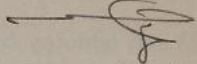


PEOPLE'S REPUBLIC OF SOUTHERN YEMEN

للدخ الاستاذ ابراهيم كيه
مع اللجنة

١٩٧٠ / ١٢ / ١٤

REPORT

to the

People's Republic of Southern Yemen

on

GUIDELINES FOR INDUSTRIAL PLANNING AND POLICY

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by

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Aden — 13th October, 1968.

I. Introduction

1. I arrived at Aden on the 11th August, 1968 and submitted my "Report to the People's Government of Southern Yemen on Guidelines for Industrial Planning and Policy" on the 13th October, 1968.

2. My terms of reference, stated first of all by the Government in a telegram dated 10th June 1968, and later amended by mutual agreement between the Government and the UN Authorities so as to exclude implementation, were as follows :

"To draft the directives for the formulation of the Industrial Policies and Plans for the Republic of Southern Yemen".

3. Neither statistic nor definite and specific statements of policy objectives were available both of which are so necessary for the formulation of guidelines for Industrial Planning and Policy for any country. I had to collect and adjust statistical data and interview key policy-makers, so as to be able to perform my mission. The result, if it has to be of a preliminary and exploratory nature, is still hoped to be useful for the formulation of an Industrial Plan based on an appropriate Industrial Policy.

II. Nature of the Economy

A. Population and Resources

4. It is estimated that the population of the People's Republic of Southern Yemen is about 1.5 million, living in an area of 112,000 square miles, with very low density of 13 persons per square mile. More than two-third of the population live on agriculture in the sparsely populated and scattered rural areas, including a substantial proportion of tribal population dependent upon animal husbandry. The rest live in comparatively small coastal towns with the exception of Aden, which has an estimated population of 250,000 and Mukalla with a population of 50,000.

5. It is estimated that the active part of the population may be put at 400,000—500,000 persons. There is visible evidence of rural under-employment. Further, unemployment in the towns is estimated as ranging from 20,000 to 30,000 persons.

6. The agricultural area is estimated at 300,000 acres. This can be significantly expanded, providing plans are made and implemented for the development of artesian water wells. The cultivated area is cropped mainly with cotton, producing long staple, high quality cotton, grains, fruit and vegetables. The total cultivable area can be increased to 1.0 - 1.5 million acres.

7. There are considerable supplies of various kinds of fish along the long coast of the Republic. It is still utilized very primitively and thus requires the development of a modern fishing industry.

8. The livestock population is estimated at about four million, consisting mainly of cattle, sheep, goats, etc.

9. Preliminary geological studies show that there is no scientific reason why oil is not discovered in the Hadhramaut area. The Pan-American Oil Company already spent \$23 million on oil prospecting.

10. There are commercial quantities of cement lime stones in three areas. In one area, which is only 40-60 kilometers off Port of Aden, it is reckoned that it has 100 million tons of cement lime stones. It is also possible to find marble, some of which are of so fine a quality as to be competitive with the Italian, in commercial quantities.

11. Further, there is a *prima facie* evidence of the possibility of existence of copper, iron and gold.

12. It is necessary that the directives for industrial policies and plans define the nature of policy for exploration and exploitation of the mineral resources of the country and ensure their proper utilization.

B. National Income and Employment.

13. The Gross Domestic Product of the former Federation of South Arabia was put at £82 million for 1965, while National Income was put at £ 74 million for the same year. It was also estimated that, owing to the withdrawal of the British Military, Naval and Air Forces and their families amounting to about 25,000 persons, the Gross Domestic Product might rise slightly to £ 86 million, while National Income might decline to £ 67 million in 1970.

14. But this estimate of Gross Domestic and National Products of South Arabia, as shown by Table No. 1, has to be adjusted so as to include Gross Domestic and National Products of 5th and 6th Governorates. The Gross National Product of the 5th Governorate was put at £ 6.9 million, including £5.9 million originating in agriculture, and £0.8 million in fisheries. The National Product of the 6th Governorate is not very large, but consists of the value added in animal husbandry, primitive fisheries, and some trading services.

15. Further, the 1970 estimate of the Gross National Product, though it did take account of the effect of withdrawal of the foreign forces, it did not take into account the effect of the closure of the Suez Canal and of the refusal by the British Government to continue repayment to the new People's Government of Southern Yemen, the financial aid, which was promised to the former Government of the Federation of South Arabia.

Table No. 1
Gross Domestic and National Products for South Arabia 1965 and 1970
(£ Millions)

Sectors	1965		1970	
	GDP	GNP	GDP	GNP
Base	10a	10	0	0
Refinery	3.5b	9	7	14
Bunkering and Petroleum Distribution	2	2.5	2	2.5
Tourism	0.3c	0.5	0.5	0.5
Shipping Services	4	5	4.5	5
Wholesale and Retail Trade—				
Banks—	8	13d	13	14
Other Industry	1.3	1.6	1.4	1.6
Agriculture—	3	3	3.5	3.5
Local Government—	7e	7	8	8
Constructions—	25f	10	33	12
Transport—	2	2	2	2
Ownership of Dwellings—	1.5	2	1.5	2
Services—	2	2	2	2
Emigrant Remittances—	7	7	3	3
	5	-	5	-
	<hr/>	<hr/>	<hr/>	<hr/>
	82	74	86	67

GDP=Gross Domestic Products
GNP=Gross National Products

Sources :

a Published figures deflated by £ 6.6 million in view of fact it includes £ 8.7 million in purchases by Base Servicemen and families; only the trade margin properly constitutes values added here.

- b Compiled from estimates on local expenditures supplied by BP Refinery, the bunkering companies, Shell, Aden Port Trust and the principal shipping and ship repair companies.
- c Estimate based on assumption by Barter, Tourism Authority Director, that 27,000 tourists spend \$1 million here and 200,000 ship visitors \$1.5 million.
- d A trade margin of 25 per cent is assumed on the £ 55 million of imports consumed in South Arabia. Included is an amount for trade margin on transit commodities, excluded is trade margin due to purchases by Base.
- e Compiled from Ministry of Agriculture estimates as follows : cotton lint— £ 2,200,000; Cotton Seed—£ 350,000; Fruits and Vegetables—£ 600,000; Wheat—£ 200,000; Barley—£ 120,000; Sesame £ 90,000; Sorghum and Millet- £ 1,000,000; Tobacco - £ 150,000; Dates—£ 500,000; Animals and Products- £ 800,000; (of which milk £ 43,000, local cattle slaughtered £ 80,000, and perhaps £ 700,000 value added in slaughtering and preparation of skins from the £ 1.3 million sheep and goats import); and fishing- £ 1,000,000.
- f Including £ 1.8 million in State local and municipalities expenditures.

All other figures are estimates

16. If the Gross National Product of the Republic of Southern Yemen is to be derived from the figures of Table No. 1, it is necessary to add the Gross National Product of the 5th and 6th Governorates and subtract the income originating in potential but not actual "foreign aid" and also the decline in public and private income owing to the closure of the Suez Canal. The Gross National Income for 1968 may therefore be estimated as £ 65 million for the former Federation plus £ 8 million for the 5th and 6th Governorates minus £ 10 million unmaterIALIZED foreign aid minus £ 6 million for the fall in public income and minus £ 4 million for the fall in private income owing to the closure of the Suez Canal. This puts the 1968 Gross National Product at about £ 53 million. This means that the National Income for the above-mentioned reasons fell short of what it would normally have been by about £ 20 million. It may also be inferred from this that per capita income fell off to £ 35 as compared with what it would otherwise have been i.e. £ 45.

17. It would be seen from Table No. 1 that the Economy of the Republic of Southern Yemen may best be described as "service station economy". Thus, the value added from the Port of Aden, Mukalla, etc., Trading Services, Tourism, Banking, Shipping, Transport and other services, amount to almost as much as three fifths of the Gross National Income. Only about one fifth of the Gross National Income, originates in the productive sectors, including about £ 8 million from agriculture and about £ 6.5 million from industry.

18. The average volume of the active population in the Republic may be put at 450,000 persons. Of those about 150,000 persons are employed in the towns. Aden alone employed 80,975 persons in December 1965, as shown in Table No. 2.

Table No. 2

Level and Structure of Employment in Aden 1966

Port	7,555
Building and Construction	12,789
Industrial undertakings	13,301
Retail and wholesale Trade	10,714
Government, Police and Army	18,231
Domestic Service	17,000
Others	1,385
TOTAL :	80,975

19. It may be noted that employment in the domestic service declined by at least 5,000 persons, and local employment by the British Base and Military Services fell off by about 8,000 persons. The decline in employment owing to the withdrawal of the British administration and military servicemen, amounts directly to about 13,000 persons.

C. Characteristics of the Economy and Problems of Economic Development.

The characteristics and problems of the economy of Southern Yemen may be summarized as follows :

20. The general task of any development policy and plan must be transformation of this "service station economy" into a national economy through both the restructuring of the existing service sectors to meet the new requirements of development and the full utilization and growth of the productive sectors of agriculture and industry.

21. There seems to be a surplus of economic facilities, especially of building and housing in Aden. In fact, there are at least as many as 1,300 houses and a larger number of flats reported to be empty. Further, a number of military bases and stations with housing facilities, evacuated by the British are still unused. A large military hospital is also not utilized. Perhaps, most important of all is the fact that the half-complete military, naval and air base in Foqim, whose cost was estimated at £ 11-14 million, is unused. There is also surplus capacity in the productive facilities of water and electricity supplies. For example, it was found that of the total of the 81 electrical generators in the Republic with a total effective capacity of 60,661 kilowatt-hour, 16 electric generators with a total capacity of 4,106 kilowatt-hour are found to be unused. It also seems that the private sector resorts to hoarding of gold and money to the extent of £ 1-2 million. This is quite apart from the capital flight that has continued especially, since Independence on 30th November, 1967. These surplus capacities must be taken into account by any general or industrial plan of development.

22. Against this surplus of capacity in building, electricity and water supplies, there is the estimated decline in the Gross National Product of £ 20 million as was indicated earlier.

23. The fall in the employment, the decline in income, the under-utilization of the electricity, water and building services were accompanied by the under-utilization of the small capacity of industrial production. This would be clear as most industries work 10-20 per cent below capacity (see section III).

24. This general state of economic depression has manifested itself in a large deficit on the Government Budget. The estimated revenue for the whole financial year 1968-1969 is put £ 8.9 millions, while the estimated expenditure for only half of this financial year (April-September, 1968) is put at £ 8.4 million. This means that the rate of Government expenditure is twice the rate of Government income.

25. The basic problem facing the economy of the Republic of Southern Yemen is twofold: on one hand, there is the need to counteract the depression created by the abnormal fall in income and employment and the budgetary deficit; and on the other hand, there is the long term problem of developing the productive sectors of agriculture and industry so as to transform the "service economy" into a national economy.

26. It seems that it is necessary to maximize income by the full utilization of the most readily available productive facilities and sources of income (especially revenue from customs duties and external loans and aids), and minimize current public and private expenditure by cutting down all unnecessary consumption, so as to maximize the savings and thereby investment absolutely and relatively, in order to tackle both current and long-term problems of the national economy simultaneously.

27. There are enormous disparities in the Republic of Southern Yemen. First of all, there are economic and cultural disparities between Aden and the rest of the Republic. Secondly, there is a very wide gap between the major towns and the countryside and tribal areas. Thirdly, the agricultural areas of Lahej and Abyan are much more developed than all other rural areas. Fourthly, there are great divergencies in the availability of means of transport between town and country. Much development of the means of transport is required for the unification and growth of a national market.

27a. The Port of Aden, despite its special status as a Free Port, is declining in importance as an entrepot and trans-shipment centre, owing to the rise of neighbouring ports, such as Djibouti, Hudaida, etc., and the growth of *direct* trade by neighbouring countries. Industrial development requires a change in the status of Port into a Free Zone rather than a Free Port, so as to allow for both growth of entrepot trade and national industries.

III. The Present Position of the Industrial Sector

It is necessary to deal with foreign oil sector and national manufacturing sector separately.

A. Foreign Oil Sector

28. A subsidiary of Iraq Petroleum Co. undertook unsuccessful oil explorations during period 1952-1957. Pan American Oil Company undertook significant exploration during the period 1962-1966. It drilled two wells in the Thamood area (fifth governorate). It is technically believed that there is no geological reason why oil should not be found in that area.

29. British Petroleum Company set up a Refinery at Little Aden in 1954. Its capacity is about 8 million tons of crude oil and its capital cost was £ 45 millions. It employs about 2,000 including 200 Europeans.

30. Table No. 3 gives quantity of Petroleum products, produced by the Refinery during 1960-1967. It is clear that output shows a declining tendency in recent years, owing mainly to the closure of the Suez Canal.

Table No. 4 gives the values of imports and exports of crude oil and Petroleum products.

Table No. 5 gives the local consumption of petroleum products.

Table No. 3
Output of Petroleum Products
(‘000 tons)

Product	1960	1961	1962	1963	1964	1965	1966	1967
Gas, Motor								
Spirits Diesel								
Oil and other								
Distilates and								
Spirits	1,448	1,869	2,069	2,082	2,241	2,256	998	728
Kerosenes	413	510	661	649	764	681	730	574
Fuel Oil	2,164	2,685	3,194	3,312	3,520	3,730	4,896	4,143
TOTAL	4,025	5,064	5,924	6,043	6,525	6,667	6,624	5,445

Table No. 4
Trade In Petroleum Products
(£ '000)

Imports	1964	1965	1966	1967	1968
Crude Oil	35,079	35,765	33,030	25,074	24,669
Fuel Oil	8,328	4,679	5,504	1,719	949
Motor Spirit	77	1,239	6,489	2,025	1,651
Kerosene	16	82	—	—	87
TOTAL	43,500	41,765	45,023	28,818	27,356

Table 4 (contd.)

<i>Exports</i>	1964	1965	1966	1967	1968
Fuel Oil	13,896	13,716	12,660	17,512	19,173
Motor Spirit	9,252	10,296	30,890	31,397	8,468
Kerosene	8,102	7,072	7,668	6,493	6,542
Ships Bunkers	24,262	20,333	22,355	8,515	2,673
TOTAL	55,512	51,417	73,573	63,917	36,856

Table No. 5

Local Consumption of Oil Products
(*000 Gallons)

<i>Years</i>	<i>Gasoline</i>	<i>Diesel</i>	<i>Kerosene</i>	<i>Total</i>
1965	126	42	—	168
1966	455	105	455	1015
1967		385	420	1925
1968*		350	140	1790

*Estimate.

31. It is clear that exports of petroleum products constitutes about 60 per cent of the output of the Refinery, while sale at Aden Port of ships' bunkers amounts to about 35 per cent on the average; but local consumption of oil products fluctuates around 5 per cent of the total petroleum products.

32. The importance of the foreign oil sector in the National Economy may be seen from the fact that local expenditure of all oil companies operating in this country, amounted to £ 4,391,483 in 1965, which accounted for about 6 per cent of the estimated Gross National Product of that year.

33. However, there are no petrochemical industries as yet.

B. National Industrial Sector

34. Apart from the B.P. Refinery, there is at present little manufacturing industry outside Aden. In the latter, the traditional industry is the manufacture of salt by solar evaporation. This industry has been declining under the pressure of high costs and foreign competition.

35. The industry which has expanded most rapidly has been the manufacture of soft drinks, with an output of 50 million bottles in 1965.

36. There is also a small shipbuilding and ship repairing industry with a capacity for the construction of boats upto 1,500 tons per annum.

37. Other industries include the production of tiles, cement blocks, cigarettes, aluminium ware, paper bags, furniture, etc.

38. Table No. 6 summarizes the preliminary results of a Census of Industry which has just been undertaken by the Central Statistical Bureau. It is clear that the estimated value of the capital invested in the ten industries listed is about £ 1,856,000. It is to be noticed that all these industries are working below capacity. The value of comparable output fell off from £ 1,125,000 in 1967 to an estimated figure of £ 962,000 in 1968. A glance at the quantities of production for the two years of 1967 and 1968 would show that physical output fell off much more sharply than this.

Table No. 6

Manufacturing Industries in Aden 1967-1968

Industry	Unit	Production 1967		Production 1968		No. of Employees		Invested Capital £
		Quantity	Value £	Quantity	Value £	1967	1968	
1. Soft Drink Industry	Bottles	44,345,859	630,904	30,862,276	437,340	259	244	390,000
2. Dairy Products ..	(000) litres	128,316	101,651	206.15	16,332	29	29	70,000
3. Salt	Tons (long)	47,620	47,620	848.20	84,820	125	125	150,000
4. Soap	(000) pounds	—	—	1,125.00	52,500	—	14	30,000
5. Aluminium Ware ..	(000) pounds	131.80	32,950	173.80	47,795	21	21	—
6. Tiles	(000) piece	1032.20	21,906	863.50	19,620	89	32	27,000
7. Cement Blocks ..	(000) piece	228.00	8,176	337.00	11,788	29	23	8,500
8. Sesame extraction ..	(Tons)	922	256,603	985	264,751	119	122	16,500
9. Flour Milling ..	(Tons)	415	25,069	448	27,094	22	21	4,725
10. Ship-building and re- pairing	—	Sub-Total	1,124,879	Sub-Total	962,040	628	—	1,159,000
		—	538,000	—	—			Total : 1,855,775

Source: Central Statistical Office.

39. Apart from handicraft industries in the countryside, there is only one small Tuna Fish canning factory at Mukalla in the fifth Governorate, two cotton ginneries at Abyan and Lahej and sesame oil extraction factories.

40. The tuna fish factory started in 1951 with a capital cost of about £ 3,000. The factory can process and tin two tons of fish per day. But actual production lasts for only forty days per year, owing mainly to primitive methods of catching fish. The machinery is too old and the size of the plant too small for economic production.

41. The two modern cotton ginneries employ about 350 workers and officials and have a total capacity of 25,000 bales.

42. There are also fifty automatic oil extraction plants in Lahej, employing ninety workers and producing 75-100 tons of sesame oil per year.

43. The value added in local manufacturing industry, outside the foreign oil sector, is estimated at £ 3 million, produced by about 10,000 employees.

IV. The New Industrial Projects and Complexes

A. Geological and Mineral Surveys

44. The growth of the industrial sector depends partly on the growth of knowledge of the mineral resources of the country. In the past a few attempts at general surveys were made. However, the need is now for a more specific and thorough survey of oil in particular areas so as to assess and overtake the work undertaken by the Pan-American Oil Company in Hadhramaut area; of copper, gold and iron ore; and of cement lime stones and quarrying, especially of marbles.

45. It is also necessary that an appropriate policy for geological exploration, may be formulated and made public and ultimately the economic exploration for mineral discovery.

B. Fishery Industry

46. Fishing activity off the coast of Southern Yemen has been largely confined to inshore waters and carried out mainly by primitive methods. But now fishermen have begun to use nylon instead of cotton lines and nets, to fit outboard motors on their canoes and to modernize their sambuqs.

47. According to general rough estimates, about 10,000 persons are engaged in the fishery industries. The total yield in years of normal production does not appear to be less than 70,000-80,000 tons per year, of which 15-20,000 tons are brought to the Aden/Lahej area where they are freshly consumed. But the biggest proportion is caught in the Hadhramaut/Mukalla area. Of this a small part is brought to the interior, and the biggest part is dried, salted and sold, either as camel food or fertilizer, or for export to Ceylon and East Africa.

48. The average annual catch per fisherman is very low, as low as 8-10 tons per year. Consequently his average income is very meagre.

49. Although the People's Republic of Southern Yemen is located along waters abounding in fish, the quantity produced and actually valuably exploited is rather small in comparison to potentiality, had an efficient fishing industry been set up.

50. The present United Nations Fishery Development Project in the Gulf of Aden, which was initiated in 1966, is to cover surveys of a more general nature and to include oceanographic observations, especially the investigation of the biology of the pelagic fish of the Gulf of Aden and its environs.

51. It seems necessary that a new study is made of the conditions and means of landing/storing, transporting and marketing of the catch with a view to their improvement. The ruling system of wholesale disposal needs to be reformed in favour of the fishermen, as the auctioneers retain 12 per cent, while the carrier charges 30 per cent of the value of the fish.

52. At a later stage, it may prove necessary that the Government of Southern Yemen may have to undertake a demonstration fishery project, in order to enhance the spread of modern methods in the private fishery industry.

C. Cotton Seed Oil-Soap-Detergents Industrial Complex

53. The output of cotton seeds averages at about 7,000-10,000 tons per year. This provides the raw material base for the making of a project report on a cotton seed oil extraction plant.

54. Tables Nos. 7 and 8 give the values and quantities of imports, exports and net imports of all edible oils during 1965-1968.

55. The net import (total import minus the re-exports) of cotton seed oil varies considerably, as it changed from 23,000 gallons in 1963 to 215,000 gallons in 1965, to 1012 gallons in 1967 and to 22,000 gallons during 1968.

56. Although both the supply of cotton seed raw materials and the size of net import of cotton seed oil, may warrant the establishment of a cotton seed oil extraction plant with a crushing capacity of 18 tons per 24 hours, it is necessary to examine the economic feasibility of a larger plant.

57. This is because of two reasons. First of all there is the possibility of expansion of cotton production and therefore, of cotton seeds output. Secondly it is necessary to take into account the substitution of cotton seed oil, produced at home, not only for imported cotton seeds, which amounts to about 20 per cent of all edible oils, but also for other types of oils, such as ground-nut oil, coconut oil, linseed oil, etc.

58. The minimum economic size of a cotton seed oil extraction plant is approximately 2,000 tons crushing capacity per month. The capital cost of such a plant may be put at £ 250,000.

59. It is also necessary to study the economic feasibility of setting up jointly with the cotton seed oil extraction plant, a soap factory and a detergent plant.

60. The value of imports of soap and washing powder amounted £ 381,000 and its quantity was 66,000 cwt. in 1967. But re-export of the same was valued at £ 49,000 and weighed 10,000 cwt. in 1967. It is clear, therefore that the net imports in the same year amounted to about 56,000 cwt., valued at £ 342,000.

Table No. 7
Imports, Exports and Net Imports of Vegetable Oil
(Quantity Galls.)

Items	1965		Net		1966		Net		1967		Net		1968		Net	
	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports
1. Cotton Seed Oil	234,854	19,914	214,940	75,543	12,216	63,327	1,170	2,182	1,012†	45,605	23,260	22,345				
2. Groundnut Peanut Oil	26,805	100	26,705	53,582	2,402	51,180	3,955	1,871	2,084	8,661	3,455	5,206				
3. Fixed Vegetable Oil N. 25	745,498	78,415	667,083	580,561	133,589	446,972	944,430	44,753	899,677	637,406	9,149	628,257				
Sub-Total ..	1,007,157	98,429	908,728	709,686	148,207	561,479	949,555	48,806	900,749	691,672	35,864	655,808				
4. Soyabean Oil	54,304	760	53,544	10,312	—	10,312	4,984	—	4,984	5,552	—	5,552				
5. Olive Oil	23,201	548	22,653	26,012	636	25,376	22,421	761	21,660	46,075	1,228	44,847				
6. Coconut Oil	83,556	14,346	69,210	66,595	19,860	46,735	55,009	26,772	28,237	152,054	11,782	140,272				
7. Linseed Oil	12,024	330	11,694	33,827	37	33,790	6,321	8	6,313	14,685	66	14,619				
Sub-Total ..	173,085	15,984	157,101	136,746	20,533	116,213	88,735	27,541	61,194	218,366	13,076	205,290				
Grand Total ..	1,180,242	114,413	1,065,829	846,432	168,740	677,692	1,038,290	76,347	961,943	910,038	48,940	861,098				
8. Sesame Oil	59,134	303,937	244,803†	67,310	309,832	242,522†	45,873	146,539	100,664†	34,346	52,197	17,851†				

† Net Exports
Source: Statement of External Trade 1965-1968 (Ministry of Economy, Commerce and Planning)

Table No. 8
Imports Exports and Net Imports of Vegetable Oils
(Value £)

Items	1965		Net		1966		Net		1967		Net		1968		Net	
	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports
1. Cotton Seed Oil	118,577	8,258	110,319	36,457	5,990	30,467	585	1,301	716†	22,558	10,755	11,803				
2. Groundnut (peanut oil)	14,467	50	14,417	17,505	1,317	16,188	2,234	912	1,322	4,774	1,526	3,248				
3. Fixed Vegetable Oil N.E.S.	367,240	39,496	327,744	264,102	32,728	231,374	414,216	24,779	389,437	335,813	4,569	331,244				
Sub-Total ..	500,284	47,804	452,480	318,064	40,035	248,029	417,035	26,992	390,043	363,145	16,850	346,295				
4. Soyabean Oil	27,857	380	27,477	4,119	—	4,119	2,654	—	2,654	2,980	—	2,980				
5. Olive Oil	12,671	747	11,924	13,115	669	12,446	10,459	390	10,069	23,893	585	23,308				
6. Coconut Oil	35,483	7,680	27,803	28,796	9,601	19,195	25,054	13,626	11,428	95,320	5,797	89,523				
7. Linseed Oil	4,410	169	4,241	11,825	26	11,799	1,673	5	1,668	5,302	33	5,269				
Sub-Total ..	80,421	8,976	71,445	57,855	10,296	47,559	39,840	14,021	25,819	127,495	6,415	121,080				
Grand Total ..	580,705	56,780	523,925	375,919	50,331	325,588	45,675	41,013	415,862	490,640	23,265	467,375				
8. Sesame Oil	33,480	232,989	199,508†	42,261	194,006	151,745†	32,901	91,135	58,234†	17,882	25,812	7,930†				

† Net Exports
Source: Statement of External Trade 1965-1968 (Ministry of Economy, Commerce and Planning)

61. The whole of this oil extraction-soap detergent-industrial complex would probably provide employment to 400-500 persons, save foreign exchange on an increasing scale up to £ 500,000 per year, while total capital cost may be around £ 1 million.

D. Leather Goods Industries

62. There is no CENSUS of livestock as yet. It is estimated that there are about 4 million sheep and goats in the country.

63. At present, the output of hides and skins is about three quarters of a million pieces. Table No. 9 shows the net exports of the various types of hides and skins during 1963-1968.

Table No. 9
Net Exports of Hides and Skins : 1963-1968

Items	('000 £)					
	1963	1964	1965	1966	1967	1968
1. Bovine and Equine Hides	115	231	4,008	1,774	(922)**	39,745
2. Calf Skins and Kip Skins	1,954	170	2,516	3,643	14,665	16,437
3. Goat Skins	14,959	11,308	25,917	26,383	58,714	396,705
4. Kid Skins	4,047	3,354	2,849	3,842		8,570
5. Sheep and Lamb Skins	19,527	18,187	23,072	37,061	319,583	681,464
6. Other Hides and Skins	133	104	449	245		—

** () indicates net imports.

Source: Ministry of Economy, Commerce and Planning :
Statement of External Trade 1963 to 1968.

Both slaughtering and tanning methods are under-developed, based on primitive techniques. This leads to under-utilization of the by-products (blood and bones) consequent upon slaughtering and also to the damaging of hides and skins. For example, only 20 per cent of all hides and skins, handled, are classified as grade I. Modern methods raise this percentage to at least 50 per cent of all hides and skins treated.

64. It is therefore, necessary to consider the gradual establishment of an industrial complex, consisting of a central abattoir or a slaughter house, a leather tanning and processing factory and ultimately a shoe factory.

65. This leather industrial complex would not be only a resource based industry, but a market based industry too. This is because of both the adequacy of the resources (supply of hides and skins) and the size of market.

66. The minimum economic size for a tanning factory is an output capacity of 300,000 pieces of hides and skins. It is possible, in the light of the local supply of hides and skins, to take as a guideline for the PROJECT REPORT on the leather industrial complex, a practical size of plant of 750,000 pieces of hides and skins. It is advisable that this plant size be designed so as to be expandable to 1,000,000 pieces of hides and skins.

67. Table No. 10 shows the value of leather and footwear imports during the period 1963-1968.

Table No. 10

Value of Imports of Leather and Footwear : 1963-1968

Articles	(£)					
	1963	1964	1965	1966	1967	1968
1. Leather	35,437	42,324	35,930	29,486	17,622	18,342
2. Manufacture of leather (Other than footwear)	31,587	21,146	18,336	13,786	11,821	43,774
Sub-total ..	67,024	63,470	54,266	43,272	29,443	62,116
3. Footwear :						
(a) made of leather	314,400	379,800	309,800	257,600	165,469	256,524
(b) made of rubber or plastic material	538,200	784,400	516,200	576,300	642,497	573,834
(c) made of other material	58,800	29,800	23,600	1,700	8,581	—
(d) Sub-total (footwear)	911,400	1,194,000	849,600	835,600	816,547	830,358
4. Grand total ..	978,424	1,257,470	903,866	878,872	845,990	892,474

Source: Ministry of Economy, Commerce and Planning,
Statement of External Trade : 1963—1968.

68. On the demand side, the total value of average annual imports of footwear was about 950,000. This includes about 50 per cent of the re-export of footwear. But it does not include the footwear import of the 5th and 6th Governorates of the Republic. It is, therefore, likely that the size of the market for footwear would be of £ 1,000,000 worth.

69. It is, therefore, clear that, if adequate import tariffs are imposed on the import of the footwear, that the establishment of a low cost factory would both absorb the output of the tannery as well as satisfy the requirements of the national market for footwear.

70. It is to be estimated that the total capital cost of the whole of the leather industrial complex (the central abattoir, tannery and the shoe factory) is about £ 1,350,000.

71. The volume of direct employment to be generated by the establishment of this leather industrial complex is approximately 500-600 workers, varying according to size of plants chosen. This is employment in production. It does not include constructional employment, nor indirect employment, generated by the expenditure resulting from the sale of the output of the industrial complex.

72. This leather industrial complex would be likely to save foreign exchange to the tune of £ 500,000-750,000 per year, depending on the ultimate size of plants in the tanning and shoe factories.

73. The foreign exchange capital cost of this leather industrial complex may be estimated at £ 500,000-750,000.

74. The profitability of the leather industrial complex may be illustrated by the number of year over which the total capital cost of the project would be recouped. It is likely that this complex will pay its way over a period of 2 to 3 years.

E. Cotton Textile Industry

75. For most of the developed countries, the establishment of a textile industry based on cotton was the starting point for their industrialization. This is because of relatively lower costs of raw material (raw and ginned cotton), and low labour cost owing to the fact that it is a labour intensive industry. This makes cotton textile competitive in cost as well as absorptive of unemployment in terms of labour.

76. Table No. 11 gives the output of local long staple cotton, cotton prices and values for the years 1957-1966.

Table No. 11

Local Production of Raw Cotton 1957-1966

<i>Years</i>	<i>Tons</i>	<i>Price £ per ton</i>	<i>Value £</i>
1957-58	5,262	311	1,636,482
1958-59	3,339	285	951,615
1959-60	5,964	305	1,819,020
1960-61	3,804	340	1,293,360
1961-62	5,809	313	1,818,217
1962-63	6,732	293	1,972,476
1963-64	4,964	328	1,628,192
1964-65	6,446	343	2,210,978
1965-66	3,411	303	1,033,533
Average :	5,081	313	1,595,986

Source: Ministry of Agriculture.

77. The average output of raw cotton may be put at about 5,000 tons per year during the period of 1957-1966. This is capable of further expansion if larger areas are cropped, more quantities of fertilizers are used and better methods of insecticide followed. The quality of the cotton is of the highest in the world (comparable of that of the U.A.R.). Part of it may be exported to finance the import of lower quality cotton for the textile industry.

78. The establishment of a cotton textile factory would process raw cotton locally produced at the expense of the export of raw cotton. This would increase value added of industrial production.

79. Table No. 12 gives cotton textile imports, exports and local consumption for 1961-1968.

Table No. 12

Year	Cotton Textile Consumption in the 1st-4th Governorate					
	TOTAL IMPORTS		TOTAL EXPORTS		NET IMPORTS	
	Yards	Value SY£	Yards	Value SY£	Yards	Value SY£
1961	53,203,340	3,742,297	33,114,108	1,998,323	20,089,232	1,743,974
1962	47,336,077	3,251,153	31,465,331	1,680,845	15,870,746	1,570,308
1963	53,830,292	3,570,034	32,057,647	1,744,284	21,772,645	1,835,750
1964	46,544,304	3,419,030	22,164,406	1,267,492	24,379,898	2,151,538
1965	49,867,701	3,765,933	17,140,182	923,479	32,727,519	2,842,454
1966	42,926,371	3,269,807	14,567,676	851,066	28,358,695	2,418,741
1967	35,459,559	3,110,983	8,431,348	510,995	27,028,211	2,599,988
1968	62,274,254	5,392,034	7,486,806	656,164	54,787,448	4,735,870

Source: Ministry of Economy, Commerce and Planning.

80. The average value of the net imports of all types of cotton fabrics may be put at about £ 1 million. This is sufficiently large consumption to warrant the establishment of a cotton textile factory, based on a certain range of cotton textile products, which are consumed locally on a large scale, especially grey unbleached and other cheap cotton products which make for the national dress (e.g. foutta).

81. It is necessary that the project report studies the establishment of a cotton textile factory of the size of at least 25,000 spindles and 500 looms.

82. The total capital cost for such a cotton textile factory may be put at £ 2 million.

83. The establishment of this factory in the Republic would raise employment by 400-500 persons.

84. The import substitution effect of this cotton textile factory would save foreign exchange to the tune of £ 0.75-1 million dinars.

F. Flour Milling, Baking and Confectionary Making Industrial Complex

85. Local wheat production is still very limited. Its area is about 20,000 acres, and its production averages around 20,000 tons per year. It is clear that productivity per acre is very low and the cropped area depends on the improvement of the irrigation system.

86. Flour mills are generally of very small capacity. The total annual capacity of flour milling in the 1st Governorate is estimated to be 42 tons per 24 hours, distributed among 25 plants.

87. The number of bakeries is estimated to be 52 plants, consuming a total of approximately 24 tons of flour daily in the 1st Governorate only.

88. Most confectionery is still imported. The average value of imports of sugar confectionery is £ 412,000 and the quantity approximately 3,460 tons per annum during 1966 and 1967.

89. It would be more economic to base this flour milling-confectionery-making industrial complex on an increase in local production of wheat. It is nevertheless possible for the country to reap the income and employment benefits consequent upon the further development of flour milling and confectionery-making, based on imported wheat.

90. The average imports of flour may be put at 40,000 tons, costing £ 175,000-200,000 per year.

91. It is necessary to examine the suitability of the flour machinery which has been lying idle since 1965 in the Slave Island. Its productive capacity was put at 20 tons per 24 hours. But this equipment, which belongs to a private foreign individual might now be more than rusty.

92. Table No. 13 gives the values and quantities on imports, exports and local consumption of wheat and flour during 1964-1968.

Table No. 13

Consumption of Wheat and Flour in the 1st-4th Governorate

(Quantity in Tons)

For the year 1964

Item	Imports		Exports		Consumption	
	Quantity Ton	Value £	Quantity Ton	Value £	Quantity Ton	Value £
Wheat	39,528	1,314,063	16,114	495,138	23,414	818,928
Flour	44,035	1,598,835	8,009	295,994	36,026	1,302,841

For the year 1965

Wheat	41,018	1,541,628	13,168	550,561	27,850	1,991,067
Flour	43,722	1,563,011	7,498	276,081	36,224	1,286,930

For the year 1966

Wheat	65,722	2,243,721	22,580	923,738	43,142	1,319,983
Flour	51,445	1,705,233	8,129	278,122	43,316	1,427,111

For the year 1967

Wheat	49,808	1,778,657	7,590	318,424	42,218	1,460,233
Flour	41,011	1,410,923	4,441	312,655	36,570	1,098,268

For the year 1968

Wheat	35,216	1,550,224	1,799	76,915	33,417	1,473,309
Flour	41,494	1,420,073	4,223	150,035	37,271	1,270,038

93. A flour mill with a capacity of between 36,000 to 48,000 tons per year may be considered for inclusion in industrial plan. Its total capital cost may be put at between £ 20,000-£ 30,000 varying according to size of plant.

94. The construction of this plant would raise employment by 30-40 persons, saving foreign exchange around £ 150,000 to £ 175,000 per year.

95. It is advisable that the flour mill project report includes a study of a modern bakery, a biscuit factory, a sweet factory and possibly other confectionery, which uses flour as its basic input.

G. Cement and Construction Industry

96. In spite of the building boom that took place from the mid-1950's up to the mid-1960's the construction industry remained limited in its scope and under developed in its techniques. It has to date been confined to the production of tiles, bricks and cement blocks.

97. There are large quantities of cement lime stones. In one area, which is about 40-60 kilometers away from Aden, it is estimated that there are about 100,000,000 tons of cement lime stones.

98. The availability of cement lime stones raw material, in considerable commercial quantities, adequacy of water and electricity supplies and access to international seaports, may provide for the establishment of a successful cement export industry.

99. Table No. 14 shows the imports, re-exports and local consumption of cement during the period 1960-1968.

Table No. 14

CEMENT

(Imports, Re-exports, "Quantity and percentage of Imports" Local Consumption and Stocks)

(Tons)

Year	Import	Re-exports		Local Consumption and stocks
		Quantity	%Import	
1960	73,215.5	6,115.2	8.3	67,100.3
1961	67,637.1	6,932.6	10.2	60,704.5
1962	91,519.7	6,238.4	6.8	85,281.3
1963	85,668.6	4,576.5	5.3	81,092.1
1964	89,047.2	6,914.7	7.7	82,132.5
1965	96,675.9	4,018.7	4.1	92,657.2
1966	633,322.0	3,582.0	6.8	629,740.0
1967	36,579.0	1,861.0	5.4	34,718.0
1968	42,288.0	4,576.0	12.5	37,712.0

Source: Ministry of Economy, Commerce and Planning,
Statement of External Trade 1960-1968.

100. Local consumption of cement, owing to the aforementioned building boom has been increasing from approximately 67,000 tons in 1960 to about 93,000 tons in 1965. Although the building boom might be over, the prospective formulation and implementation of a development plan would generate an expansion of demand for cement, at least as considerable as that which was generated earlier by the building boom.

101. It may, therefore, be safely estimated that the annual consumption of cement during the period of implementation of the development plan may be put at 100,000 tons per year.

102. If it were possible to secure an export market for cement, on such basis as the barter of cement against machinery and equipment of long-term bulk purchase contracts, then the optimum capacity of the proposed cement plant might not be based only on local cement consumption. It must be based on the local consumption market as well as export markets.

103. It is, therefore, necessary that the two possible-capacities based on local consumption, and on local consumption plus export-are thoroughly investigated.

104. In the first place, the size of plant suitable for the home-market may be put at 100,000 tons per year.

105. If both the home-market and the export market were to be taken together, the size of the cement plant under consideration, would be in the range of 300,000-500,000 tons per year.

106. There are a few bricks and tile factories, which produce about 4,000-5,000 tiles or bricks per day. The production of tiles was estimated at 2.2 million pieces valued at £ 55,900 in 1966. The production of cement blocks was also estimated at 80,000 pieces valued at £ 2,700 in 1966.

107. It is necessary to use some of the output of cement in the production of cement bricks, blocks, tiles, pipes etc. Two plants with the initial output of 10,000 tons each may be considered.

108. The capital cost of a cement plant with 100,000 tons capacity may be around £ 1,600,000-£ 1,750,000, and the two cement brick and pipe factories £ 250,000-400,000. Both can employ about 250 workers and save foreign exchange as much as £ 500,000.

H. Other Light Industries

109. There are a vast number of light industries that can profitably be set up, especially by the private sector, such as animal fodder, batteries, lanterns, nails, nuts, button, exercise books, etc.

110. There are also some handicraft industries that may be established in the country, as well as the existing handicraft industries such as pottery, curved daggers, handloom weaving, etc. Here the report of the ILO expert "Small-Scale and Handicraft Industries" may be consulted, especially the suggestions contained in paragraphs 38-42.

V. Guidelines for Industrial Planning and Policy

A. Nature and Scope of Industrial Planning

111. At this stage of the development of the economy of the Southern Yemen, and in the light of the available statistics it is neither necessary nor possible to apply the advanced techniques of Industrial Programming. But an improvement must be made on the previous plans of development of Aden Colony for 1955-1960, and for 1960-1964, as these were confined to a list of expenditures on projects largely of social services and did not include any industrial project.

112. Further, the rate of growth of the *Whole* of the economy of Southern Yemen had been very modest up to 1966. It probably did not exceed 5 per cent per annum, while the rate of growth of population might have exceeded 3 per cent per annum.

113. The economy has been suffering from a state of depression, since the end of British occupation, foreign aid and the closure of the Suez Canal. It has suffered from a negative rate of growth of 10-15 per cent per annum during the last two years.

114. What is more immediately required is more in the nature of a public works programme rather than a long term plan. Although this task is outside my terms of reference, it is relevant in so far as it has a bearing on the nature and scope of the required Industrial Planning and Policy.

115. While a mere list of expenditures on industrial projects is inadequate, a fully fledged industrial plan is impossible. What is adequate and possible is to undertake the preparation of a capital investment programme of industrial projects and complexes. This would avoid the disadvantages involved in a mere list of public expenditures, as it consists of groups of co-ordinated and interrelated projects or complexes.

116. It is necessary also, that the industrial capital budget is accompanied by a manpower or employment budget, a foreign exchange cost and saving budget, and rudimentary balances of materials and financial resources.

117. The scope of the Industrial Investment Programme must cover the public, mixed and private industrial sectors of the national economy. This means that the Industrial Investment Programme must be comprehensive. But the nature of industrial planning may differ between sectors. It may be central and directive for the public industrial sector, and indirect or indicative for the private sector.

118. The nature of industries that are to be included in the Industrial Investment Programme may be described as resources-based and market-based industries at one and the same time, in order to ensure their ultimate comparative efficiency.

119. Wherever possible and otherwise economic, the technology of the industries to be included in the Industrial Investment Programme must be labour intensive i.e. using more labour than capital per unit of output.

B. Objectives and Targets of the Industrial Investment Programme

120. First and foremost, the Industrial Investment Programme must begin by a survey of the existing industries including the refinery industry with a view to a diagnosis of the under-utilization of their productive capacity and a prescription leading to the maximization of output of the existing plants.

121. It may be useful to set the oil refinery industry the indicative target of full capacity production of 8 million tons of crude oil per year during two or three years, and the establishment of a petrochemical complex, possibly jointly, starting with a fertilizer plant, in five years.

122. It may be possible to set the target of *doubling* the added value of industrial output outside the foreign oil sector, which amounts to £ 3 million, during a period of five years. This may raise the contribution of the non-oil industrial sector to 10 per cent of the Gross National Income.

123. The objectives contained in the two preceding paragraphs would amount to the maximization of the rate of growth of industrial output in the Republic of Southern Yemen.

124. It is necessary, also, that the absorption of urban employment may become one of the most important objectives of the Industrial Investment Programme. The latter may aim at the creation of permanent industrial employment for about 2,000 workers, and indirect and constructional employment of another 1,000 workers.

125. The industrial Investment Programme may aim at yielding a gross foreign exchange saving about £ 2.5 million. It is difficult at this stage to estimate the net foreign exchange saving, as the import content or foreign exchange cost of the Industrial Investment Programme requires a more detailed study of the approved industrial projects and complexes. But the maximum economy in the use of foreign exchange in the Industrial Investment Programme is necessary.

126. The objectives of the maximization of the rate of growth of industrial output, the absorption of unemployment, and the saving of foreign exchange if achieved, would contribute to the diversification and stabilization of the economy, and would thus help to transform it into a national economy.

C. Control Figures for the Industrial Investment Programme

127. Table No. 15 summarizes in rough and ready quantitative terms the investment cost, employment, and foreign exchange saving of the Industrial Investment Programme. These figures of industrial projects and complexes are no more than guidelines for the proposed detailed studies of project reports to be prepared for the formulation of the final industrial programme.

Table No. 15
New Industrial Projects and Complexes

Industrial Sub-Sectors	Investment Cost £	Employment	Foreign Exchange £
A. Geological Surveys and Explorations (Oil, Copper, Gold, Iron Ore, etc.)	400,000	—	—
B. Fishery Industry	100,000	—	—
C. Cotton seed Oil-soap-detergents Industrial Complex	1,000,000	450	500,000
D. Leather Industrial Complex	1,350,000	550	625,000
E. Cottons Textile Industry	2,000,000	450	750,000
F. Flour Milling-Confectionery Industrial Complex	35,000	35	165,000
G. Cement and other construction industries	2,000,000	250	500,000
H. Other light industries (e.g. Animal Fodder, Dry Batteries Assembly)	115,000	100	75,000
TOTAL	7,000,000	1,835	2,615,000

128. It is to be noted that the capital cost of the programme is £ 7.0 million. Depending on the availability of domestic and foreign financial resources, the programme may be spread over a period of three to five years. This would make the annual rate of expenditure range between £1.0—2.33 million. But the requirements of other sectors of the economy, especially, agriculture, may impose adjustments of the programme for at least three reasons.

129. In the first place, some agricultural projects, such as the expansion of cotton production, may prove to be more socially profitable than the marginal projects included in these control figures of the Industrial Investment Programme. Secondly, co-ordination between the growth of the industrial sector and other sectors of the economy may require the *postponement* of a particular project. Thirdly, the scarcity of financial resources may impose a cut-back in the overall development plan, including the Industrial Investment Programme.

130. The choice between 3 years and 5 years industrial programme depends among other things, on the nature of the directives and plans that are to be made for other sectors of the national economy, especially agriculture. The Industrial Investment Programme must form a part of an integrated development plan.

131. The total capital cost of the Industrial Investment Programme may be divided between sub-sectors in the following way :

- (a) Public Industrial Sector £ 3.5 million;
- (b) Mixed Industrial Sector £ 2.0 million;
- (c) Private Industrial Sector £ 1.5 million;

132. It is the size of the project, its relation to the strategy of the development, and the relative aptitude and efficiency in the various sectors, which determine what projects of the Industrial Investment Programme are to be allocated to the three sub-sectors. No hard and fast rule is advisable. Each case may be studied according to its own merits and demerits, in a given situation.

D. Policy for the Exploration and Exploitation of Mineral Resources

133. It is necessary that a policy is decided for the exploration of mineral resources. Whether the instrument of this policy is a partnership between the Government and foreign organization, a works contract between same, or an agreement on technical and economic co-operation, two principles must be followed:

134. First of all, whatever is discovered remains the property of the State.

135. The risk capital involved in exploration, prior to discovery, is the sole responsibility of the foreign party or organization. If and when discovery is made, then the cost may be shared by both parties according to agreed proportions.

136. Any of the three methods or instruments of exploration may be applied to the exploitations after discovery. But preference depends on the relative merits or demerits of each in the circumstances.

E. Policy for the Encouragement of Industrial Investment

137. All industrial establishments, where capital cost amounts to at least £ 2,000, at least 60 per cent of its capital is owned by the citizens of Southern Yemen, employ 75 per cent of its total non-technical labour force locally, the local content of its output is at least 25 per cent of the value of total output, must enjoy the following privileges.

138. Such industrial establishments must be exempted from income tax.

139. Their profits must be exempted from profit taxes for three to five years.

140. Its reinvested reserves are to be exempted from income tax.

141. Its estates are to be exempted from estate taxes or local rates.

142. Its imports of machinery and raw materials are exempt from customs duties.

143. These industrial establishments are to be granted state lands by long-term lease at nominal rates.

F. Industrial Protection

144. Customs and tariffs policies must be changed so as to protect the products of the infant industries from unfair foreign competition. This would require a change in the Status of the Free Port of Aden in particular into a Free Zone. But protection of national production must be flexible so that the consumers do not permanently shoulder the burden of the inefficiency of the industrial producers.

G. Financial Assistance

145. The banking control system may have to be reformed so as to deal with the banking bias in favour of commercial investment and against industrial investment. Rates of interest on loans and overdrafts for industrial investors must be reduced from their very high present levels. Foreign investors have to be induced to bring in their working capital rather than utilize local deposits through overdrafts as this is now causing financial difficulties for local industrialists.

146. If this policy proves unsuccessful, stronger financial measures may become necessary. Otherwise, this may be a case for the transformation of one of the commercial banks into a Development Bank.

H. Labour Policy

147. It is necessary that the rules of labour industrial discipline are ensured. In return, wages policy may be tied to labour productivity.

I. Organization for the Formulation of Industrial Plans, Implementation of Policies, and follow-up of execution

148. All of these three functions of industrial planning, policy implementation and follow-up of execution are presently entrusted with the Ministry of Economy Department of Industry Planning Department. The responsibility for follow up execution is almost non-existent.

149. In view of the smallness in size of the industrial sector, and of the shortages of qualified personnel, it is necessary that these functions are vested in one Department.

VI. Conclusions and Recommendation

150. It is necessary for the alleviation of the economic depression, and for the transformation of the service economy into a national economy that speedy action be taken on the guidelines proposed in this Report for the formulation of an Industrial Investment Programme of three to five years.

151. It is recommended that this Report is presented to the High Planning Council after being studied by the Consultative Committee. The approval by the High Planning Board of the Directives for Industrial Planning and Policy contained in paragraphs 111-194 would or should provide the terms of reference for the Industrial Planning Report or for experts in charge of implementation to draft the Industrial Investment Plan for the next three to five years.

