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INDUSTRIAL PROJECT PLANNING AND IMPLEMENTATION IN IRAQ: AN INTRODUCTORY REVIEW [1]

prepared by

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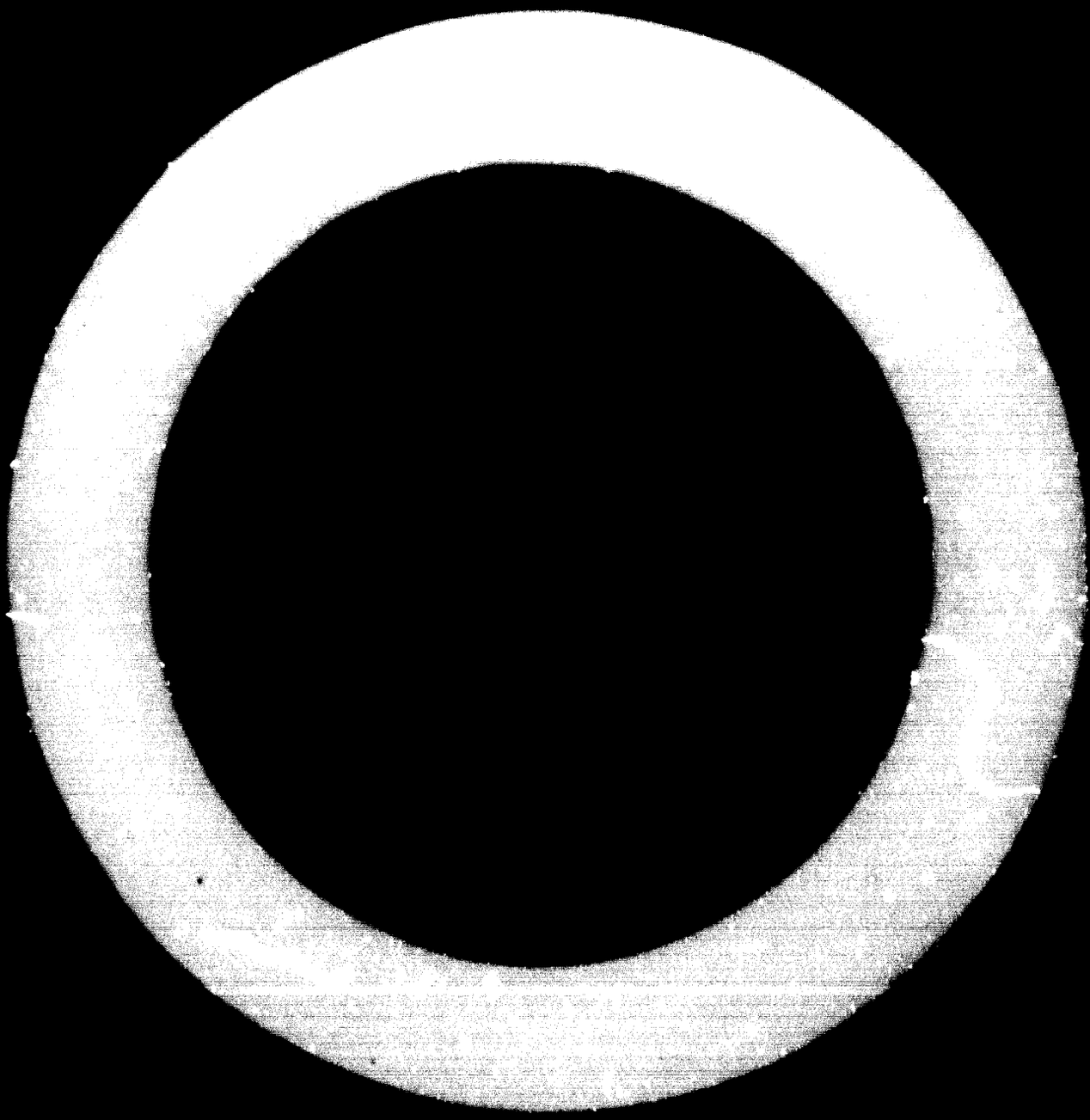

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I. INDUSTRY IN IRAQ

A. Scope and features of the industrial sector in Iraq

1. The methods by which Iraq hoped to make industrial progress varied substantially from one period to another. Various phases of industrial progress may be identified by the degree of participation of the Government in planning and implementing a realistic industrial programme in each period. Each phase, of course, is characterized by the nature of the economic structure adopted at different periods of the country's statehood.

2. The economy of Iraq developed from a completely free enterprise to, more or less, a socialist one through the last fifty years. The private sector assumed the major lead during the first thirty years with varying degrees of Government backing. But during the last twenty years, the public sector moved in and took over the major responsibility, especially in the past ten years.

3. Currently, national industries fall into three different groups, classified according to the degree of participation and control of the Government.

4. Industrial projects of the public sector. These are the projects owned and managed by the Government. Some of these projects were planned and implemented by the Ministry of Industry; the rest were nationalized industries which were established prior to 1964. These industries are managed by the State Organization of Industry and have a total capital of ID. 62.62 million (see table 1).

5. There are other industries which are owned by the Government but these are not attached to the Ministry of Industry. These are placed under the direction of other specialized ministries, such as the Ministry of Oil and Minerals which runs the oil refineries, the sulphur plant and other related petroleum industries. Other ministries involved in industrial planning and/or management are the Ministry of Agriculture which is responsible for implementing the cane sugar project (including the plant) and the Ministry of Economics which is involved in the planning of dates and grain industries.

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Table 1. State owned industries

Type of industry	Capital (Iraqi Dinars)	Rate of capacity utilization, 1968 (per cent)	Number of employees
Food and chemical industry:			
Vegetable oil, soap, detergent and cosmetics	3,327,291	72.2	1,615
Wheat milling	795,154	104.8	465
Food packing	426,622	73.3	148
Dairy	1,678,711	54.3	459
Sugar	2,954,468	84.2	391
Pharmaceuticals	10,000,000	-	-
Sub-Total		77.7	3,078
Textile industry	21,965,271	77.0	6,035
Construction materials industries (cement, bricks, asbestos and electrical fittings and equipments)...	18,070,934	58.9	3,116
Leather and tanning industry	1,574,170	58.8	1,039
Match and cigarette industry	1,827,193	87.3	2,801
Total	62,619,814	71.9	16,869

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6. The Ministries of Industry and Oil and Minerals are the two ministries involved in the implementation of the various industrial programmes which were all included in the major economic plans of different periods. These programmes include various projects which may be classified as follows:

(a) State-owned projects dealing with the development of existing industries. Some of these programmes are executed directly by the industrial unit concerned at the State Organization for Industry (SOI) or by the Government Oil Refineries (GORA) whose activities included such projects as the extension of the Samawa Cement factory and the Daura Oil Refinery. In some cases, consultants and construction contractors are engaged to make detailed study and to carry out the design and construction programme;

(b) new industries that are implemented by the Ministry of Industry. The Ministry employs consultants and construction contractors to carry out the work through its Directorate of Industrial Design and Construction (DIDC). Examples of this group of industries include the fine textile project at Hilla, the Fertilizer and Paper Projects at Basrah, and the Rayon Project at Mindiyn. In some cases, DIDC and SOI were involved in major extension of existing industries, (e.g., the Mosul Sugar Plant and the Suwaira Jute Projects) employing the same procedure. Similar methods were applied by the Ministry of Oil and Minerals for the erection of a new Luboil plant at Daura and Taji Gas Plant; and,

(c) industries implemented under special agreement signed with Foreign Governments offering long term loans to cover the supply of machinery and technical assistance. For these projects, the Ministry of Industry is mainly responsible for the civil engineering and local construction activities as well as for the general follow-up and supervision of implementation. The best example of such an agreement is the one signed with the USSR in 1959 which covers 14 projects, (the farm machinery project, the glass project, etc.).

7. <u>Industrial projects of the private sector</u>. Private industries may be classified into two classes:

(a) licensed projects which enjoy state protection and which are registered with the Directorate of Industrial Planning and Promotion. The total capital of these projects is about ID.40 million (see table 2); and,

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(b) small projects with plants consisting of machinery whose value is less than ID. 3,000. These projects are not licensed by the Government but, like all other industries, are members of the Federation of Industries. The estimated total capital of these industries which are mainly of handicraft type is about five million Iraqi dinars.

8. Industries with joint-ownership. These represent industries that were initiated by the private sector in co-operation with the Industrial Bank (a state-owned bank). The total capital of these projects is about ID. 3.21 million, of which about 25 per cent are owned by the Industrial Bank or by other government agencies.

9. Industrial projects in these three sectors (not including petroleum industries) have a total capital of one hundred and ten million Iraqi dinars and a total labour force of 67,000. All these projects are members of the Federation of Industries. The private sector alone has a total invested capital of about ID. 48 million (see table 3).

10. Other industries in Iraq are those operated by other ministries, such as energy and petroleum refineries. These represent a total investment of approximately ID. 120 million. This figure does not include the industrial projects under construction.

11. The Government's role as an investor began actually in 1950 when the Development Plan was initiated. Up to 1966, the amount of ID. 285.2 million was allocated for industrial development. Actual investment, however, did not come to more than 44 per cent of the allocations made in the various industrial plans (see table 4).

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Table 2. Number of industrial [illegible] and number of employees [illegible]

Type of industry	Number of projects	[illegible] (Iraqi Dinars)	Number of employees
Textile industry	492	8,[illegible]	12,116
Food industry	408	8,632,[illegible]	5,[illegible]
Building material industry	256	5,311,900	20,320
Chemical industry	209	6,407,450	3,865
Metal working industry	265	6,108,240	4,941
Wood working industry	72	1,034,900	819
Glass	10	123,550	2[illegible]3
Paper	69	2,506,[illegible]90	902
Leather	37	325,150	1,166
Others	29	403,900	286
Total	1,847	39,813,210	50,282

Table 3. Total capital invested in Iraqi industries
(Iraqi Dinars)

I. Public sector:	
A. in operation	62,619,614
B. under construction	95,020,856
C. electricity	30,000,000
D. oil industries	110,000,000
E. others	11,743,962
II. Private industries	45,251,000
III. Joint-ownership industries (shared by both the public and private sector)	3,210,000

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[illegible]; that th[illegible] per cent [illegible]

[illegible] that [illegible] under construction [illegible] in table 5. In addition, the private sector [illegible] which are under construction. The total capital [illegible] million dinars.

[illegible] into the following categories: food and [illegible] related industries; building material industries; [illegible] industries; general services industries and power generation.

15. Petroleum industries and power generation are monopolised by the State which also owns all heavy and large industries (usually with a capital of more than one million Iraqi dinars). The private sector is mainly concerned with medium and small-scale industries, dealing with consumer goods, food, textiles, etc...

16. Total capital already involved in industrial projects is estimated to be 260 million dinars.

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Table 4. Government investment [illegible]
(in million Iraqi Dinars)

Year	Total investment		Industrial investment	
	Allocated	Actual	Allocated	Actual
1951	9.3	3.1	-	-
1952	20.5	7.5	3.0	-
1953	28.4	12.0	5.0	0.5
1954	31.5	20.5	6.0	2.0
1955	46.6	31.2	4.1	2.9
1956	81.9	42.4	17.0	5.0
1957	100.8	56.8	16.0	8.6
1958	99.5	51.6	11.0	11.9
1959	83.6	49.6	9.4	4.9
1960	234.7	47.5	21.3	5.7
1961	98.4	66.7	12.5	7.2
1962	108.1	58.8	24.7	10.3
1963	117.7	53.5	39.6	9.5
1964	135.4	72.7	43.0	16.5
1965	125.3	55.1	32.1	13.0
1966	139.8	72.9	40.5	22.9
Total	1,461.5	701.9	285.2	120.9

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Plant under construction	Capacity	[illegible]
Jute textile plant	30,000,000 metre	[illegible]
Agricultural machinery plant	38,920 ton	[illegible]
Pharmaceuticals plant	n.a.	7,000,000
Glass plant	23,592 ton	
Rayon plant	n.a.	16,[illegible],350
Sulphur recovery plant	26 ton/day	10,700,000
Pulp and paper	160 ton/day	17,000,300
Fertiliser plant	n.a.	9,500,500
Rayon textile plant (Hilla)	45,660,000 yd.	9,100,000
Expansion of Mosul textile plant	n.a.	4,100,000
Expansion of Mosul sugar factory	n.a.	5,000,000
Total		99,020,850

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[illegible] factors to an independent state. Agriculture has [illegible] the country but its development was a slow process. [illegible] on the other hand, suffered a late start and an intermittent development.

18. The idea of industrialization was introduced in the twenties, when foreign industrial products started to flow into the Iraqi market at a higher rate and started to influence the country's economy.

19. For quite a long time, handicraft articles, such as copper ware, clay house utilities, wool spinning and weaving, date-juice making, brick making, etc., were the only industries that existed in Iraq. The development of mechanized and modern industry was blocked by various factors, some of which continued to be an obstacle throughout the years. These factors, whose influence is still apparent in the country, may be classified as political, social and financial. Various components of these factors brought about, from the start, certain delays and weaknesses in the planning process.

20. In order to define Iraq's strategy for industrial development, the economic history of the country may be presented as developing periods defined in terms of the overall conditions of the State.

21. The first period, the 1920-1940 period, is characterized by the establishment of an independent state, emerging from a dependent, underdeveloped society, whose efforts are all directed toward the formation of a political, economic and administrative structure. This period is also characterized by the lack of capital and the scarcity of know-how capable of properly allocating available resources among various sectors of the economy.

22. The first step taken by the newly-formed government of Iraq to introduce industrial thinking was the publishing of the Custom tax law of 1923 which exempted some machinery imported for industrial purposes from taxation. In 1926, the government published the Industrial Projects Encouragement law, which was revised

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[illegible] 1940. [illegible] procedures and financial difficulties for the establishment of industrial projects by having the custom tax on imported machinery and raw materials. In 1936, the Agricultural-Industrial Bank was formed in order to participate in the industrialization process; its contribution was, however, quite modest.

23. This period also witnessed the establishment of few mechanized industries, all of which were owned and operated by the private sector. The world economic depression of 1929 and the political instability in the country itself during that period did its share to curb industrial progress.

24. The second period, the 1940-1950 period, is characterized by the positive effects which the second world war had on industrial development and which resulted from the country's need for self-sufficiency in the essential and strategic commodities. By the nineteen forties, Iraq was already in touch with the developed countries; the educational level already raised and greater emphasis was placed on technical and economic skills. Moreover, the abrupt changes in the flow of foreign products to the local market during the war years, for which the country's demand had increased during the nineteen thirties, made it possible for the under-utilization of the physical capabilities of the country to come to an end.

25. The war years witnessed the establishment of many new industrial projects and the development of the already existing small projects. By 1950, there were almost 150 mechanized small and medium-size plants producing a variety of goods, such as vegetable oil, soap, cement, cigarette, alcohol, etc. All those industries were still owned by the private sector. Companies with limited and unlimited liabilities were formed during this period for exploring various industrial ventures.

26. In the meantime, the Industrial Bank was established as an autonomous government institution (with a capital of one-half million Iraqi dinars) to finance private industrial projects and to establish other projects in co-operation with the private sector.

27. Through this bank, it was hoped that techno-economic studies for new industrial projects would be undertaken and the private sector's investment in a successful industrialization programme would be promoted by the Government. This scheme, adopted by the government of the nineteen forties, established the basis for co-operation between the private and public sectors. In contrast, industrialization in the preceding period was launched under a completely free enterprise system.

28. During this period, projects were initiated by either the private sector, the government or third parties, and, in general, these projects were investigated by their initiators and implemented on a turn-key basis. The planning of various projects included some technical but mainly economic studies (some of which are detailed) aimed at determining the immediate rate of return on invested capital; less attention was paid to the effect of these projects on the national economy as a whole. However, even with conditions in the country favourable for industrial development, the capital invested in industry by the end of this period amounted to not more than four million Iraqi dinars.

29. The third period, the 1950-1959 period, may be considered as one in which the first real step toward industrial development took place. During this period, a long view stretching perhaps for years to come was taken by the Government. Such a step was encouraged by the desire to employ capital expected to be accrued from the sudden increase in oil revenues (from about ID. 3 million to ID. 42 million dinars between 1950 and 1952) and where such revenues constituted in 1951/1952 about 25 per cent of national income and about 90 per cent of the hard currency needs of the country.

30. With the formation of the Development Board in 1950, industry, together with other sectors, entered into a new stage of planning. The Board enjoyed the independence, so much needed by such a planning organ working for a balanced economic development, for identifying industrial opportunities, for expanding existing industries and for establishing new ones. For executing all its plans, the Board was allocated about 90 per cent of the oil revenues (the percentage was reduced later). In 1953, this Board was transformed into a Ministry, executing the first Five-Year Plan, 1951-1956, with a total allocation of ID. 152.1 million,

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[illegible] per cent. In the first plan, 1955-1959, [illegible] million Dinars, industry's share amounted to [illegible] per cent.

31. The services of international technical experts were sought to assist Iraq in the establishment and implementation of a programme of industrial development and in the creation of a market that may be capable of diversifying and raising the level of economic activity. Various proposals were made for the establishment of new industries, especially those which depend on domestic raw materials, such as minerals, agricultural or industrial raw materials. The promotion of the private industrial sector was also suggested. These efforts resulted in the following:

(a) the public sector became a direct investor, establishing large industries (textiles, cement, sugar, etc.), and the level of expenditure on such services as power and transportation was raised;

(b) the Government adopted measures aimed at encouraging the private industrial sector through the Industrial Bank and the Directorate of Industry (Ministry of Economics) by providing technical assistance, extending loans and customs tax exemptions on certain products and on imports of materials, and by direct participation of the Industrial Bank in certain projects. Co-ordination of industrial projects and control of harmful competition was placed in the hands of the government;

(c) planning of projects was often accompanied by detailed economic and technical studies; and,

(d) in the second half of the decade, industry was second only to oil in promoting growth of the national economy, contributing about 12 per cent to national production. This resulted not only from participation of the public sector in industrial ventures but also from the flow of private capital into industry.

32. The fourth period, the 1959-1964 period, is characterized by the following:

(a) establishment of the Ministries of Planning and Industry to carry out

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general economic planning and implementation [illegible], respectively, with emphasis placed on the creation of new [illegible];

(b) encouraging the private sector to invest in industrial projects by promulgating the Industrial Promotion Law which aimed at protecting new industries and by encouraging the Industrial Bank to take a more active role as an investor and a promotor of industrial enterprises. Also, a new Directorate of Industrial Planning was established to provide services to the private sector. Accordingly, the private sector, acting independently or in partnership with the public sector, through the Industrial Bank, became very active and resulted in the establishment of a number of medium-size industrial projects. Industrial development in the private sector was co-ordinated by the Directorate of Industrial Promotion which was established for the specific purpose of studying and licensing proposed projects in the light of an overall industrial strategy;

(c) the public sector became more active in the establishment of heavy industries, whose implementation was entrusted to the Directorate of Industrial Design and Construction;

(d) foreign capital was encouraged to invest in private industrial enterprises, and foreign loans, such as the USSR loan, were sought and used for the supply of machinery and technical services to the public sector; and,

(e) government co-ordination and control procedures became more obvious and organized during this period. Direct involvement of the government paved the way for the nationalization of a number of large economic enterprises, including 20 medium-size industrial projects in 1964.

33. The fifth period, 1964-present, started with the nationalization of the large industrial enterprises in Iraq. The role of the private sector as an investor began to shrink and the Industrial Bank's role was reduced to that of a provider of loans for small industrial projects. Control and operation of major industries was undertaken by the State Organization for Industries which became an important body of the Ministry of Industry.

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32. The last two periods are distinctly characterized by [illegible] control over industrial activities and by industrial expansion. The Organization for Industries was established for the specific purpose of [illegible] industries and other enterprises that had been planned [illegible] by the Ministry of Industry prior to nationalization. A number of industrial projects were, however, under the control of other ministries, such as the Ministry of Oil and Minerals which is responsible for all petroleum refineries and the Ministry of Agriculture which became involved in a number of agricultural industries, e.g., the Cane Sugar Project.

33. The industrial programme that was prepared during the fifth period was an important part of the overall Five-Year Plan, 1964-1969, which, in addition, included a new section dealing with planning in the social and educational sectors. Also, during this period, new heavy industries were planned and some of the projects that were planned in the preceding periods were commissioned. The follow-up system was reorganized to become an important tool for implementing industrial projects, although, unfortunately, it has not been functioning as adequately as expected. Currently, the government is analyzing the industrial programmes of previous economic plans with the purpose of allocating available capital to certain projects on the basis of the following priorities:

(a) projects that are already under execution; and,

(b) previously planned projects whose present studies indicate strategic and economic importance.

34. At the same time, an industrial survey is being undertaken with a view to determining, in the light of previous programmes, the:

(a) importance of certain major projects so that further feasibility studies may be carried out;

(b) importance of certain small-scale industries and the degree and method of private participation in these industries; and,

(c) the capital and foreign loans requirements.

35. Though this policy sounds ideal and very promising, still rapid action has been taken to establish a number of medium-size industries without much emphasis on detailed feasibility studies.

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II. [illegible]

A. [illegible]

THE MINISTRY OF INDUSTRY

38. The Ministry of Industry was established [illegible] at the [illegible] industrialization programme which was initiated in [illegible] by the Development Board in the early fifties.

39. The Ministry is made up of various directorates and has control over a few semi-official organizations. The following is a brief presentation of the various divisions of the Ministry which deal with the planning and implementation of industrial projects.

40. The Directorate of Industrial Design and Construction (DIDC) is responsible mainly for the implementation of public sector projects. Its responsibility includes supervision during the construction and execution stages.

41. Normally, this directorate deals with public Industrial projects that have been approved by the Ministry of Planning for further investigation and/or execution. It is responsible for negotiating and concluding contracts as well as for the programming of annual activities related to each project. The engineering activities of this directorate is devoted mainly to the preparation of preliminary technical studies of proposed projects and to reviewing consultant studies and contractors'designs as well as to follow-up activities during the execution stage.

42. The Directorate of Industrial Design and Construction is made up of various sections. During the planning stages, these sections participate in the preparation of preliminary studies of proposed projects either through the establishment of committees or by assigning staff members to a particular stage. The same may be true for the selection of consultants and/or constractors for

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(a) [illegible] industries section;

(b) chemical industries section;

(c) engineering industries section;

(d) Power (electricity) section;

(e) mechanical/electrical engineering section; and

(f) civil engineering section.

44. About 120 engineers are involved in office design and field construction activities of major projects. In addition, the services of consultants are engaged for making detailed project studies and designs and for assisting in the selection of contractors, supervising and commissioning of construction (except for projects which are financed under foreign agreements).

45. The staff of this directorate is not sufficiently large to enable it to handle all the projects involved, and lacks the technical know-how required for various types of projects. Training of people in this directorate has not been successful because of several factors. One important factor is the discontinuity of assigned staff to certain projects as counterparts to consultants or contractors. The limited experience in certain industrial fields and processes made it difficult to verify consultants' recommendations or construction work. As a result some projects suffered delays, and, in many cases, costly modifications at a later stage were encountered.

46. The Directorate of Industrial Planning and Promotion (DIPP) was established by merging two separate authorities, the Directorates of Industrial Planning and of Industrial Promotion of Private Industries.

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47. [illegible] technical service [illegible] the [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] In addition, [illegible] [illegible] in the [illegible] industrial [illegible] laboratory testing [illegible] [illegible] of activities for which it is entrusted, this directorate is understaffed in terms of technical qualifications.

48. It was proposed that this directorate should participate in two main aspects of industrial programming:

(i) undertaking preliminary surveys to determine potential [illegible] industries, and

(ii) co-ordinating activities in the public and private sectors.

49. The first part is carried out by co-operating with other divisions of the Ministry of Industry. The second part, which is thought to be the directorate's major responsibility, is carried out by examining applications submitted by the private sector for establishing certain industries and, on the basis of such examination, granting licenses that would enable newly established industries (whose plants are equipped with machinery costing more than ID 3,000 dinars) to enjoy government protection.

50. This Directorate is made up of the following three major sections:

(a) Investigation and research section carries out technical feasibility studies for certain projects and conducts laboratory tests on raw materials and products. It is also responsible for determining or verifying, from the technical point of view, proposed processes and materials;

(b) promotion section is responsible for studying proposals and applications for the establishment of industrial projects by the private sector; and

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[illegible] neither

[illegible] the different sectors. The [illegible] made more difficult by the lack of information on all phases of industry, and by the lack of authority to control the activities of the private sector. Most of the directorate's time is spent on checking the validity of industrial proposals submitted by the private sector.

52. The State Organization for Industry (SOI). Prior to nationalization, public industrial enterprises were managed by the Directorate of Government Industrial Projects. After nationalization, SOI was formed to manage all industrial plants. These were originally classified into five main groups, but recently, they were regrouped into six main enterprises of related industries.

53. Each member company of the SOI presents its development need in the form of a preliminary study to its own group's technical section for further study and for determining implementation procedures. If the proposal involves a major policy decision or a fairly large budget, the request is referred to the Ministry of Planning through SOI. Otherwise, SOI proceeds with the implementation provided that such a request falls within its own annual budget and program.

54. The main divisions of the SOI are:

Group Industries - Weaving Unit. Industrial plants are grouped into six sections, namely, spinning and weaving, food and cigarettes, chemicals, construction materials, leather and tanning, and engineering industries.

55. Each of these groups of industries has a director and a number of staff who are usually involved in supervising industrial enterprises within

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it is group, coordinating the work among these enterprises and investigating technical proposals and marketing trends in the country. Each company is run by a director general and a board of directors. The technical staff of each enterprise is responsible for drawing and implementing expansion plans and also for suggesting new projects and major expansions.

56. Projects: This division is responsible for the analysis and evaluation of new projects and for major expansions suggested by the group industries. The division draws plans for implementing approved development programmes, and determines the means of achieving desired expansion. In some cases, this division may recommend further studies and may select consultants for particular problems. Such recommendations are forwarded to the SOI board for approval, which, in turn, may recommend the inclusion of new major projects to the Ministry of Planning for further studies.

57. Implementation of major expansion and of new projects are usually carried out through contractors and are supervised by consultants and staff of the institution responsible for the proposal. For minor expansions, each institution carries out its own scheme after obtaining the approval of its own board, provided that it falls within the limit of its budget.

58. Advisory services: This division is mainly concerned with long-term planning. It analyses studies submitted by various group industries with respect to production, organisation, marketing, and industrial feasibility studies. This division, however, has not been as active as expected.

59. The new major industries which are established and put on stream by the Directorate of Industrial Design and Construction, are transferred to the SOI, with their capital, both initial fixed capital and operating capital. This means that the SOI is an overall administrative body that co-ordinates production and marketing activities of these industries and expands or develops similar industries. To cover the expenses of the SOI, 10 per cent of the net profit of each industrial enterprise is contributed to the SOI budget.

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60. For expansion and development, each industrial enterprise retains 25 per cent of its annual net profit (tax-free) for such purposes. Because the taxation law forbids the transfer of these tax free reserves to the SOI budget, new projects are planned as expansion schemes of existing industries.

61. The SOI is not adequately equipped to handle the planning of new projects, including feasibility studies on a large scale. It is not staffed with a sufficient number of adequately trained planners and design engineers to deal with all proposed projects without having to depend on the processing and production staff of operating companies. Rather, it still depends on the conventional method of turn-key contracting and execution, which limits training opportunities.

62. The Industrial Bank. Through this Bank, government capital is used to finance certain private industries. The Bank also undertakes direct investment in certain industrial projects through joint stock companies with the private sector. As originally conceived, the Bank was supposed to engage itself in other industrial responsibilities, such as the creation of co-operatives for importing raw materials and for exporting excess finished products. However, nationalisation of industries, which included some of the Bank's major joint companies, has changed the scope of its operations.

63. Through its small technical department, the Bank usually conducts its own preliminary investigations in respect of various project possibilities. However, the Bank's main emphasis has been on the economic side, taking its own profit as the primary criterion for issuing loans. Thus, the Bank's role in the development of industries has been limited by its having acted as a finance company rather than as an industrial promotor. The rate of interest which the Bank charges on various loans is high and is inconsistent with the objectives for which it was established.

The Federation of Industries (FI)

64. This organisation was formed in 1959 and was put under the auspices of the Ministry of Industry. Its main function is to bring into one organisation all manufacturing enterprises for the purpose of co-ordinating planning and production

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activities, sharing views, exchanging ideas and creating new procedures which may benefit all participants as well as industry as a whole. All private and state-owned industries are members of this Federation.

65. A small research section was established as part of the activities of the Federation. This Section was designed to help the private sector by supplying it with information related to the preparation of preliminary project studies. Consultants and suppliers of machinery and raw materials as well as construction contractors are usually invited to assist the private sector in formulating project ideas. In many cases, the federation refers to the private sector to independent third parties for advisory services related to the preparation of industrial projects.

The Directorate of Industrial Buildings (DIB)

66. This directorate is concerned with the Civil Engineering activities of industrial projects directly under execution by the Ministry of Industry. These are the projects that are established with foreign loans, and for which foreign governments undertake to supply machinery and technical assistance. This Directorate is also indirectly involved in the civil engineering work of projects that have been contracted on a turn-key basis to specialized firms.

67. This Directorate is well staffed with engineers that carry out design and supervision activities for the civil engineering portions of different projects.

National Electricity Administration (NEA)

68. This administration is responsible, through its power stations and power grid system for the generation, supply and control of power in all parts of Iraq. With the exception of minor construction activities, the implementation of its planned projects that have obtained the approval of the Ministry of Planning is handled by the Directorate of Industrial Design and Construction.

The Bureau of Standards and Measurements (BSM)

69. This newly-established organisation was formed in order to establish codes for Standards and Measurements on the national level. These functions used to be the responsibility of the Directorates of Public Industries (Ministry of Economics)

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and Industrial Planning. The role of this organization is still limited, but it could develop into an important instrument for industrial planning and implementation.

Other Divisions

70. Other divisions are mainly concerned with administrative and other related areas but these have limited effect on industrial planning activities.

71. For the training of industrial staff, a number of projects have included elaborate training programmes supervised by the Ministry of Industry. In addition, the Industrial Management Development Centre was established with United Nations assistance to help in training and raising the level of industrial cadres for a more effective participation in the planning, implementation and management of Iraqi industries.

THE MINISTRY OF PLANNING

72. It has already been pointed out that the first real attempt at industrial planning was initiated by the Development Board - later by the Ministry of Development - in the nineteen fifties. In 1959, when the Ministry of Planning was formed, the major planning functions of the Ministry of Development were transferred to it; the implementation of industrial projects was, however, designated to the Ministry of Industry.

73. The Ministry of Planning also underwent a few modifications during the last ten years of its history. But the main functions of the Ministry remained the same, with only minor variations in its structural responsibilities. The main divisions of the Ministry of Planning that are concerned with Industrial programming are:

The Planning Board

74. The Planning Board replaced the Development Board of the nineteen fifties and inherited its functions dealing with the formulation of the country's economic plan on the basis of proposals and studies undertaken by various ministries. The execution of the plan which used to be the responsibility of the Ministry of Development, was left for the concerned ministries.

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75. The Planning Board paid more attention to industry than its predecessor; its 1959-1964 plan did not, however, cover all economic aspects of Iraq. This was remedied in 1964. Also in 1964, a Steering Committee was established in addition to the Planning Board, to prepare the detailed plan and the annual investment procedures for implementation. It became the responsibility of this Steering Committee to co-ordinate the financial and economic policies and follow-up the execution of projects. In the year 1964, the planning board for educational and social development was established as a complementary development body for the preparation of a general manpower plan consistent with the development needs of the country.

76. In the year 1966, the responsibilities of the Planning Board were defined in more detail so as to cover problems of co-ordinating economic, financial, commercial and monetary policies. With this additional burden, the Board became involved in expressing its views with respect to the general annual budget of the State and in setting guidelines for the activities of the private sector.

77. The Planning Board is headed by the Prime Minister; its membership consists of the Ministers of Planning, Economics and Finance, as well as the Governor of the Central Bank. Other members of the Board represent the specialized organizations and other Ministries related to development.

Directorate of Industry (Ministry of Planning)

78. This Directorate reviews proposals submitted by the various Ministries, e.g., the Ministries of Industry, Oil and Minerals and Agriculture, for inclusion in the overall industrialization programme. It is the responsibility of this directorate to study the technical and economic aspects of these proposals, and to prepare, in co-operation with the Directorate of Economics (Ministry of Planning) and in the light of the general economic policy, the preliminary report for each proposed project for submission to the Steering Committee. This Directorate is also responsible for the follow-up of all industrial projects under execution by the concerned ministries.

79. It is important to point out that other ministries are involved in industrial planning. These include the Ministries of Oil and Minerals, Agriculture, Economics, etc. With the exception of the Ministry of Oil and Minerals, these ministries lack both the technical staff and the base for industrial planning and execution. Usually the Ministry of Industry and the Directorate of Industry of the Ministry of Planning

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carry a major burden in implementing the industrial plans of these ministries.

B. Industrial planning in Iraq

80. Even since the Development Board was established in 1950, planning in Iraq was initiated to achieve two objectives: (a) to develop a sound economic system in the shortest period possible, and (b) to raise the country's scientific, technical and organisational level. In order to achieve these objectives, ways and means of improving investment and consumption had to be envisaged and targets were formulated to deal with the sectoral effects on national economic growth.

81. During the nineteen fifties an Industrial Survey was carried out and a number of recommendations were made to the Development Board regarding the programming of industrial projects; means for proper implementation were suggested in the light of existing financial and technical conditions. However, it is believed that the Board's selection of certain projects was not based on detailed scientific methods.

82. When the Planning Board was established (1959), new investment policies and different procedures were adopted. Under this arrangement, the newly-formed Ministry of Industry presented its programme and its implementation budget during the following five years.

83. Currently, the Ministry of Planning is responsible for the programming of industrial projects within the framework of the general plan formulated by the Planning Board. The Ministry of Industry, on the other hand, is responsible for the implementation of this programme. Detailed studies are carried out mainly by the Directorate of Industrial Design and Construction and, to a lesser extent, by the technical sections of the State Organization for Industry.

Links with other aspects of programming

84. Planning is a continuous process undertaken for the specific purpose of achieving the planned targets for social and economic development. These targets involve investment policies, linking sectors together and forming a

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unified base for an active economic and social strategy [illegible] determined by the interactions of various projects within the [illegible] and by inter-sectoral influences.

85. Factors influencing industrial programming are examined during the preparation of different plans. But the degree of importance given to these factors varies according to the planner's own philosophy and according to the period involved. Some of these factors are:

Financial

86. The sources of investment capital required for the implementation of different plans (see table 6) may be closely linked to the continuity of the planning process. Distribution of available investment capital among various sectors need, therefore, to be carefully studied not only during the preparation of the plan but also during the implementation stages. Table 7 shows that there have been variations in budget allocations for different sectors during the past twenty years.

Social

87. Low levels of consumption usually reflect low levels of production and vice versa; a rise in demand may not lead to a general increase in production unless enough projects are introduced to absorb the growing labour force. At the same time availability of skilled labour and technical staff in sufficient numbers are essential for the employment of available capital. Hence, the creation of an adequate educational system and a strongly based infra-structure are pre-requisites for good development planning.

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Table [illegible] Government revenues available for investment
(In Millions of Iraqi Dinars)

Year	Revenues from oil	Net profit of government projects	Foreign loans	Other income	Total
1951	6.7	-	0.8	0.04	7.5
1952	22.9	-	1.1	-	24.0
1953	34.8	-	0.2	0.2	35.2
1954	40.0	-	0.1	0.6	40.7
1955	59.1	-	0.04	1.6	60.7
1956	48.2	-	-	2.9	51.1
1957	34.2	-	-	1.7	35.9
1958	60.8	-	-	0.9	61.7
1959	43.3	-	-	0.3	43.6
1960	47.5	-	-	0.1	47.6
1961	58.1	0.9	7.6	0.1	66.7
1962	50.5	6.6	11.3	1.6	70.0
1963	57.2	3.3	8.2	1.1	67.6
1964	64.8	2.7	8.6	0.4	76.5
1965	67.7	1.7	3.0	0.6	73.0
1966	62.2	0.7	6.5	0.4	69.8
Total	757.0	15.9	47.44	10.54	830.8

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Table 7. Sectoral allocations in various plans (1951-1970)

(Millions of Iraqi dinars)

Plan	1 Agriculture, irrigation, drainage and land reclamation		2 Industry, mining and power generation		3 Transportation, communications and storage		4 Building and housing		Total
	Iraqi dinars	Per cent	Iraqi dinars	Per cent	Iraqi dinars	Per cent	Iraqi dinars	Per cent	
First Plan (1951-1956)	76.4	50.2	31.0	20.4	26.8	17.6	18.0	11.8	[illegible]
Second Plan (1955-1959)	108.0	37.8	43.6	15.3	74.2	26.0	59.8	20.9	[illegible]
Third Plan (1956-1961)	153.8	32.8	76.1	14.3	124.4	26.3	123.1	26.6	[illegible]
Fourth Plan (temporary) (59/60-62/63)	47.9	14.8	48.7	15.0	100.8	31.1	127.0	[illegible]	[illegible]
Fifth Plan (1961-1966)	113.0	20.3	166.8	30.0	136.4	[illegible]	[illegible]	[illegible]	[illegible]
Sixth Plan (1965-1969)	173.6	[illegible]	187.2	29.2	110.1	17.2	69.8	[illegible]	[illegible]

Raw materials

88. Competent industrial management cannot function adequately in the absence of adequate flows of raw materials. In Iraq, the agricultural and mineral sectors are major suppliers of industrial materials. A survey of these resources is essential for determining the development path of industry for years to come. For certain essential or basic industries, certain raw materials may have to be imported, but in general, the desire to have a local supply of raw materials calls for full exploitation of agricultural and mineral resources.

Market

89. The domestic market may be very limited for optimum production of certain industries. But this may not be the case for a number of import-substitute industries, such as food, textiles, building materials, etc.

90. For an evaluation of optimum capacities, export possibilities should be explored. Closer economic relationships with the Arab countries make it necessary to analyze the production capabilities and markets of these countries for certain products. A good example of this case is the petrochemical industry which is under negotiation among certain Arab States.

Adequacy of criteria for comprehensive planning

91. The primary targets of the overall plans were:

(a) to increase national income by an acceptable annual rate (the present plan assumed an annual rate of growth of 8 per cent);

(b) to balance growth in national expenditure against that of national production;

(c) to create work opportunities to eliminate or lower the rate of growth of unemployment;

(d) to expand social and other services and to allow for increases in domestic consumption; and

(e) to initiate new investments designed to decrease the country's dependence on oil production as a major source of national income.

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govern its development.

94. The major economic sectors covered in the economic plans are:

(a) Agriculture, irrigation and land development;

(b) Industry, mining and power generation;

(c) Transportation and storage facilities;

(d) Housing and building projects.

95. Investment priorities and implementation scheduling varied from one planning period to another depending on the results of studies conducted during the preceding periods and, to a certain extent, on the domestic political philosophy adopted.

96. In the early fifties, the services of foreign consultants, such as Lord Salter and Arthur D. Little, were engaged for the drawing up of a balanced economic development plan. These studies included suggestions for the development of the industrial sector; they also emphasized the importance of foreign trade and the role of the private sector in bringing about sound development. Moreover, organizational reforms were proposed in order to simplify the implementation processes of various programmes.

97. In dealing with the industrial programming, various projects were studied and recommended as potentially good projects, taking into consideration the availability of productive resources and of intermediate goods.

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[illegible] these

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A [illegible] has not

[illegible] previously

planned [illegible] development

has been carried out. [illegible] the planned development of

certain projects has not materialized because complementary factors failed to

develop in other sectors. A good example is the [illegible] project

whose development depended on the development of the agricultural sector for

the supply of raw materials as well as on the development of complementary

productive processes.

99. Such problems are repeated in different forms in other projects. For instance, no training programme has been implemented as part of the overall programme of industrial programme.

100. The private sector, on the other hand, failed to receive the right attention. To stimulate the private sector, financial assistance was provided through intermediary institutions, such as the Industrial Bank. But in general projects planned by the private sector were not co-ordinated with those of major industries. Therefore, it can be concluded that sectoral planning has not been undertaken in an integrated and co-ordinated manner.

101. It is to be remembered that planning in each of the economic sectors followed the same process. Various ministries participated in the planning of corresponding programmes. These are :

(a) the ministries of agriculture and agrarian reform for agriculture, irrigation and land development;

(b) the ministries of industry and oil and minerals for industry, mining and power generation;

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(c) the ministries of communications and [illegible] transportation and storage of [illegible]; and,

(d) the ministries of housing and public works [illegible] for housing and buildings.

102. Different ministries sometimes duplicate each others functions even in the planning stages due to overlapping or complementary responsibilities. This situation has created delays in implementation and differences in approaches applied to the same projects.

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III. [illegible] REGIONAL PLANNING

A. [illegible]

103. The technical services of the Ministry of Planning, i.e. the Directorate of Industrial Studies, undertake to review the preliminary studies of all industrial projects prepared by the ministries concerned in the light of their relationships to other projects and to their overall effect on the national economy. Such a review would then be included in a detailed report to be submitted to the Steering Committee at the Ministry of Planning.

104. The Steering Committee studies these projects in the light of the general policies and objectives of the five-year plan, and the plan as a whole would then be reviewed in its final form by the Planning Board and submitted to the Cabinet for approval.

105. The Ministry of Planning prepares the annual budget of the plan with the assistance of the ministries concerned which, in turn, prepare their implementation plans. The method outlined above is again followed for obtaining the approval of the Planning Board for the overall annual plan of investment.

106. The execution of approved industrial projects whose estimated cost is less than one million Iraqi dinars is delegated to the Ministry of Industry. For projects exceeding one million dinars, detailed feasibility studies prepared by the Ministry of Industry are submitted to the Ministry of Planning for approval. Normally, such feasibility studies are prepared by consultants selected by the Ministry of Industry (or by other specialized ministries) with the approval of the Ministry of Planning.

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107. The projects recommended by the Ministry of Industry and approved by the Ministry of Planning, public announcement, or direct invitations, are issued to construction contractors to offer their bids. The Ministry of Industry, having prepared and sent the tender documents that include the technical specifications of projects to these contractors, would eventually evaluate the various offers made and submit their recommendations to the Ministry of Planning for approval.

108. Approval by the Ministry of Planning implies approval by the Planning Board of proposals submitted by the Steering Committee, and the latter's proposals are made on the basis of a careful evaluation of the reports of the Ministry of Industry.

109. Execution of the industrial programme is left to the Ministry of Industry. However, new developments, especially changes in the duration of execution or in expenditure on projects, need the approval of the Ministry of Planning. Usually, the Directorates of Industrial Design and Construction and Industrial Buildings are responsible for the execution of all the industrial projects of the Ministry of Industry, except those that are handled by the State Organisation of Industry as part of its development programme. Other ministries involved in industrial activities have their own technical Divisions for implementation. For instance, the Ministry of Oil and Minerals performs similar activities regarding the execution of petroleum industrial programmes through the Oil Planning and Construction Administration (OPCA).

110. Industrial projects involving financing and/or technical assistance from a foreign Government may be concluded in a special agreement. Usually the general form of the agreement is handled by the Cabinet. Detailed planning and implementation of such projects are handled by the Ministries of Industry and Planning. Procedures similar to the one outlined above are applied except where

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[illegible] are involved. In [illegible]. Other [illegible] involved in [illegible] of [illegible] are the Ministries of Economics and [illegible]

[illegible] in industrial [illegible]

111. The role of the private sector in industrial development is less effective now than it used to be during the early stages of industrial development. Nevertheless, private industrial activities continue to be felt, especially in the development of small-scale industries. This phenomenon came as a result of the government's decision to nationalize medium-scale projects in 1964. In the same year, the government also limited the capital of joint stock companies to ID 70,000.

112. Private projects are divided into the following two categories on the basis of their size and capital:

(a) small industries whose cost of machinery, excluding power generators, is less than ID 3,000;

(b) industries with individual plants whose machinery are valued at more than ID 3,000.

113. The establishment of projects in the first group does not require government authorization or licensing and hence does not enjoy governmental protection. Most of these projects are usually owned by individuals who have no conception of industrial planning, rather, they depend on the suppliers of machines to determine for them the size of production and type of machinery required for producing commodities whose market is known and sure. Some of these projects which may develop into bigger enterprises are bound to need government attention. Most of these projects depend on imported intermediate products and their activities are mainly profit-oriented.

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114. The Directorate of Imports at the Ministry of Economics is responsible for supervising the activities of this group of industries; its approval is required for the importation of the industrial inputs. Usually this directorate co-operates with the Federation of Industries and seeks the advice of the Directorate of Industrial Planning and Promotion in order to avoid the excessive use of foreign exchange for commercial purposes only.

115. The second group of projects enjoys the immediate attention of the Government. Licenses are issued by the Directorate of Industrial Planning and Promotion which also grants them facilities and protection.

116. The technical and economic preliminary studies in respect of this group of projects are prepared by the private entrepreneurs themselves. Usually such studies are prepared with the help of consultants, vendors or product suppliers. In some cases, the Technical Section of the Industrial Bank gives technical assistance to projects of interest to the Bank. In other cases, the Industrial Bank and the Directorate of Industrial Planning and Promotion may prepare such studies on their own initiatives and offer them to private entrepreneurs.

117. These preliminary studies are then reviewed by the technical staff of the Directorate of Industrial Planning and Promotion (Ministry of Industry) for the purpose of verifying, among other things, the country's need for such projects.

118. The Industrial Promotion Board studies those proposed projects in the light of the general economic policy, taking into consideration the following points:

(a) effect on the national economy in general;

(b) local market demand and export possibilities;

(c) available raw materials, power and services;

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(d) size of labour force to be employed and location of the project;

(e) effect on similar existing industries and healthy competition; and

(f) saving of hard currency.

119. In the event that a license is granted, the project receives the protection specified in the law. Protection is granted by the Ministry of Economics for such time necessary for projects to become sufficiently efficient to withstand economic pressure.

120. The main benefits granted under the Promotion of Private Industries' Law may be summarized as follows:

(a) exempting from customs duties some or all of the machinery, spare parts and raw materials for a certain period;

(b) restricting importation of competitive products;

(c) refunding of customs taxes levied on imported raw materials for a certain project in proportion to the value of the exported portion of its production;

(d) granting of loans to supplement available capital through the Industrial Bank;

(e) granting of land to house project plants and their facilities, either as a gift or on a rental basis for minimum nominal charges; and

(f) granting of other assistance to proposed projects such as technical assistance and laboratory services, exploring export possibilities, et

121. Usually, private industries produce consumer goods. Therefore, the views of the Ministry of Economics are sought in order to obtain a clear idea about market demand, quality and quantity of imports of a particular product, the foreign exchange involved, export policy, etc. Studies covering these items are essential in order to establish trends for the encouragement of private industry and for the protection of consumers. The major criterion adopted by the

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3. Lags for implementation

122. The methods adopted for the execution of public sector programmes are not the same for all projects. The same is true for programmes executed at different stages of Industrial Development.

123. The private sector follows one of the two procedures in the setting up of industrial plants:

(a) adopting projects only after the carrying out of technical and economic studies by specialized consultants who would also suggest a sound plan of implementation; and,

(b) employing commercial methods for the implementation of suggested projects based on marketing possibilities, foreign exchange, earnings, etc.

124. In either case, implementation depends mainly on capital requirements and availability. The sources of private capital for industrial purposes have diminished since 1964. The reasons are:

(a) nationalization of major industries in 1964. Private capital has since been directed toward real estate and buildings;

(b) nationalization of commercial banks in 1964. This has limited the amount of loans and overdrafts extended to industry, since the private sector began to deal with only one financing system;

(c) nationalization of commercial companies has increased industrial risks;

(d) the Act of 1964/65 regarding financiers and money lenders limited to a minimum the activities of this group;

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(c) [illegible] to less than LD [illegible],

(f) [illegible] Industrial Bank was a partner in [illegible] the latter institution to that of a small bank, with a [illegible] available for the financing of new industries.

125. Implementation of private sector projects is decided upon on the basis of availability of capital and of financing conditions. In other words, capital is the main factor involved in determining implementation.

126. Implementation of industrial projects in the private sector does not usually involve major industrial consultants; except for civil engineering design and supervision, they depend on technical assistance rendered by the vendors, local contractors and the Industrial Bank. In most cases, two contracts are drawn up, one with the suppliers of machinery and one with the local construction contractors.

127. For the public sector, projects involve a tremendous engineering and other work which may delay the execution of some projects and postpone others indefinitely due to complicated routine procedures and over cautious attitudes.

128. Usually when the list of proposed industrial projects is submitted to the Planning Board, the latter may recommend further investigations by the Ministry of Industry. Such investigations include technical studies, a tentative plan for the implementation of projects and a rough estimate of the capital requirements of each project.

129. In most cases, especially in the case of new and technically complicated projects, implementation plans include suggestions regarding the type of consultancy services required to undertake one or more of the following tasks:

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(b) formulating [illegible] operations regarding [illegible];

(c) detailed design and tender documents [illegible] specifications and conditions for the construction contract;

(d) evaluation of various construction [illegible] the Ministry of Industry;

(e) supervision of construction and erection of the plant;

(f) supervision of final test runs; and,

(g) supervision of the training of Iraqi personnel or assuming the technical and/or managerial responsibility of the project for a certain period of time.

130. The degree of participation of consultants in these activities varies from one project to another, depending on the nature of projects and the availability of local expertise. For instance, in oil refining and related industries, local expertise has been developed over the past two decades, i.e., ever since the Daura Refinery, the largest industrial institution in the country, was established.

131. For other industrial projects, the services of consultants have been engaged for different tasks. The Directorate of Industrial Design and Construction for example, usually works with the consultants in order to verify part of the work undertaken by the Directorate itself, or to obtain the required training which will enable it to continue to function at later stages.

132. Only in few cases were consultants engaged for the management of industrial enterprises for specified periods. This was due to the lack of technical and managerial background in that particular industrial operation, in cases similar to those of the Daura Oil Refinery (in the early fifties), the

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134. [illegible] Planning Board approves the project [illegible] submitted to it by the Ministry of Industry (or by other ministries). When [illegible] economic plan is [illegible], the projects' estimated budget is distributed over the envisaged completion period of the project. The budget is used as a guide by the Ministry of Industry when executing the first phase of project implementation, i.e. the process of selecting consultants.

135. In most cases, public announcements are made for inviting contractors to present their bids. In the case of large and highly diversified projects, work is subdivided into two or more contracts. The final selection of contractors is the responsibility of the Planning Board. At the end of this stage execution becomes the responsibility of the Ministry of Industry but consent of the Planning Board for major modifications to the approved scheme during the execution period must be obtained.

136. The annual budget usually includes all expenditures envisaged by the Ministry of Industry with respect to the execution of the project, such as consultant's fees, cost of investigations carried out by third parties other than the Ministry of Industry itself and the consultants, payment made to the contractors, travelling and specific overhead expenses encountered by the Ministry of Industry, etc..

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before [illegible] the implementation [illegible] in the text of the [illegible]. [illegible] was taken in 1965 when the economic agreement signed between Iraq and the USSR in 1959 was modified to suit the industrial development envisaged at the time.

135. Without exception, all projects suffered delays during one stage or another of the implementation period. For this reason, the annual plans of different projects have been changing and the transfer of alloted budgets was frequently encountered by the Ministry of Planning.

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[illegible] Industrial [illegible] on the basis of suggestions by [illegible], various [illegible] of private [illegible] organizations or by entrepreneurs who [illegible] with the Board [illegible]. However, the planning of major projects is usually reviewed by various institutions, e.g. Ministries of Industry, Oil, Planning, etc. Before projects are included in the plan, certain evaluations are carried out to determine their priority with respect to:

(a) the project's contribution to national economy;

(b) immediate capital required for the project;

(c) project's profitability and productive efficiency;

(d) project's effect on national production and consumption capabilities;

(e) length of the period required for executing the project;

(f) labour requirements of the project; and

(g) saving on hard currency resulting from the completion of the project.

140. Project data are collected by the Ministry of Industry for an assessment of the technical potentialities of each project. In order to assist the Steering Committee in evaluating projects, the technical and economic studies include the following factors, whose importance vary from one project to the other:

"Raw material availability and cost, labour force envisaged, degree of training and availability of trained people, local market potentials and possible export, manufacturing and process costing, inter-industry linkages, importance of the product for domestic need, total capital involved, other services required, etc."

141. Project priorities depend on the outcome of the final economic analysis made by the Planning Board in the light of financial requirements, profitability and strategic importance.

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142. Planning of the project [illegible] Ministry [illegible]. [illegible] various technical sections at the directorate of Industrial Design and Construction, or the State Organization for [illegible]. After the preliminary approval of the Ministry of Industry, is obtained, the section [illegible] studies for the proposed project. A committee comprising of 5 members of the technical sections concerned and representatives of other sections and/or ministries would then be established for the purpose of evaluating the proposed projects. Prior to the preparation of the preliminary project report, subcommittees may be formed to study various aspects of projects with the departments concerned. Usually, these committees represent the State Organization and the Directorates of Industrial Planning and Promotion, Industrial Buildings and Industrial Design and Construction. The report would then be reviewed by a special committee appointed by the Ministry of Industry. Once the project is approved it will be proposed to the Ministry of Planning.

143. In some cases, consultants are engaged for the preparation of feasibility studies for projects. These consultant reports are reviewed by a special committee established at the Ministry of Industry.

144. Sectional and departmental committees formed from within the same directorate are usually involved in the preparation of technical studies of particular projects. Committees established with membership from different directorates may be concerned with the overall aspects of projects and their relationship to other industries. Projects which are linked to other economic sectors are usually dealt with by committees which include members from other ministries.

145. The role of the Ministry of Industry in the planning of industrial projects is limited to the preparation of technical reports and preliminary economic studies for industrial projects proposed to the Ministry of Planning. In addition, the Ministry of Industry may suggest implementation programmes for projects, outlining methods of their execution. These are presented to the Ministry of Planning in the form of reports summarising the technical aspects of projects, such as raw material and product specification, capacity and process description, approximate capital and labour requirements, etc.

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b. [illegible] project evaluation

Criteria of evaluation

146. In Section II, it was explained that the main criterion adopted in evaluating industrial projects is their direct and indirect effects on the national economy and the extent of their inter-industry relationships.

Contribution to national growth

147. Table 7 shows the various investment allocations made for the industrial sector in different plans. These allocations varied from one period to another. Up to July 1969, the total amount invested in industry was about 350 million Iraqi dinars; the bulk of this amount was invested during the last two decades. Figure 1 illustrates the contribution of industry to gross national product.

148. From the time when the first five-year plan was initiated in the early fifties and up to 1966, the average rates of economic growth and of per capita income are estimated at seven and five per cent respectively. The 1960/65 plan was an ambitious programme aiming at achieving an aggregate a annual rate of growth of ten per cent. The results were not encouraging since this target was not attained. The present plan was based on an average aggregate rate of growth of eight per cent. The industrial sector's contribution to this rate of growth is estimated to be 12 per cent. This seems reasonable since similar targets were achieved in certain previous periods.

149. The inter-relationships such as those existing between agriculture and mining, make it necessary to consider the effects of these sectors on industrial growth. Those effects should be recognized when considering the supply of raw materials, power and industrial inputs of other sectors. At the same time, the growth in other sectors may bring about a higher level of consumption of industrial products and may encourage further investment.

Cost benefit analysis

150. Iraq is presently leaning towards a socialist structure where the economy is re-oriented towards social benefits and social costs. This philosophy calls for a reassessment of the planning procedures that were employed in the early stages of the country's industrial development.

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151. In theory, the [illegible] capitalization of capital charges [illegible] operating costs. In practice, however, the [illegible] rates of return for industrial projects [illegible] changes which may cause a decline in the excess [illegible] cost. In other words, the yield was not calculated [illegible] benefits and costs. This has resulted in neglect [illegible] reforms which was bound to result in a real rise in the level of wages over time.

152. In the private sector, higher rates of return were expected than in the public sector. This is necessitated by the greater risk involved and the high rates of interest.

153. The public sector, on the other hand, depended on government resources which are available at minimum or no overhead cost.

154. Project planners became mostly concerned with the following:

(a) initial cost and production target;

(b) profitability and pay-off period;

(c) strategic importance of production;

(d) immediate social benefits such as labour force involved, degree of training envisaged; and

(e) immediate economic benefits, such as saving on hard currency and foreign exchange.

155. In general, labour productivity has not been taken into consideration when analysing industrial projects. This is due to the fact that no statistical evaluation of labour performance has been undertaken.

156. In many cases, the domestic market seems quite small for economic projects and therefore export possibilities became an important factor in project planning.

Evaluation of major investment projects for financing purposes

157. In evaluating major products included in the Economic Plan's budget for financing purposes, long-range capital management planning is considered. Plan budgets are forecast on the basis of expected resources. The major resources are oil revenue and foreign loans.

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159. Major projects are usually large undertakings with large capital involvement. Thus, detailed economic, technical, social and strategic studies are expected. Because of these factors varied from one project, or from one planning period, to another. For instance, the first five-year plan included projects that were only briefly outlined. The same was true for some of the projects that were to be implemented with the help of a foreign loan contracted in 1959. Some of these projects were thoroughly studied, however, before the financial plan was drawn up.

160. To elaborate on the long-range financial plans of the major projects, it is important to point out that existing projects fall into two categories: those that are financed completely under the five-year budget, and those that are financed in part by foreign loans. In any case, the five-year budget mainly depends on a portion of the country's oil revenue and foreign loans. The foreign loans are used to finance the supply of imported machinery and foreign technical assistance for certain projects only. The only foreign loan of interest here is the one included in an economic-technical agreement signed in 1959 between Iraq and the USSR. In that agreement, the USSR was to give technical assistance and to supply machinery for 15 projects (only 14 of these involved productive plants). The total loan was 550 million rubles (0.222168 g. of gold/ruble) at eight per cent interest, to extend over a period of seven years. By the time the agreement was signed, some of the projects proposed had already been studied and evaluated properly; others were simply listed for further analysis.

160. That agreement was reviewed at a later date. The projects implemented under the agreement are: the cotton textile plant, the agricultural machinery plant, the medical drug plant, the glass factory, food canning plant, shoe plant and electrical utilities plant with a total capital involvement of about 36 million Iraqi dinars. The loan which was recorded as part of the budget for the 1959/64 plan, was used to finance the supply of machinery and technical assistance. The other side of the agreement calls for the financing of local construction, including civil engineering works and the cost of locally-produced and imported building and construction materials.

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161. Layouts and essential engineering designs for local construction were to be supplied by the USSR. However, detailed civil engineering work and construction was to be handled by the Directorate of Industrial Buildings. Erection of machinery and other units, including servicing, were to be checked and supervised by the Directorate of Industrial Design and Construction. These two directorates shared responsibility by assigning their own engineers to carry out the design and programming work of each project and by employing local contractors.

162. At the project level, the financial plan, being a long-range one, was based on the average rate of return on investment. In evaluating projects, although planners consider mainly the pay-back period in order to determine the profitability of particular projects, they also take into account other economic and social factors.

163. The plan's budget covers the initial capital for each project, including fixed and initial operating costs.

C. Follow-up of implementation

164. Table 4 shows that planned investment allocations differed from actual allocations, indicating that the actual execution of programmes fell short of the planned programme. As a result, the completion of projects was delayed and often, new financial arrangements were sought in order to cover the uncalculated shortfalls of the first phase of implementation. In addition, other problems brought about by various factors, emerged during the second phase of implementation, i.e. the production phase.

165. Factors which affect the implementation of various plans are numerous; their influence varies according to the plan's duration and the nature of projects. In general, however, implementation is affected by one or more of the following factors:

Planning problems

166. The early industrial plans of the nineteen fifties were formulated by the Development Board with the help of foreign consultants and advisers. The Board itself and the Iraqi counterparts lacked the experience necessary for handling such tasks. During the early part of the sixties, the Iraqi

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[illegible] implementation remained limited to the [illegible] sector. The legislative [illegible] execution. As a result, the [illegible] became more decentralized with regard to planning but [illegible] with respect to execution.

167. Industrial projects could have been executed [illegible] and at less cost if it were possible to determine the scope and [illegible] of the industrial programmes, namely:

(a) determination of priorities and the extent to which the development of specific industries fit into the overall programme of implementation;

(b) determination of the dimensions of specific projects in terms of investment, location and servicing facilities;

(c) determination of the role of the public and private sectors in major projects in terms of marketing, technical assistance, capital and organization; and

(d) setting up of major programmes, organizing the execution of projects and defining the responsibilities and powers of such an organization.

Technical and administrative problems

168. Planning failed in the past to consider the importance of training for the implementation of industrial programmes. Because of the lack of necessary technical know-how, it was difficult to carry out the implementation programme without devoting efforts for the development of the required capabilities and know-how.

169. Qualitative and quantitative weaknesses of the planning and implementation systems made it possible to overlook some of the essential factors necessary for successful implementation. The follow-up system that was mainly invested with the Directorate of Industrial Design and Construction is further weakened by lack of authority and delays caused by office routine. Various projects were supervised by one resident engineer who sought only occasionally the cooperation of other engineers at the Ministry of Industry because of the latter's involvement in other projects.

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170. The main problems that emerged from the follow-up system which was adopted may be summarized as follows.

(a) absence of decentralized authority responsible for integrating cost control and progress reporting of implementation programmes;

(b) overall financial analysis of projects was not made by project managements since these are not authorized to make decisions without the approval of the Planning Board;

(c) suitable working arrangements between consultants or contractors on the one side, and Iraqi counterparts on the other, have not been perfected to allow for intelligent training and for eliminating the duplication of activities and responsibilities; and

(d) cautious attitudes of the administrative staff made it difficult to design a system that allows for the flow of information along organizational lines and for reports to be subjected for immediate analysis by the successive levels of the organizational structure.

Economic problems

171. It is obvious that the economic structure is a major factor in implementing industrial programmes. The Iraqi capital market is under-developed, and the sources of private investment funds are limited; hence there is a serious gap in the financial structure of Iraq. It is, therefore, difficult for the public sector, being the major investor directly (or indirectly through the industrial bank or other state-financing institutions) involved in the development of new projects and expansion of economically sound projects, to satisfy all development needs without severely draining the technical, financial and professional resources which are already taxed by other essential projects.

172. Some of these problems were under constant investigation and the present plan tried to remedy some of the weaknesses of previous plans. The main feature of this plan with respect to implementation is the emphasis placed on the follow-up procedure. The follow-up programme is delegated to the ministries concerned (such as the Ministry of Industry), which are to keep close contact with the Industrial Division of the Ministry of Planning as

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outlined in Section II. The Ministry of Industry, however, is understaffed with respect to design and construction, except for civil engineering work. Further, the building up of a highly efficient technical organization for the implementation of technical programmes has not been carried out fully due to the lack of practical training programmes.

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174. In the preceding sections, a description of the existing situation and of government machinery for industrialization was presented. The following comments could be made regarding the industrial structure:

(a) the strategy for industrial planning could not be said to have been based on a long-run view extending over all economic sectors and covering the various inter-relationships of different projects in those sectors. Most of the projects proposed were based only on the availability of resources;

(b) technical and administration staff are an essential component of a successful industrialization programme. The proper placement and division of labour of the task force trained for the industrialization process constitute the bases for an efficient organization. Unfortunately, such an organization was not developed at a rate favourable for an efficient implementation of the industrialization programme. Furthermore, overlapping of responsibilities and duplication of functions prevail in a number of governmental agencies. These condition brought about a certain amount of administrative delays that may have inhibited development; and

(c) the social structure has not been considered as an important factor in development planning. Social structure includes not only educational levels but also structural reforms required for the growth of production and consumption, the sharing of responsibility and acquiring the will to develop.

175. It is difficult to conceive that governments are able to execute their development programmes without the cooperation of society. Effective contribution of society, whether by supplying investment capital through taxation or savings or by providing services, is well conceived by planners, but the formulation of a programme for the promotion of such contribution is limited.

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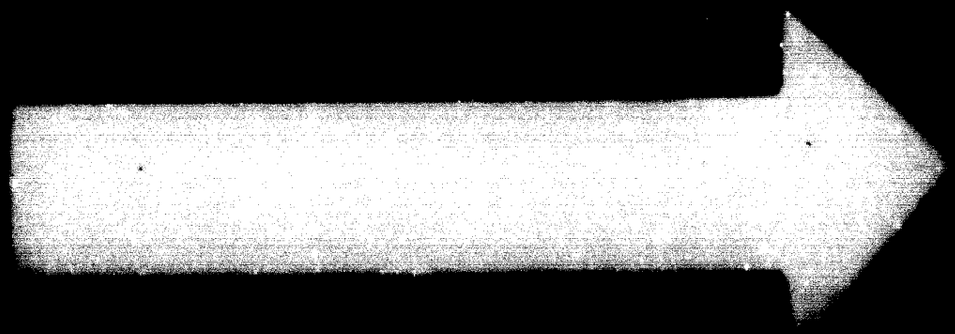

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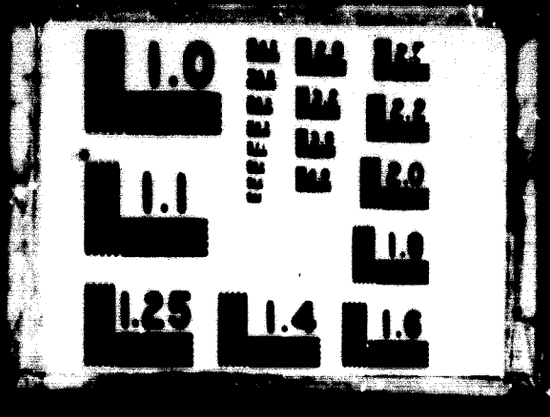

176. Based on the observations and analyses of existing problems, it may be concluded that a new approach should be found in order to establish a more solid industrial programme for the future. Suggestions and proposals may be numerous; these depend on the experience and philosophy of analysts. The following include a few proposals that may be worth some consideration:

(a) industrial planning is to be part of the overall economic and social planning, whose objective is the acceleration of the development of national income with available means;

(b) the organization of planning and execution should be defined in terms of authority and organisational procedures in order to allow for effeciency in execution and better control over implementation;

(c) sectoral programmes should be coordinated with the development programmes of other sectors;

(d) the public and private sectors should share responsibility and cooperate for better industrial programming; and

(e) public utilities, education and social services should be looked upon as complementary sectors to industrial development.

Coordination between planning and implementation institutions

177. The industrial structure should be reconstructed so that industrial projects in Iraq can be identified as:

- projects in the planning stages;
- projects under construction; and
- projects in operation and production.

178. Figure 2 illustrates in detail a structure which would make the Ministry of Industry responsible for all industrial activities. The following are the main suggested changes to the functions of the divisions of the Ministry of Industry:

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179. [illegible] of all industrial [illegible] unit [illegible] corporation which [illegible] for [illegible]

180. For planning purposes, each managing unit may have a small research and development section which may draw up programmes for expanding and developing existing industries in cooperation with the technical staffs of plants involved in this programme. An aggregate programme for all the units is to be submitted annually to the Board of the State Organisation for Industries.

181. The Board may request that either further investigation or the implementation of various projects be undertaken by the concerned establishment provided that the required capital falls within the annual budget of the State Organisation.

182. For major projects, the M.I is to refer the programme to the Directorate of Industrial Planning and Promotion for inclusion in the overall industrial plan.

Directorate of Private Industries

183. The responsibility of this Directorate is to supervise and coordinate the various industrial activities of the private sector. To function properly this Directorate should be represented on the boards of the Industrial Bank and the Federation of Industries.

184. The planning activities of this Directorate may be summarized as:

(a) helping the private sector in preparing preliminary studies and in formulating a [illegible]ary programme of implementation;

(b) formulating annual and periodic policies for the private sector and refering these to the Directorate of Industrial Planning and Promotion;

(c) coordinating the industrial programmes with the investment plans of the private sector in the light of the industrial planning policy as outlined in the general plan; and

(d) determining the Government's role and participation in private sector activities and granting licenses for the establishment of industries involving private capital.

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[illegible] committed to it by the Public Organization [illegible] and by the Directorate of Private [illegible] the general development policy as outlined by the [illegible]

(b) to formulate an industrial programme for incorporation within the overall economic plan. Such a programme may help to prepare for the overall development plan of the following period and for the setting-up of an industrial policy which may guide both the public and private sectors; and

(c) to analyse the technical and economic aspects of various projects in cooperation with other ministries and agencies.

Directorate of Industrial Design and Construction

186. This Directorate is to be mainly responsible for the detailed engineering work and implementation of major projects outlined by the Planning Board. Although this Directorate may assist the Directorate of Industrial Planning and Promotion in the preparation of preliminary studies, its actual functions start only after the Planning Board approves the implementation of projects.

187. Follow-up sections are to be composed of project managers and their staff, assisted by design, construction, general service and other technical sections of this Directorate. It may be necessary to establish a training institute, a library and a research section as part of this Directorate in the long run.

188. Though the present set-up of the Ministry of Planning is quite satisfactory for its present responsibilities, it might be necessary to introduce a few changes to suit the suggested programme and functions outlined below:

(a) formulating general concepts of national development policies and defining objectives and targets for future plans by setting up planning trends for the industrial sector, which is to be detailed by the Ministry of Industry before inclusion in the aggregate plan;

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[illegible] detailed investigation covering [illegible]

(b) [illegible] for [illegible] action programmes prepared by the ministries concerned with a view to [illegible] decentralised execution procedure;

(c) checking on implementation progress through the follow-up system of the Ministry of Industry and considering necessary modifications to approved schemes; and

(d) supervising overall activities, including those of the private and public sectors dealing with consumption, production and finance (such as the general and State budgets).

189. With the proposed set-up of the Ministries of Industry and Planning, the following steps may represent the logical process of industrial planning and implementation:

(a) based on detailed studies prepared by the technical, social and economic sections of the Ministry of Planning, the Planning Board is to outline the general framework of the planning policy;

(b) the Directorate of Industrial Planning (Ministry of Industry) is to formulate industrial programmes based on studies and suggestions made by the research and development sections of the State Organisation for Industries and the technical section of the Directorate of Private Industries and to submit these to the Ministry of Planning;

(c) approval of the industrial programmes by the Planning Board on the basis of studies made in connexion with other programmes and in the light of the economic policy detailed by the Steering Committee (and the Director te of Industry at the Ministry of Planning) implies authorization for the Directorate of Industrial Design and Construction to start implementation;

(d) implementation programmes prepared by the Ministry of Industry include ways and means of execution, capital required, annual budget, etc. This needs the Planning Board's approval. However, actual execution would be carried out by the Directorate of Industrial Design and Construction;

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Proposed technical information system for industrial planning

191. Figures 2 and 3 illustrate the proposed industrial structure and planning procedure in Iraq.

192. Industrialization needs a flow of information both for the planning and for the implementation programmes. The information required during the planning stage may be divided into two types:

(a) Statistical data. The Central Bureau of Statistics was strengthened by the Government and became more active in collecting, analysing and publishing statistical data in respect of economic and social activities. Data collected by government bureaus and survey teams collecting market and other information on the private sector may furnish basic data for planning purposes. The Bureau of Standards and Measurements may have to be separated from the Ministry of Industry and developed in order to take an active role in determining specifications and standards for design, construction and production purposes as well as in controlling product qualities;

(b) Technical information. This type of information may include suggestions and methods of handling industrial programmes based on experiences in particular fields related to general planning or to planning in the industrial sector. Such information may be developed and made available by various ministries dealing with social, economic and technical fields.

193. For the purpose of preparing the overall plan, various ministries are represented through their corresponding sections at the Ministry of Planning. However, concrete information may be obtained by dealing with each aspect of industrial planning separately. The Ministry of Planning may seem to be the proper organization capable of determining data requirements and other information to be furnished by the various directorates concerned as outlined below:

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(a) capital availability and financial allocation for the plan. The Ministry of Finance (which includes all nationalized commercial banks), the Ministry of Economics (which includes all economical organizations of the public sector) and the Central Bank seem to be the main bodies that are capable of elaborating on this topic;

(b) social needs. The three main bodies concerned with this topic are the Ministries of Education, Labour and Social Affairs, Health and Municipalities;

(c) technical aspects and raw materials. This topic may be dealt with by the Ministries of Industry, Oil and Minerals, Agriculture, Housing and Works, Irrigation and Communications; and

(d) marketing. This topic may be dealt with by the Ministry of Economics.

194. For better results, periodic surveys in different fields should be conducted by various ministries in order to determine structural changes and accomplishments of previous programmes. Such surveys may also assist planners in the formulation of new plans with minimum waste of money, effort and time.

195. For further technical information, research may be the right medium, and it may be conducted on different levels. Research institutes at various ministries and universities around the country may undertake major studies, especially those dealing with applied research.

196. Finally, the follow-up system may need the services of experts to draw up a productivity improvement and management development programme that would ensure greater efficiency and better control over implementation of industrial plans.

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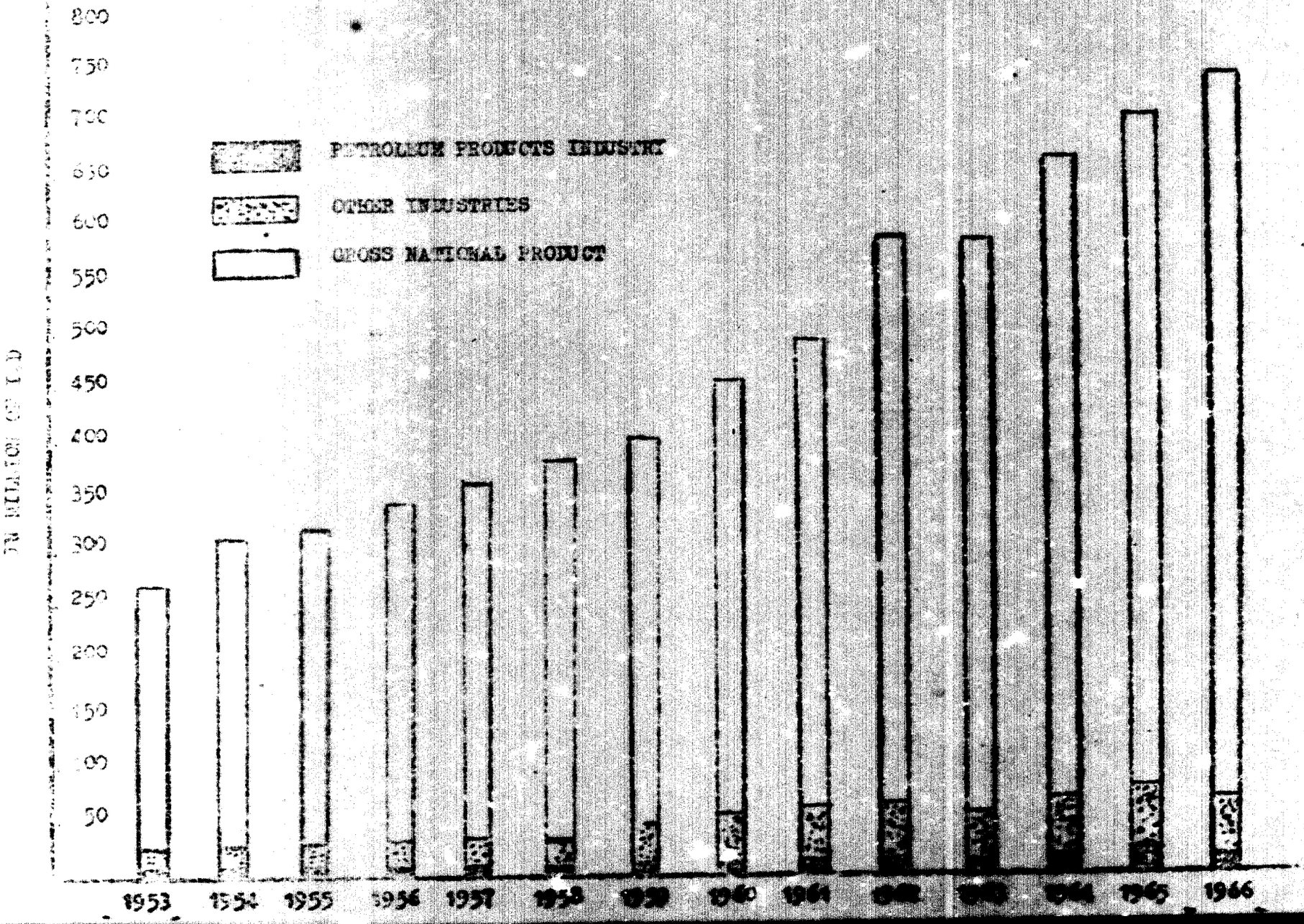
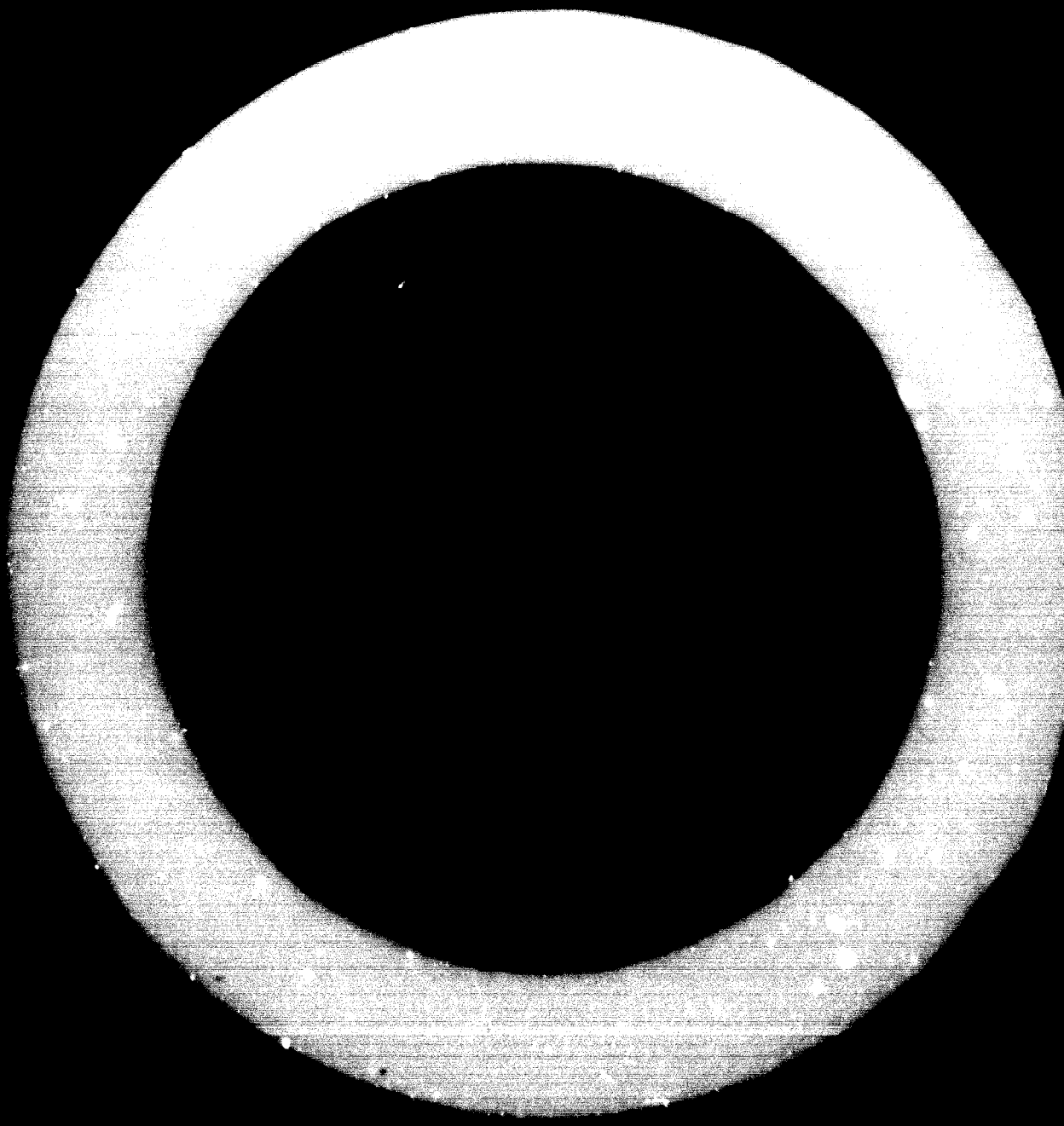
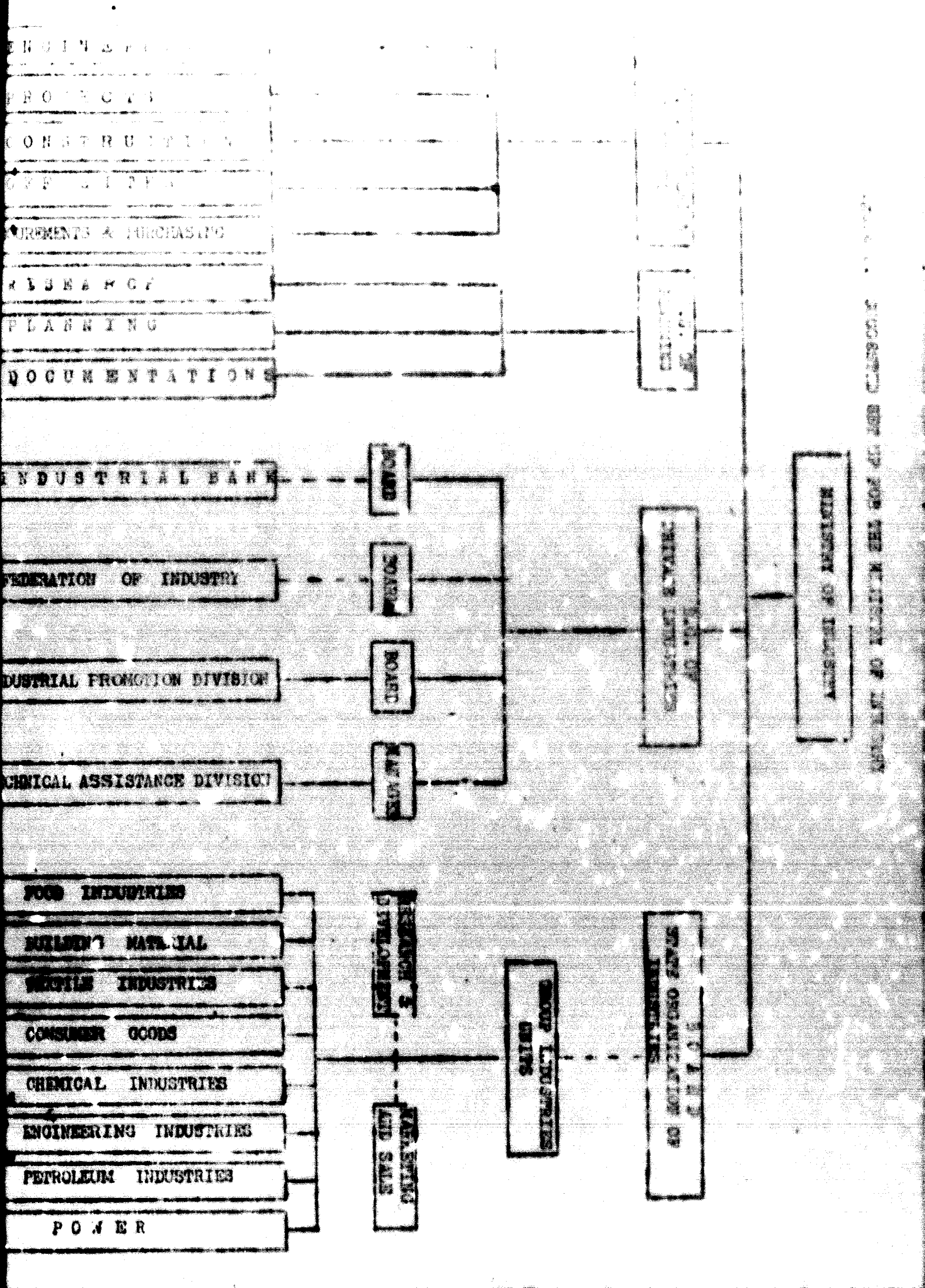
Figure 1. VALUE ADDED OF THE MANUFACTURING INDUSTRY TO THE NATIONAL PRODUCT (IN CURRENT PRICES)







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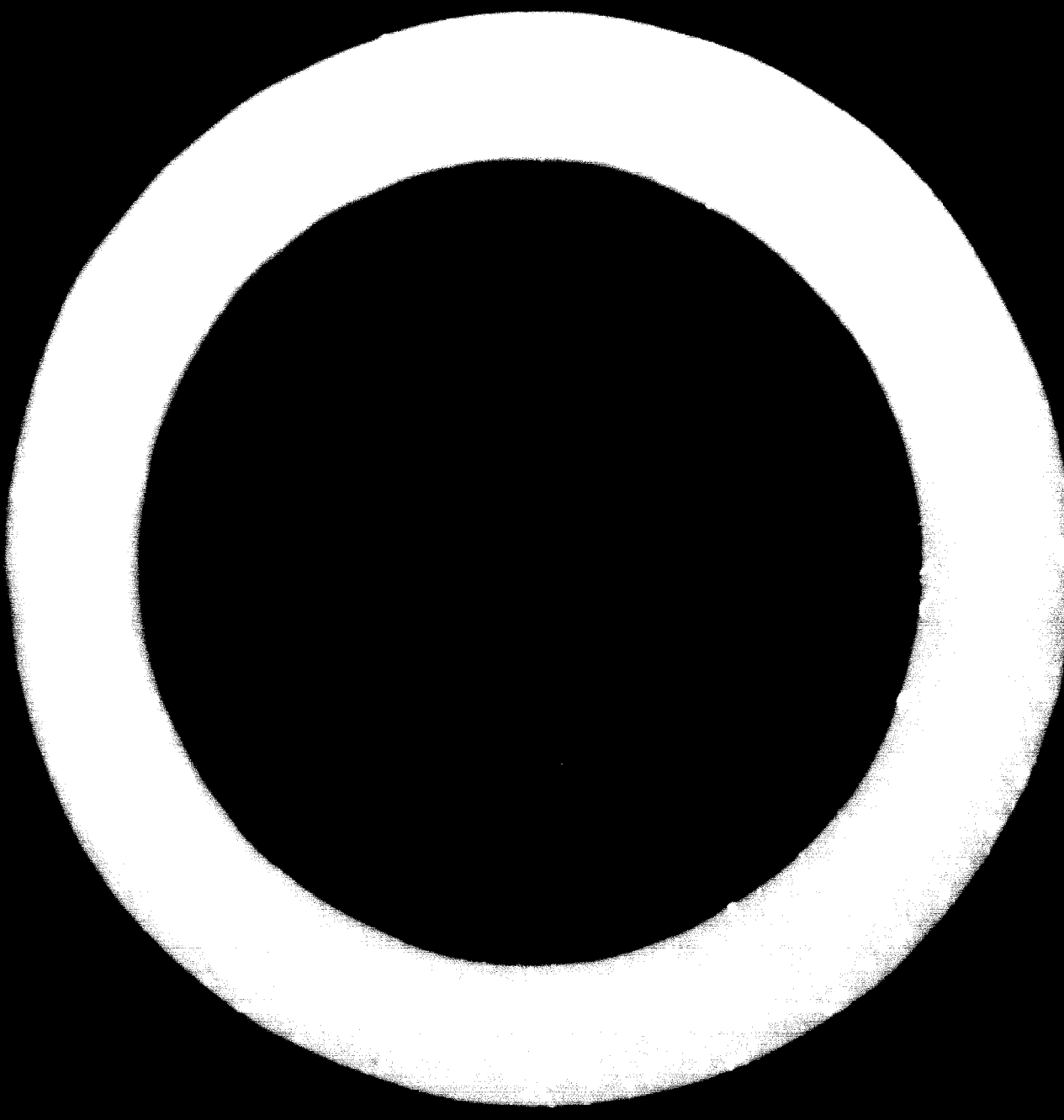
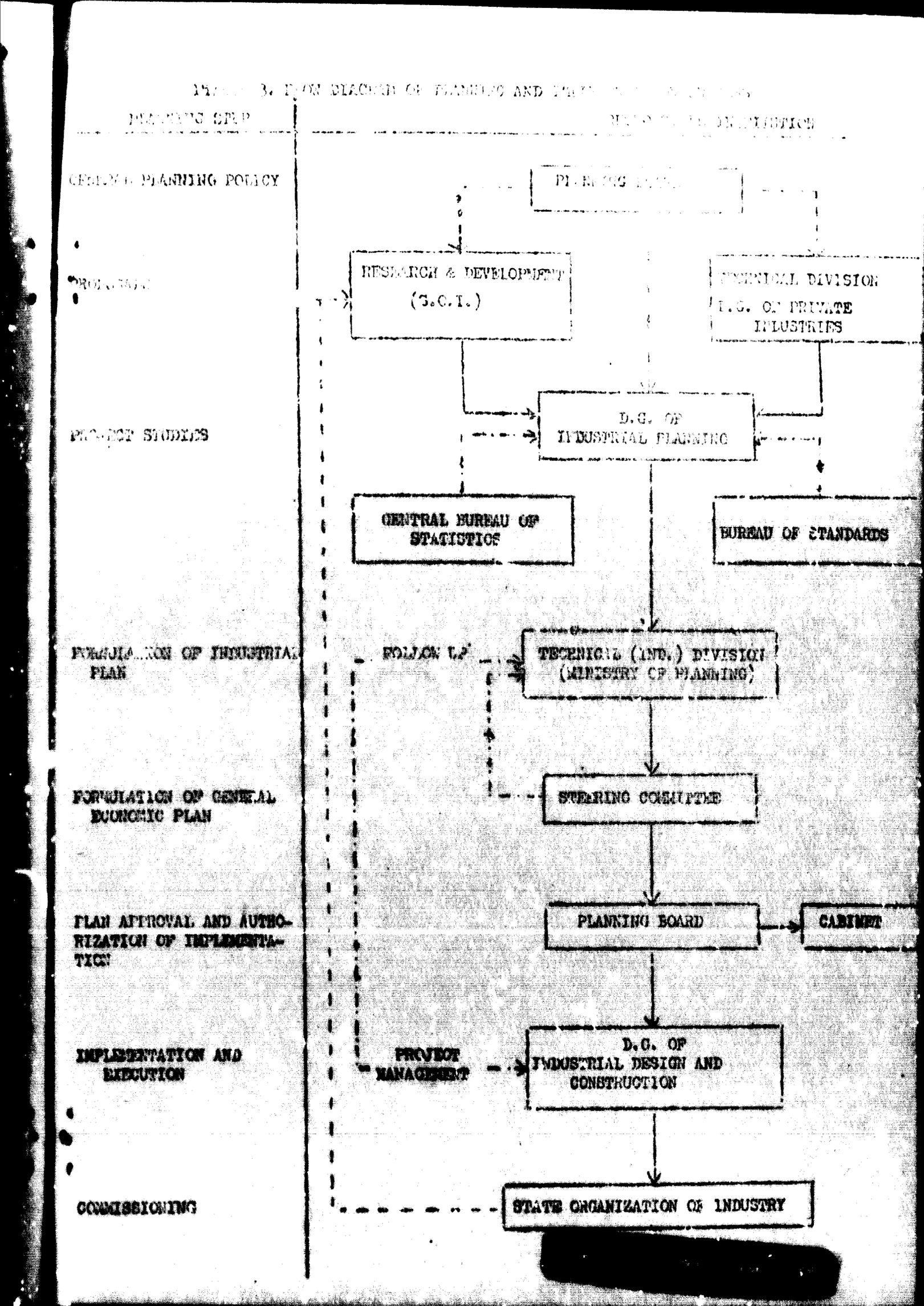
CHNICAL ASSISTANCE DIVISION
FOOD INDUSTRIES
CONSUMER GOODS
CHEMICAL INDUSTRIES
ENGINEERING INDUSTRIES
PETROLEUM INDUSTRIES
POWER

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