the expansion of existing firms has the advantage of making the best use of scarce managerial personnel and resources, the law should have extended the benefit to the expanding firms as well.

Import Duties:-

Exemption or reduction of import duties on machinery, equipment spare parts and raw materials is also a fairly widespread practice, and is incorporated in nearly all incentive legislations. There is no doubt that this device is superior to income tax exemption. This is so because, while the income tax relief accords benefits to industries

which can make profits, exemption from import duties is a device which helps firms to acquire a profit. Moreover, it has the advantage of lessening the financial burden, by reducing the capital expenditure in most industrial undertakings thus enabling them to be in a better competitive position.

One of the disadvantages of such a device is that by allowing capital goods to enter free-of-duty, it may encourage the establishment of capital-intensive industries at the expense of labour-intensive types of business, which are more desirable in an economy suffering from an acute shortage of capital and a relative abundance of labour, as is the case in Sudan. Moreover, due to the small size of the national markets in most developing countries, there is the danger that if such capital goods are imported on an extensive scale, they might remain idle for most of the time. However, in spite of these disadvantages, the incentive is indispensable if the aim is to encourage industrial development.

The 1956 Act provided for the reduction of duties on raw materials only, while both machinery and equipment were dutiable. This is quite illogical since what really matters in the initial stage is the cost of erection rather than the financing of the

operation. Many investors may be unable to go on with the investment simply because of the initial high cost they have to incur. This has, however, been rectified in the new Act, and the exemption is extended to include capital goods as well as construction materials. Here it can be argued that, since in the Sudan, the government depends to a large extent on indirect taxes for its revenue (over 30 per cent of total revenue) and since it is already committed to a heavy burden of expenditure, such an exemption involves a great sacrifice. Again this depends on whether the goods in question would have been imported in the absence of the exemption. If the goods would be imported anyway, the exemption will definitely cause a loss in revenue, which has to be compensated for by levying additional taxes elsewhere in the economy. But if on the other hand the goods would not be imported in the absence of this provision, then the revenue loss is again illusory and not real. In the case of raw materials, the revenue is compensated for by the excise duties on the finished products, thus eliminating the risk of a decline in the government revenue, since the volume of goods liable to tax will remain the same whatever is the source.⁽¹⁾

(1) Revenue from excise tax rose from 5 million pounds in 1964/65 to 13 million in 1967/68.

However, the real problem arises when it comes to the administration of the said provision. Although the new Investment Act indicates that the authorities in the Ministry of Industry are the sole bodies to determine the requirements of the different enterprises, for machinery, equipment, spare parts and raw materials, in order that the provision would not be abused, yet there is much doubt that they can perform this effectively and efficiently. Even if they can manage to judge whether say a particular machine is needed by an enterprise or not, there remains the problem concerning the control of the quantities to be imported. It is quite possible that this same machine can be put to other uses and thus be imported in larger quantities for the purpose of resale. The same is also applicable in the case of tax-reduced raw materials imports.

Protection:-

Protection whether through imposing a protective tariff on similar imported articles, restricting or prohibiting the imports of the same, is certainly the most powerful inducement to be offered to import substituting industries, because it enables them to operate in a protected market. The justification for such protection is to be found in the fact that

during the early stages of production, the new industry is bound to operate at high costs, simply because of lack of experience, lack of trained workers, lack of sufficient markets etc. etc.

Another alternative measure which can do the same even more efficiently is the provision of direct subsidies. This is so because, by keeping down the price of the final products, direct subsidies assist industries in obtaining a larger market for their output. But, however desirable direct subsidies may be, their use has to be discarded in many developing countries (e.g. Sudan) due to budgetary considerations.

Under the 1956 Act protection is provided through the imposition of protective tariffs on competing imported articles. In practice, however, the tariff device was rarely used and protection was given either through partial or total prohibition of imports. The argument, which is usually put forward to justify this policy, is that there is a strong consumer prejudice against the locally produced goods. So this attitude on the part of consumers has led the government to lose confidence in the tariff device as a protective tool.

According to the new code, protection is to be granted either through tariffs or total or partial

prohibition of imports. Protection is further reinforced by the assurance of government purchase. However, in this connection the following comment is in order. There is no doubt that the tariff device is superior to the other forms of protection because, in addition to giving the consumer some degree of freedom to choose between the domestic and foreign product on payment of a higher price for the imported commodity, it would also induce the domestic producer to increase his efficiency in order to capture that part of the market taken by the imported goods. Under a system of total prohibition, on the other hand, the local producer is under no pressure either to reduce prices or improve quality. This being the case, total prohibition of goods should be avoided, even if the domestic industry can produce enough for the home market. To maintain a stream of certain imports is a wise policy, since by toughening the competition, it protects the consumer against any tendency on the part of the domestic producer to ask for higher prices. Here it can be said that in order to hedge against this tendency, the Act has empowered the Minister of Industry to fix the selling price of the local products. This, however, usually fails, firstly, because a competent machinery to provide the supervision and the necessary checking is not available at present, and secondly, even if the price

control can be enforced the result might be a deterioration in the quality of the products.

The Special Case of Foreign Capital:-

While the various provisions laid down in the new Investment Act are of great value to the foreign investor and hence need to be publicized, there are however, certain additional factors which are liable to influence his behaviour to a much greater extent. Among these is the political and industrial atmosphere. Political stability is of utmost importance to the potential foreign investor and it goes without saying that all of these incentive measures are bound to be useless in an atmosphere of political unrest and instability. Frequent changes of government are bound to discourage the foreign investor, because of his fear that what is promised by the government of today will be denied by the government of tomorrow. In this connection it is also worth mentioning that in Sudan, as in most other developing countries, there is still too much anxiety about the political influence of private foreign capital. There is no doubt that such exaggerated fears limit the flow of capital, and if it is conceded that some abuses are bound to occur, the government has at its disposal sufficient powers to exercise control without cutting off an

important source of capital. In this respect Professor Lewis made the following remark in his report "Industrialization and the Gold Coast (Ghana)", "Whatever the foreigner's faults may be, the fact remains that the Gold Coast needs him more than he needs the Gold Coast. If all the foreign capital now in the Gold Coast were driven out, it would have little difficulty in being absorbed elsewhere, for the simple reason that the Gold Coast is a very small place relatively to the world as a whole. There are many places within the sterling area crying out for capital - England herself, not to mention Australia... The Gold Coast cannot gain by creating an atmosphere towards foreign capital, which makes foreigners reluctant to invest in the Gold Coast."⁽¹⁾

Moreover the existence and maintenance of industrial stability is of equal importance to the foreign investor. He needs to be assured, by words as well as deeds, that no pressure will be put on him in connection either with wage negotiations or industrial relations in general. He also needs to be assured that commercial contracts will be carried through legal channels, and that no arbitrary interference is exercised by the government

(1) W.A. Lewis, Report on Industrialization and the Gold Coast, Government Printing Department, Accra, 1953. Leading Issues, p. 163.

in business affairs. In this connection article (20) in the new Investment Act, according to which authorised officials are entitled to enter the enterprise for the inspection of records, documents, accounts, etc. etc., should be administered with great care, because if it is carried beyond reasonable limits, it is liable to annoy the management of the enterprise and to lead to malpractices.

To conclude, while it is probable that such concessions might involve some economic cost whether in terms of revenue sacrifice or in terms of higher prices the consumer has to pay, it is hoped that such cost will be more than offset by the benefits that would be derived from industrialization. The benefits to be expected are in the form of creation of employment opportunities, creation of a cadre of entrepreneurs, technicians, technical personnel, and creation of external economies. It is, therefore, worthwhile to sacrifice some income now in order to reap greater benefits in the future.

APPENDIX

MAJOR INSTITUTIONS CONCERNED WITH INDUSTRY
IN THE SUDANMinistry of Industry and Mining:-

The principal body concerned with the planning and promotion of industrial development in the country is the Ministry of Industry and Mining. Besides being responsible for industrial policies and legislation, it also acts as an advisory body offering help and guidance to the already existing industrialists as well as to new investors who wish to launch industrial ventures. Moreover, it acts as a liaison between industries and various government units in an endeavour to safeguard the interests of both local and foreign investors in such matters as the issue of import licences, procurement of raw materials, customs refunds, purchase of government units, protection, employment permits, etc. etc. However, to make its role more effective in promoting industrial development, the Ministry should exert greater efforts in publicizing the country's industrial opportunities and attracting the interests of both local and foreign investors to launch the same.

Industrial Development Corporation:-

A government-owned organisation which is now known as the Industrial Development Corporation was established in 1962 with the purpose of acquiring the existing government enterprises and undertaking new industries for which private capital has not been forthcoming. According to the Act under which the Corporation is established, IDC is regarded as a semi autonomous body to be governed by a Board of Directors consisting of ex-officio members and other members who are chosen on the basis of their experience in industry or administration. To ensure government control over the Corporation, the Act requires that in certain matters, the approval of the Minister of Industry and Mining should be obtained. It also empowers the Minister to issue directives in matters relating to public interest.

In this connection it is worth mentioning that if the government control over the Corporation is carried beyond reasonable limits, this is bound to jeopardize its activities as well as hamper its efficiency. After all the Corporation is established as a profit-making organisation and as such it has to satisfy the demand of the market rather than that of the public authority.

Industrial Bank:-

Due to the absence of a capital market in the country and to the fact that commercial banks usually extend short term loans suitable for commercial purposes,⁽¹⁾ the need has been realized for the establishment of an institution to cater for the requirements of industry for medium and long-term credits. So in August 1962 the Industrial Bank of Sudan which is wholly owned by the Government started its operations. It has an authorized capital of 3,000,000 Sudanese pounds of which only 2,000,000 has been paid up. In addition to extending loans and acting as a guarantor for loans given to enterprises, it also performs other promotional functions such as the provision of technical assistance and advisory services.

Since its inception and up to the end of 1967, the Bank has granted 76 loans out of the 442 applications received. The total sum of these loans amounted to Ls 1,661,461. However, since it is now evident that the Bank has already reached

(1) In this respect it is worth mentioning that the Bank of Sudan should exert great influence to induce commercial banks to direct their loans to industry.

the stage where it requires more capital, it is necessary that efforts should be directed towards securing more funds either through borrowing from international financing institutions or through offering its shares to the public and commercial banks or both.

Industrial Research Institute:-

The Industrial Research Institute which came into existence in April 1965 was established according to an agreement signed by the Government of Sudan and the United Nations Special Fund. It is set up as an autonomous agency to be governed by a Board consisting of ex-officio members and other members chosen by reason of their experience in industry and business. Its objects as they are laid down in the Act include the following:-

- "(1) Performs tests, investigations, analysis and research.
- (2) Furnishes advice and consultation services on problems of industrial planning, process engineering, production management, cost and quality control and market development.

- (3) Undertakes or participates in the formulation of standards for industrial and commercial products.
- (4) Makes surveys and studies of natural resources, raw materials and by-products of industry, mining and agriculture to promote their economic utilization.
- (5) Co-operates with other bodies and institutions promoting scientific and technological research and in training of technical experts, craftsmen and specialized production personnel."

These services are available for public and private enterprises as well as any financing institution in Sudan on payment of a fee not exceeding the cost of the service.

However, it should be noted that although all these services are of great value to industries, yet it may be very difficult to enlist the interests especially of private industrialists without heavy promotional efforts. This is especially true if the institute offering the services is connected in one way or another with the Government. A British

Technical Advisory Service has pointed out that even if the service is provided free of charge it must be actively promoted, adding that, "A high proportion of the time of the staff has been spent visiting firms and telling them what can be offered. As soon as this process is reduced the number of enquiries falls, so that a continuous effort has to be made."⁽¹⁾

(1) Quoted by C.F. Carter and B.R. Williams, "Science for Industry: Policy for Progress", Oxford University Press, 1959, p. 31.

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