THE BOOK WAS DRENCHED

TEXT FLY WITHIN THE BOOK ONLY

PRELIMINARY REPORT
OF THE
INDUSTRIAL PLANNING COMMITTEE

INTRODUCTORY.

1. The Government of Madras, by its G.O. Ms. No. 2303, Development, dated 26th May 1947, constituted a Committee consisting of the following members :—

Chairman.

1. Sri S. PARTHASARATHY, Madras.

Members.

2. Sri P. S. KUMARASWAMY RAJA, M.L.A.
3. Sri R. SURYANARAYANA RAO, M.L.C.
4. Sri M. PALLAM RAJU, M.L.A.
5. Janab M. MOHAMED ISMAIL, M.L.A.
6. Sri Rao Bahadur B. V. NARAYANASWAMY NAYUDU, Madras.
7. Sri B. S. SANJEEVA REDDI, Betamcherla, Kurnool district.
8. Mr. SAMUEL AARON, Pappinisseri, North Malabar.

Secretary.

9. Mr. A. S. NAIK, I.C.S.

The terms of reference to the Committee are as follows :—

(1) To draw up long-term and short-term plans for industrialization in this Province, having regard to—

(*a*) the essential character of the industries;
(*b*) the full utilization of raw materials available in this Province;
(*c*) the utilization of the by-products of existing industries; and
(*d*) the availability of power, transport and labour.

(2) To determine the nature and extent of Government assistance that should be given to such industries and in connexion therewith, to recommend the establishment of any authority, statutory or otherwise, that should be set up for giving such aid or assistance.

(3) To advise on the nature and extent of control which should be exercised by the Government over industries especially those that have been given Government assistance and suggest which industries should be—

(*a*) State-owned,
(*b*) State-controlled, and
(*c*) left to private enterprise.

(4) To report on the working of the State-aid to Industries Act and recommend whether it should be amended, repealed or replaced by any new legislation.

(5) To advise whether or not any limitation should be imposed on the distribution of the profits of industries where the whole or part of their finance is contributed by the public.

(6) To report on the merits or otherwise of the existing systems of management of industries and recommend whether or not any provision should be made to control or alter the existing systems of managements.

(7) To advise on the question whether and to what extent labour should participate in the profits of industry and whether any conditions should be imposed on industries, that may be started hereafter, in the interests of labour.

(8) And to advise whether it would be necessary for the Government to set up a co-ordinating authority to render effective assistance to promoters of industries.

2. The Committee held its first meeting on the 20th June 1947, and subsequently met on 19th, 21st, 22nd and 23rd July and 6th, 7th, 8th and 9th August 1947. In the order of reference, it is stated : " The Committee will complete its investigation as early as possible and will submit interim reports as soon as the investigation relating to particular problems is completed." The Government say that the final report should be submitted to Government within three months after the constitution of the Committee. Considering the very wide terms of reference, the Committee is of the opinion that it would not be possible to submit the final report within three months as contemplated by the Government. Normally, only two methods are resorted to by committees of this kind, to elicit public opinion. One is by the issue of a questionnaire, and the other is by examination of witnesses. The Committee prepared a questionnaire for the purpose of assessing public opinion in respect of the various problems connected with industrial development, and had the same published in the newspapers The response to the questionnaire has not been very considerable, and moreover they afford little assistance to the Committee in arriving at conclusions. The problems connected with industrial planning do not readily lend themselves to being expressed in the form of questions. The adoption of the latter method would involve the Committee in considerable delay before they can assess public opinion. The Committee, therefore, came to the conclusion that a more satisfactory way of eliciting public opinion is to submit an interim report on some of the problems of industrial planning. The public would then have an opportunity of expressing their views on particular problems both from a critical as well as a constructive angle.

3. The Committee has not been able to cover the entire range of subjects involved in industrial planning or those included in the terms of reference within the time at their disposal. For instance, the Committee has not been able to draw up long-term and short-term plans for industrialization of this Province. Before any industrial development can take place in this Province, it is necessary to arrive at decisions regarding the broad outlines of industrial policy and to establish conditions which are pre-requisite for rapid industrialization of the Province. They have, therefore, taken up these questions in the first instance. It is proposed to take up the investigation of the possibilities of particular industries hereafter. The Committee at one stage entertained doubts whether their labours should not be postponed to a future date. Soon after this Committee was appointed, the epoch-making declaration of His Majesty's Government was made declaring their intention to transfer power to Indian hands. The future Constitution of India is in the course of discussion, and it is not possible at the time of this report to ascertain what would be the powers of the Provincial and the Union Governments in the matter of industrial development. After reconsidering the position, the Committee felt that it might be of some assistance to the Government if their views on the question of sharing of powers over industries and industrial development are made known. They have, therefore, devoted some paragraphs to this question.

4. The report now submitted by the Committee must be considered as a preliminary report containing the tentative conclusions of the Committee on the matters dealt with. The Committee do not claim to have exhaustively dealt with all aspects of the various matters considered by them. Their main purpose at this stage, as already indicated, is to outline some of the problems connected with industrial planning.

5 The recommendations of the Advisory Planning Board were thrown open by the Government of India for public criticism. This Committee is of the opinion that a similar course should be adopted with reference to this interim report. They submit that the Government should publish the same immediately and invite public opinion thereon But this should not mean that this Committee would again have to consider the same subjects in their final report. The Government will be at liberty to refer back to the Committee for further elucidation any particular matter in the light of public reaction or otherwise, or they may straightaway implement the recommendations of the Committee in the event of their being acceptable both to the Government and the public.

Progress of Planning.

6. Even before the cessation of hostilities, "Planning" has been engaging the attention of the Central and the Provincial Governments, politicians, industrialists and economists in India. The ultimate objective behind planning is to raise the standard of living of the people as a whole, and to ensure employment for all. The range of subjects covered by the planning schemes embraces all forms of national activity. These studies into planning have resulted in the publication of several schemes of planning. Among them, we may refer to—

(1) "A Plan of Economic Development for India" by the Bombay businessmen,

(2) "The Gandhian Plan" by Mr. S. N. Agarwal,

(3) The Reports of the National Planning Committee,

(4) The People's Plan,

(5) The Reports on Reconstruction Planning by the Reconstruction Committee of Council,

(6) The Post-war Reconstruction Development Schemes of the Government of Madras, and also of the various Provinces,

(7) The Report of the Advisory Planning Board, and

(8) The Reports of the Panel Committees on the various industries.

In addition, several books on planning have been published, and articles have appeared in various journals in India. The attempt to evolve a final plan has been made by the Advisory Planning Board, constituted by the Government of India on 26th October 1946. The terms of reference to the Board were :—

(*a*) To review the planning that has already been done by the Government, the work of the National Planning Committee and other plans and proposals for planning;

(*b*) to make recommendations in the light of this review for the co-ordination and improvement of planning;

(*c*) to make recommendations as regards objectives and priorities; and

(*d*) to make recommendations regarding the future machinery of planning.

7. Some of the problems connected with industrial planning with which this Committee is concerned, have been fairly and exhaustively dealt with in the Report of the Advisory Planning Board. In his foreword to the Report, Pandit Jawaharlal Nehru has stated that matters comprised in the report are of the highest importance and have a special urgency and that it is vital that public opinion should be seized of them, and he winds up by saying " the publication of the volume will evoke interest and constructive criticism from a considerable body of opinion in the country and so contribute to the solution of some of our major problems." The Report has yet to be accepted and implemented by the Government of India.

Scope and Limitations of Industrial Planning.

8. The Bombay Plan sets out the principal objective of planning as bringing about a doubling of the present *per capita* income within a period of fifteen years from the time that the plan comes into operation, and the authors of the Plan say that the ultimate object of planning should be to increase the volume of India's economic production to the fullest extent which its natural resources would allow. The Second Report of Reconstruction Planning Council mentions the objective of planning as raising " the standard of living of the people as a whole and to ensure employment for all." The Report of the Advisory Planning Board adopts the above definition and adds : " The attainment of this objective requires that the resources of the country should be developed to the maximum extent possible and that the wealth produced should be distributed in an equitable manner. It also requires a certain degree of regionalization, that is, a dispersal of industrial and other economic activity, so that so far as the physical conditions permit each distinct region of the country may develop a balanced economy." In a wide sense, all economic activity, whether undertaken by the individual or by the State, takes place according to plan. The industrialist who wants to start a factory, or expand his factory, or amalgamate with another industry, is doing planning when he takes decisions on such matters. The planning activity of the idustrialist is his reaction to the normal forces of his economic environment. Under the capitalist economy, the need for planning was felt because (1) of the increasing size of the industrial unit calling for a large investment of fixed capital; (2) of the growing instability of demand as a result of rapid social and economic changes; and (3) of the change in our mental attitude towards labour which was hitherto being treated as a mere factor in production without any human aspect. Planning by the State started in an attempt to deal with these problems of capitalist economy and to introduce the motive of service to the community in addition to the profit motive already present. Planning may, therefore, be defined as the establishment of an authority within the State with powers to dictate production programmes which various industries must undertake, and as ancillary thereto the power to control the location of industries and to canalize the savings of people into financing of schemes for the development of the country. The question which we have to consider before undertaking planning is where the planning by the industrialist should cease, and where planning by the State should begin. Until we decide to socialize industries, private initiative should be largely responsible for the development of all industries, except those which the Government may, for strategic or other reasons decide to own and control. The problem of planning, considered in that light is to ascertain in what ways the State can help the industrialist either by removing

the obstacles in the way of starting an industry or by undertaking constructive work essential to industry but beyond the scope of the individual. In our opinion, planning in India, at least for some years to come, should be confined to these objectives. The concentration of economic power along with political power in the hands of ruling politicians will result in creating an authority which cannot be curbed except by other powers of equal or greater magnitude. Such a state of affairs should be avoided under a capitalistic economy though the form of Government may be democratic. Planning should be confined to control over production and location of industries. The control over production will necessarily involve the licensing of industries and the giving of directions regarding output and standardization of goods to be produced. It will enable the State to equalize production and demand, and maintain price levels. The control over the location of industries will enable the State to avoid concentration of industries in urban areas with its attendant evils and will ensure distribution of industries over the entire Province. The distribution of industrial production must, however, be left in private hands. The multiplicity of controls exercised by the Government during war time, however justified, has resulted in the complete dislocation of the traditional economic system of the country, the restoration of which will take considerable time. Unless there are very exceptional reasons, control by the State over distribution should always be avoided.

Political Assumptions in Planning.

9. The Bombay Plan was based on the assumption " that the future Government of India will be constituted on a federal basis and that the jurisdiction of the Central government in economic matters will extend over the whole of India." The National Planning Committee proceeded on the assumption implied in the resolution of the All-India Congress Committee, passed in May 1929, that ' in order to remove the poverty and misery of the Indian people and to ameliorate the condition of the masses, it is essential to make revolutionary changes in the present economic and social structure of society and to remove the gross inequalities." In the note of the Chairman (Pandit Jawaharlal Nehru) of the Planning Committee, dated 21st December 1938, it is stated :—" This resolution indicates an approval of socialistic theories, but apart from this general approval and some further advances in subsequent resolutions, the Congress has not in any way accepted socialism." No political assumptions are made either in the Reports of the Advisory Planning Board or of the Reconstruction Committee of Council. Planning, especially, industrial planning, is compatible with any form of political Government. Planning has been done under the Communist regime of Russia, under the Fascist Government in Germany, and under the Democratic Governments in England and America. Planning is quite consistent with cent per cent private ownership, though, in course of time, it might irresistibly lead towards State ownership. It is, however, essential before attempting planning, to decide whether it should receive any bias towards socialism. When we examine the question of nationalization of industries, we find that there is a diversity of opinion, which could be avoided if our political objective is definitely settled. Again, our attitude towards Labour, in relation to Industry, will depend largely on the question whether the future State is going to be a Democracy under a capitalistic economy or a Democracy under a socialistic economy. This Committee is assuming for the purpose of its industrial plan that the future Government of India will be a democratic Government with a bias towards socialism.

NATIONALIZATION OF INDUSTRIES.

10. In March 1931, the Karachi Congress passed a resolution on economic programme, with the following clause :—

"The State shall own or control key industries and services, mineral resources, railways, waterways, shipping and other means of public transport."

Pandit Jawaharlal Nehru, in April of this year, in his address to the All-India Manufacturers' Organization, said :—

"I have no doubt in my mind that in the future structure of our society, economic enterprise—commercial and industrial—may be more largely controlled, on behalf of the community than it has been in the past in India. Some enterprises may profitably be undertaken by consumers and some by small-scale producers co-operatively in their own interests Others will have to be owned and ordinarily managed by the State."

11. The Report of the Advisory Planning Board refers to the statement of industrial policy, which was issued by Government in April 1945, giving a list of basic industries of national importance which might be nationalized "provided adequate private capital is not forthcoming and it is regarded as essential in the national interests, to promote such industries." The list included important industries such as iron and steel, chemicals and dyes, automobiles and tractors, and the electro-chemical and non-ferrous metal industries.

12. In paragraph 56 of their Report, the Advisory Planning Board remark : "Broadly speaking, therefore, thinking and planning in regard to industrial development has so far proceeded on the assumption that practically the whole field will be left to private enterprise." The Board then comes to the conclusion that at the present juncture it is not desirable for the industrial development of the country that the State should assume the ownership and management of industries. They, therefore, recommend that Defence Industries and "any industry or branch of any industry which it might be found desirable to start as a State enterprise, through the reluctance of private capital to undertake it, should be nationalized. The nationalization of the following should be considered :—

Coal, mineral oils, iron and steel, motor, air and river transport."

13. It is essential to bear in mind the distinction between nationalization and State ownership. Nationalization of industries implies that a class of industries within a specified area becomes State-owned and no scope is given to private industries of that class to exist within that area. In short, the State assumes monopolistic control over a branch of industry within the area. In the event of the State owning an industry, it does not necessarily mean that private enterprise is completely eliminated from that branch of industry, but the State only becomes just another competitor in that branch of industry

14. We agree with the views of the Advisory Planning Board that it may not be practicable at this stage to initiate a policy of nationalization of industries on a large scale. The difficulties in the way of nationalization are many To mention only the chief among them, the administrative departments of the Government have not been organized to undertake the management of industries.

15. For the purpose of considering the question of nationalization, we think it desirable to classify industries under four heads :—

(1) Defence industries.

(2) Industries connected with the generation of power;

(3) Industries connected with transport and communications; and

(4) Industries essential to the economic well-being of the people.

Among defence industries, we would include—

Arms and ammunitions of war, military vehicles whether armoured or not, warships of all kinds, military aircraft, manufacture of chemicals and appliances solely used in connexion with war, and development of strategic mines.

Among industries connected with the generation of power, we would include—

Coal, manufacture of industrial power alcohol, motor and aviation fuel, kerosene and crude oil, and generation of electricity exceeding, say, 5,000 kilowatts.

Among industries connected with transport and communication, we would include —

Manufacture of locomotives, automobiles other than motor cars for private use and light industrial vehicles, other mechanically propelled vehicles, aircraft other than military aircraft, ship-building, manufacture of telephone, telegraph and wireless apparatus other than domestic radio sets and office appliances.

Among industries essential to the economic well-being of the people, we would include—

Iron and steel, cement, textiles, processing of foodstuffs, sugar, heavy chemicals, fertilizers, electrical machinery, machine tools and agricultural implements, pharmaceuticals and drugs.

16. In regard to the industries grouped under the heading "Defence Industries," this Committee is unanimously of the opinion that they should be completely nationalized, in the sense that they should be owned and controlled exclusively by the State. In regard to the industries falling under the heads 2 and 3, the majority of the Committee is of the opinion that, though there is a strong case for their nationalization, considering the difficulties which exist in the way of the Government assuming the management of these industries, the scope for private enterprise should not be ruled out in the event of the State not taking the initiative to start them. The Chairman and Dr. B. V. Narayanaswami Naydu do not agree with this view of the majority. They feel that the trend of recent thought is that the responsibility for the development of these industries is on the State. They, therefore, consider that it is essential that these industries should also be exclusively owned and controlled by the State in the same way as Defence Industries. With reference to the industries falling under the 4th head, the Committee is unanimously of the opinion that full scope should be given for private enterprise as these industries require a greater degree of technical skill and managerial ability for their development than other industries. But, wherever there is reluctance of private capital or absence of private initiative, either to undertake them or to expand them, Government may step in, promote those industries and may own them either completely or partly or render State aid. At this stage, it is desirable to examine the constitutional aspects of this question. Under the Government of India Act, 1935, the subjects incorporation, regulation and winding up of trading corporations including banking insurance and finance corporations, are included in the Federal Legislative list. This means that it will not be open to the Provinces to incorporate any

statutory body in connexion with such industry except under the Indian Companies' Act. For instance, if it is considered desirable that representatives of labour should take part in the management of companies, the provisions of the Indian Companies' Act would preclude Provincial Governments from undertaking legislation to that effect. Under the Canadian Constitution, the Provincial Legislatures are given the exclusive powers of legislating with reference to the incorporation of companies with Provincial objects. General powers to legislate in respect of local works and undertakings are also given. The respective clauses (Nos. 11 and 10, section 92 of the British North American Act) are given below :—

"*Exclusive powers of Provincial Legislatures.*"

Section 92.—" In each Province the Legislature may exclusively make laws in relation to matters coming within the classes of subjects next hereinafter enumerated ; that is to say,—

Clause 11.—The Incorporation of Companies with Provincial Objects ;

Clause 10.—Local works and Undertakings other than such as are of the following classes :—

(*a*) Lines of steam or other ships, railways, canals, telegraphs, and other works and undertakings connecting the Province with any other or others of the Provinces, or extending beyond the limits of the Province ;

(*b*) Lines of steam ships between the Province and any British or foreign country ;

(*c*) Such works, as, although wholly situate within the Province, are before or after their execution declared by the Parliament of Canada to be for the general advantage of Canada or for the advantage of two or more of the Provinces."

17. We would, therefore, recommend that Provincial Legislatures should have the power of legislation regarding the incorporation of Companies with Provincial objects, and to control the operations of companies within the Province though incorporated outside the Province provided that in the latter case the legislation is not repugnant to any provisions of the Central legislation. The Provincial Legislatures should also have power to legislate in respect of local works and undertakings within the respective provinces, which are not considered essential for control by the centre.

CONTROL BY THE CENTRE OR THE PROVINCES.

18. Under the present constitution, production, supply and distribution of goods, development of industries, subject to the provisions in the list 1 with respect to certain industries under federal control are provincial subjects. During the war, the Government of India were exercising control over industries under various ordinances. Some of these controls, such as, the control of capital issues, control over imports of capital goods and exchange control are still being continued. The prevailing view, however, seems to be that planning and control of industries should be a Central Subject. The report of the Advisory Planning Board states (paragraph 51) :

" We are of the opinion that the proper development of large scale industries can only take place if all political units, whether Provinces or States, agree to work in accordance with a common plan. * * *

The alternative suggested is Provincial planning; but the practical difficulties in securing a measure of agreement on plans drawn up independently by a large number of Provinces and States, and in integrating them so as to form a single coherent plan appear to us to be far greater than those of adjusting a common plan to the requirements of the various units.

19. We should like to make it clear that, should political developments hereafter rule out a Centre for the whole country in the field of industry, the ideal of common planning should nevertheless be pursued and arrangements made for achieving it by negotiation and agreement amongst the various units. We would, however, add that proper planning for the industrial development of the country can only be on the basis of every political unit, whether a Province or State, having full opportunity for the development of its resources, employment of its people and investment of its capital. The emphasis, at present, should be on the positive rather than the restrictive aspects of planning.

20. In the Second Report by the Reconstruction Committee of Council, the question whether planning should be done by the Centre or by the Provinces is dealt with in a very general way:

"Although most of the subjects of development are the responsibility of the Provinces, the present position is not as difficult as might appear. There is general agreement as to the measures necessary over a great part of the field and for a task of this nature and magnitude a pooling of all resources will clearly be desirable, if not necessary, and this will inevitably entail a considerable degree of co-ordination. Co-ordination is especially necessary in respect of such subjects as resettlement, industrial development, electric power, irrigation, road transport and road planning. In certain matters requiring unified direction, it may be possible to set up autonomous authorities with powers of an all-India nature in agreement with Provinces and States."

21. The Advisory Planning Board has enumerated twenty-one industries which should be made the subject of Central Planning. They are

(1) Arms and munitions of war;
(2) Coal;
(3) Iron and steel—Primary production;
(4) Prime Movers;
(5) Automobiles and tractors;
(6) Aircraft;
(7) Ship-building and marine engineering;
(8) Other heavy machinery;
(9) Electrical machinery;
(10) Machine tools;
(11) Heavy chemicals, fertilizers pharmaceutical and drugs;
(12) Electro-chemical industries;
(13) Non-ferrous metal industries;
(14) Rubber manufactures;
(15) Manufacture of telephone, telegraph and wireless apparatus;
(16) Power and industrial alcohol;
(17) Motor and aviation fuel, kerosene and crude oils;
(18) Cotton and woollen textiles;
(19) Cement;
(20) Sugar; and
(21) Vanaspati.

22. In our opinion, the grouping is too wide and leaves but few industries for development by the provinces. We have classified under the heading: " Nationalization of Industries " the industries which might be nationalized and the industries which might be left open for private enterprise. In our view, all industries other than those which are recommended for nationalization should be subject to planning by the provinces.

23. We shall now examine the arguments both in favour of and against control by the Centre. It may be argued that a uniform policy of industrial development for India will not be pursued if provincial Governments are to be allowed to formulate their own plans. The recent instance of the policy with reference to textiles formulated by the Madras Government may be cited in support of this argument. Another argument which may be urged in favour of control by the Centre is that the price level of consumer goods throughout India can only be effectively maintained if production is subject to the control of a central authority. The first argument can be met by a reference to the statements of our leading politicians on industrial policy. There have been serious divergences of opinion amongst them as regards the policy of industrialization. It is the conflict in their views that influenced this Government to adopt a retrograde policy.

24. The next argument however, requires more serious consideration. Much can be said in favour of a uniform planning policy for the whole of India. The difficulty, however, comes in the application of such a policy in regard to the development of industries within the provinces. At the outset, we must point out that we are not dealing with the case of a country where the optimum of industrial production has been reached so that any further development of industries will result in over-production of goods and trade depression. One may safely assume that, for the next decade or so, there is no danger of over-production of any class of goods and industrial planning should chiefly be concerned with the problem of augmenting production. It may be necessary to introduce some measure of control by a Central authority to prevent over-production only after considerable industrial development has taken place in India.

25. A factor which we have to take into consideration in industrial planning is the vastness of the country. When we assume a central planning authority, we often lose sight of the great distances that separate provinces. Planning in India should not be so much concerned with the distribution of industries among the provinces as with the distribution of industries within a province. If the Madras Province is deficit in cotton textiles, the deficiency has to be made good within the province itself, rather than by the surplus production from another province. A planning policy which contemplates distribution of goods to deficit areas over long inland routes will be to the disadvantage of the consumer. It might be cheaper to get the goods from other countries by overland routes than from the neighbouring provinces. Already, the traffic on the inland transportation systems is considerable and we are experiencing shortage of supplies within a few hundred miles of a factory.

26. We will now examine the present system of planning exercised by the Centre to ensure proper production. The Government of India have constituted several planning Committees to examine the possibilities and problems connected with the development of specific industries. Their reports are now being made available to the public. In the case of Textile, Vanaspati, Cement and Sugar Industries, the Government of India have taken certain

decisions. The decisions involve the ascertainment of the limits of expansion which should be permitted in respect of each such industry and the distribution of the industries amongst the various provinces in terms of production. The Government of India has, so to say, allocated to the provinces their quota of future industrial production. It is left to the provinces to invite applications from industrialists to establish as many units of industries as possible, subject to the condition that their total quota is not exceeded. The allocations made by the Centre do not generally take into account the peculiar needs of every province or the export market or any fall in production caused by strikes and other breakdowns. We do not underrate the importance of the work undertaken by the several panel Committees. As attempts at an industrial survey of the country with reference to particular industries, they furnish very valuable information to industrialists. At the same time, we must not forget the limitations of such surveys. They are intended to be pointers to the possibilities of industrial expansion in several fields of industries, rather than the complete industrial survey which an industrialist usually undertakes before he thinks of promoting an industry. In our opinion, the attempt made by the State to determine the future demands for specific classes of goods within the next five years can only be more or less arbitrary. If the assumptions should prove incorrect, the response to changing conditions will, in the case of the State, be necessarily tardy. Industrial production must be flexible if it were to meet the demands of a changing market. Ordinarily, before starting an industry in a particular locality, the private *entrepreneur* investigates the prospective market for the products of that industry. He is influenced by a greater number of factors than what the Government take into consideration, such as, the proximity of markets, the cost of transport, the cost of production, the availability of experts and technicians and the environmental factors favourable to the industry. We do not think that the State should assume the responsibilities of the private industrialist. Applications have been made to establish industries without any previous investigation. The applicants have assumed that the Government have made the necessary investigations. The applications have been treated similar to the cases of Government calling for tenders to erect a factory at a particular place. The incentive to start an industry should spring from the industrialist and the Government may control the development by a system of licensing. Industrial surveys and propaganda should be undertaken by the Government only to assist industrialists and not for arriving at final decisions. Except where the Government itself is starting the industry, there is no need to determine the size of the unit, the production quota for the province or its location beforehand.

27. Let us take the case where the Centre has allocated to a particular province a certain number of units of industry but the industrialist there considers the prospects of starting such an industry unfavourable. The result would be that the deficiency in the estimated total production of India as a whole will not be made good and it will not be open to any other province to make good the deficiency. We are, for these and other reasons, in agreement with the final recommendations of the Advisory Planning Board, namely, that proper planning for the industrial development of the country can only be on the basis that every political unit, whether a Province or a State, has full opportunity for development of its resources, employment of its people and the investment of its capital.

28. If the present policy were to be pursued, the provinces do not assume any responsibility for the industrialization of their territory. We again refer

to the recent allocations made by the provinces in respect of textile and vanaspati industries. The provinces were naturally content with inviting applications from industrialists to start the industries and allocations have been made to the applicants on various considerations, the least of them being the ability of the applicant to start the industry, the potentialities of the locality and the economics of the industry. If industrial development were to take place in India more rapidly, it is essential that provincial administrators should be entrusted with the responsibility of industrial planning. It is only then that opportunities will be open to them to develop an industrial outlook. The Centre will have no reason to feel helpless, if the provinces were to be given powers in respect of planning. No province can afford to pursue a policy which is not conducive to the interests of India as a whole. The Central Government will have ample moral authority to exercise their influence whenever occasion demands it. There is always the method of settling any inter-provincial conflicts in the field of industries by means of *ad hoc* conferences.

29. We are, therefore, strongly of the view that the provinces should be given freedom to plan and develop industries within their jurisdiction, and that the powers which they possess under the Government of India Act, 1935, should be augmented further instead of being taken away from them.

Location of Industries.

30. The problems connected with the location of industries have been examined by the Office of the Economic Adviser to the Government of India and a Memorandum prepared by the office has been published. We are in full agreement with the policy recommended in it for adoption, which is quoted below :—

" Broadly speaking, in a country like India it will be extremely dangerous for the State to arrogate to itself the right to determine the location of individual undertakings. The successful conduct of industry from the business point of view is of primary importance if India is to achieve the desired industrial progress. The factors which determine this are of such ever changing character that, as the Barlow Commission point out, ' there is no reason to suppose that so far as the profitability of industrial enterprise is concerned, the State, if it should take on itself unduly wide and autocratic powers of regulation and control of industrial location will be likely in general to prove any wiser and to make more farsighted or enlightened choice, from the point of view of industry, than the generality of those who guide individual undertakings'. The majority of the witnesses examined by the Barlow Commission were, however, in favour of some regulatory action being taken by the State on national lines and in the national interest."

31. It is, however, essential to bear in mind a few points in considering the location of industries. After World War I, there had been a move against centralization of industries which succeeded in some measure. The results of World War II have demonstrated the wisdom of dispersal of industries both from political and strategic points of view and it is not necessary to marshal here the arguments for and against centralization. We may safely proceed on the now accepted view that industries should be dispersed over the entire Province. A distinction which has often been forgotten in this connection is between centralization of industry and the size of the industrial unit. There has been a tendency on the part of the Government to sanction only smaller units to ensure the spread of industries over the Province. The

sanctions accorded for the installation of vegetable ghee plants and spinning mills are cases in point. In modern industrial production, the size of the unit is an important factor. The economy which could be effected by mass production is not possible if an industry has to be split up into a number of small units. A small unit will have little chance of competing against a larger unit though the latter may be situated in another province or even out of India. Before sanctioning an industry, therefore, one of the questions which has to be scrutinized carefully is to find out whether the unit sanctioned is an economic unit capable of competing against similar industries.

32. Again any anxiety to see that every class of industry should be represented in every district should be discouraged. The dispersal of industries among the various districts must be made on the merits of each district in relation to the industry.

33. Another point to be considered is whether the relatively great importance that is being attached to the location of raw materials or of markets is justifiable. With the development of transport, these factors have ceased to play an important part in the location of industries in western countries. To cite some examples, the iron and steel industries in England, Germany and America get their ore to places where coal is found. In America, the ores from Lake Superior are transported to Connelsville district and England and Germany get their ore from Sweden. Another example of interest to this Province is the location of the paint industry in Calcutta. The bulk of raw materials for the paint industry is mined from the Ceded Districts but the paint itself is manufactured in Calcutta and is sold in all the markets of India. Another example is of the paper industry. Large quantities of pulp from Sweden and Canada are exported and paper is made at places other than the source of supply of raw materials. Before the war, Japan was a large importer of short-staple cotton from India and the products made out of such cotton were again being imported into India. The development of transport facilities, therefore, has minimized the importance which used to be attached to the nearness of raw materials and markets in locating an industry. Provided other facilities for the starting of an industry such as power, labour and transport, are available there is no reason why industries should not be started within the Madras Province capable of competing with similar industries established in other parts of the world. As is said in the Memorandum on Location of Industry " while the manner in which the individual *entrepreneur* chooses his location can be described in the form of a few set rules, the general environmental conditions which determine its choice are capable of being considerably influenced by State Action ".

34. Some of the difficulties experienced at present in the way of starting industries may be traced to the non-availability of data about the potentialities of particular localities. We have elsewhere recommended the establishment of a Bureau of Information in the Department of Industries where such information will be available to the public. But more important than the collection of such materials is the need to impress upon Municipalities and Panchayats the desirability of preparing handbooks regarding the potentialities of industry within their area. The handbook should also refer to the facilities which the Municipalities will be able to afford to any industrialist, to their licensing laws and to the scale of local taxes and rates charged by them. The District Industries Officers who have been appointed may undertake this work in conjunction with Municipalities and Local Boards. We have appended (Appendix V) a sample of advertisements made by local bodies

in America inviting industrialists to come and start industries within their area. However much the Government may plan, its success can only be assured if people become industrially conscious.

Licensing of Industries.

35. In view of our recommendations that except in regard to industries connected with defence, communications and generation of power, all other industries should be left open for planning and control by the Province, it is necessary to devise the necessary administrative machinery by which the Provincial Government can exercise such control, which can only be effectively exercised by a system of licensing of industries. For this purpose, the Provincial Government must introduce necessary legislation for taking power for licensing the starting and expansion of industries. The definition of "industries", in such legislation, must be restrictive rather than too wide. It should not include cottage industries or small-scale industries, say, enterprises requiring less than one lakh of rupees of capital or involving the employment of less than fifty workers. Again, the term "expansion" should also receive a restrictive meaning. It must be confined to the addition of units intended to increase the output of the main product of the industry concerned, and not any addition for the purpose of improving the process or for the utilization of bye-products. The legislation should provide for the establishment of six regional Boards of Industries. We propose to divide the districts into the following six regions :—

(1) Vizagapatam, East Godavari and West Godavari.

(2) Kistna, Guntur and Nellore.

(3) Kurnool, Cuddapah, Bellary, Anantapur and Chittoor.

(4) Chingleput, South Arcot, North Arcot, Salem, Coimbatore and Nilgiris.

(5) Tanjore, Trichinopoly, Madura, Tinnevelly and Ramnad.

(6) Malabar and South Kanara.

36. The Regional Advisory Boards may consist of between five to seven members. They should be nominated by the Government from among persons representing industrial, financial and labour institutions within the region. The District Industries Officer of the district where the office of the Regional Board is located shall be the Secretary of the Board. The functions of the Regional Advisory Board of Industries will be to receive applications for the starting and expansion of industries in their area and to forward them to the Provincial Advisory Board for Industries together with a memorandum embodying their reasons for or against granting of the licence. It should be distinctly understood that the Regional Advisory Board of Industries shall not have the power to withhold transmission of an application received by them under any circumstances. The Provincial Advisory Board will be located at Madras. All the members of the Provincial Advisory Board of Industries should be nominated by the Government. It should consist of not less than eleven members, of which six shall be persons representing each of the six regions; two officials of the Government—one the Director of Industries and another not being an official of the Secretariat; three other members representing financial, industrial and labour interests respectively, who should be residents of Madras. The functions of the Provincial Advisory Board of Industries will be as under :—

(1) To assume the same functions as the Regional Advisory Boards in respect of Madras City;

(2) To consider all applications transmitted to it by the various Regional Boards, and make their recommendations thereon to the Government;

(3) To advise the Government on any question of industrial policy that may be referred to them.

The Provincial Advisory Board of Industries shall have the power to co-opt one or more members who are experts in any particular branch of industry to assist them while considering applications relating to such industries. All proposals received by the Provincial Advisory Board of Industries from the Regional Advisory Board of Industries should be forwarded to the Government together with their recommendations for or against the granting of a licence. To ensure the speedy disposal of these applications, and also to eliminate canvassing, we suggest that the Government shall only have power to withhold the grant of a licence, but shall not have the power to issue a licence to an applicant who has not been recommended by the Provincial Advisory Board of Industries. It is also desirable to specify a period of time within which licences should issue from the Government.

Control over Production.

37. While discussing the scope and limitations of industrial planning, we pointed out that control over production involves, in addition to licensing of industries, the giving of directions regarding output and standardization of goods to be produced. The problem to be considered is, what administrative machinery should be set up to exercise the control. The Government can exercise a certain measure of control over private industries, as they are the suppliers of power in many cases and as they also exercise, at the present time, control over distribution of finished products and the supply of raw materials essential to industries. But to exercise satisfactory and effective control, it will be necessary to resort to legislation. The industries which immediately call for some measure of control by the Government are : Textiles, Cement, Sugar, Vanaspati and Building Materials. Though the products of these industries are quite essential to the life of the community, their present output and quality happen to be unsatisfactory. In the Textile industry, especially there is no standardization in the matter of yarn or cloth. The aim of the Government should be to see that as far as possible goods required by the masses and not merely luxury articles used by the rich, are produced by the industries in this Province. The shortage of utility varieties required by the masses can be overcome to some extent if the production of luxury articles is curtailed. To cite one example, the effects of cloth shortage can be mitigated to some extent if mills are required to produce yarn suitable for being woven into cheap sarees, dhoties and shirtings instead of coatings, upholstery, printed goods and other costly varieties of cloth. We understand that, the Ad hoc Committee set up by the Government of India has made certain recommendations regarding standardization of cloth and yarn. The report of the Committee has not yet been made public, but it is understood that it is being considered by the Government of India with a view to implement the recommendations of the Committee. We do not know what these recommendations are, but we recommend the immediate establishment of Production Boards for each of these industries under suitable legislation. Such Boards should consist of representatives elected by the management of the industries concerned, representatives of labour employed in those industries and representatives of Government. These Production Boards should have the power of deciding the quantity and quality of goods to be produced by the component industries. In the event of any component member failing to

comply with the directions issued by the Production Board, the Government should have the power to remove the management of the offending unit and to assume the management itself or depute other persons to manage according to its directions. These Production Boards while they may be limited in the first instance to the industries we have enumerated above, may be set up for other industries also whenever the need is felt.

MINERAL RESOURCES OF THE MADRAS PROVINCE.

38. The development of the mineral resources falls within the Provincial list, except to the extent that their regulation and development under Federal Control is declared by a Federal Law to be expedient in the public interest. The Advisory Committee on the Utilization Branch of the Geological Survey of India recommended that there should be central control through a comprehensive Act concerning specific minerals. Again, in the second report on Reconstruction Planning issued by the Reconstruction Committee of Council, Government of India, it has been stated—

" Regulation of mines and oil-fields and of mineral development has so far remained a predominantly provincial subject. As a planned and uniform policy will be more and more necessary in future, it is proposed to make, in so far as the Constitution allows, a beginning in this direction by bringing under central control all minerals of strategic or key industrial importance."

39. The Government of India proposed to take under central control the regulation of mines, oil-fields and the development of mines by introducing legislation of two sorts :—

(*a*) A general law authorizing control over the power to lease including the terms on which the following minerals are to be worked :

Coal, Petroleum, Mica, Beryl, Chromite, Ilmenite, Sillimanite, Manganese Ore, Monazite, Rare Earth Minerals, all Uranium and Thorium bearing minerals and Piezo Quartz; and

(*b*) Ad hoc legislation dealing specifically with problems relating to individual minerals of All-India and strategic importance such as Mica, Petroleum and coal.

The subject was discussed at a Conference held at New Delhi in January 1947. Mr. C. H. Bhabha, the Hon'ble Member for Works, Mines and Power in the Interim Government in his address to the Mineral Advisory Board on the 10th January 1947 stated :

" We do not propose to ask for any new legislative power. We want merely to exercise powers which we already possess, but which, unhappily for the country, the Government of India have so far refrained from making any use of."

According to Mr. Bhabha, the subjects which should come within the scope of the Central Legislation should be limited to :

(i) Power to frame rules regarding terms and conditions of future leases;

(ii) Power to modify conditions and terms of existing leases on a suitable and agreed basis;

(iii) Application of improved mining methods to ensure conservation of mineral assets;

(iv) Control over exports;

(v) Collection and compilation of statistical returns;

(vi) Encouragement of domestic utilisation of ores;

(vii) Local processing, refining and treatment of ores and minerals;

(viii) Providing expert mineral advice and service to all; and
(ix) Carrying on research on mining, fuel research, etc.

But at the conference in Delhi no agreement was reached in respect of these matters with the Provinces. We cannot say at this stage whether under the new constitution control over mineral development will be with the Centre or with the Provinces.

40. The Geological Survey of the Government of India was founded in 1851 by Dr. Thomas Oldham. The work done by the Department has been very valuable from the point of view of the Science of Geology; but from a practical point of view it did not give much assistance to industrialists in starting industries based on mineral resources. The Government of India, therefore, decided to expand the Geological Department and they have drawn up a five-year plan early this year for its reorganization to enable it to take its proper place along with other scientific organizations in the planned economy of this country. Before the war, there were only 27 officers in that department and it is now proposed to increase their number to 140. " A small number of junior officers will be sent abroad for special training and others will be trained in several parts of India at the beginning of each season. For this purpose, training camps will be opened where students from the Indian Universities will be admitted. In the first year or two, admission will perhaps be restricted to Officers of the Department; but later it should be possible to permit others to join them so that those who wish to be employed by private firms or Indian States may also have an opportunity of gaining additional experience. As the new function of the Department is planning for the future, an Advisory Board has been formed consisting of experts capable of advising on both the short term and long term policies for a planned future development. This will include the examining and prospecting of the principal mineral deposits, especially those that are of immediate importance in connection with the expansion of the country's industries. Among the minerals to be investigated those required for the expansion of the iron and steel industry, viz., coal, iron ore and refractories will be given preference. Investigation into the reserves and the quality of the raw materials required for the glass and ceramic industries will also be made." " In addition to the above two industries, in connection with the industrial expansion of India the following areas which are likely to prove important in the future will be mapped in detail and prospected by drilling where necessary.

The Lignite deposits of the Cuddalore areas and other possible occurrences along the Madras Coast, the Gondwana area of the Godavari and such other areas as may appear promising as a result of the geological mapping now being carried out by the Southern Circle."

41. " The Geological Department of the Government of India propose shortly to set up a Mineral Information Bureau whose main functions will be the dissemination in non-technical language of facts and correct information relating to Indian minerals, precious metals, gems, minerals for chemical industries, industrial clays, sands and miscellaneous minerals. The Bureau will advise on the uses and processing of raw minerals and quantitative data on the availability and suitability of minerals for industries and will help industrialists by carrying out laboratory tests and by recommending technologists for mine survey, geological survey, prospecting and opening up of economic deposits. The Bureau will be under the supervision of Dr. D. N. Wadia who will be assisted by the staff of the Geological Survey

India. The services of the Bureau will be free though small charges may be levied for special analytical work. A quarterly journal—'Indian Minerals'—will also be published, which will contain articles written mainly in non-technical language on matters relating to the different aspects of mineral development in India and short accounts of such developments in other parts of the world."

42. "The Madras Government have approved a proposal for the preparation of a comprehensive monograph on the mineral industries of India containing exhaustive surveys of individual industries in relation to India and the world giving

(*a*) a general treatment of the raw materials required for each of the industries together with their availability and location;

(*b*) the different chemical processes that have been developed indicating those that are most suitable for Indian conditions;

(*c*) a description of plant and machinery; and

(*d*) pointers for future development and expansion.

The monograph is to be prepared by Dr. G. Gopal Rao, Professor of Chemistry, Andhra University, after visiting some of the industrial centres in India and in consultation with the Geological Survey of India." The Committee is not sure whether a comprehensive monograph as contemplated by the Madras Government can be made available by an individual investigator. It must be understood that we are not questioning the capacity of Dr. Gopal Rao to undertake this work. In our opinion, such a work can only be usefully and successfully accomplished by a survey conducted by a body of expert geologists and technicians with the necessary equipment at their disposal because, as is evident from the note on the natural resources of the Province prepared by Dr. M. S. Krishnan (Appendix II) in most cases of minerals even the approximate data on the quantities available are lacking.

43. In 1944, the Government of Madras formulated a scheme for the formation of a nucleus of geological staff consisting of one Superintending Geologist and twenty geologists for work in this Province and addressed the Government of India in the matter. About the same time, the Director, Geological Survey of India, had also put up a scheme to the Central Government for the expansion of the Central Geological staff. The Government of India advised the Provincial Government that action on the provincial scheme be deferred till the proposal of the Director was disposed of by them. In July 1945, the Government of India approved the proposal of the Director, Geological Survey of India. It was stated that, under that scheme, 15–17 geological officers would work in Madras during the field seasons of 1945–46 and 1946–47 and that about 20 officers would be working in this Province by 1948, when the Central staff was fully expanded. In addition, the services of a Geophysicist and Mining Engineer were to be made available to Madras.

44. Only nine geologists were, however, actually allotted for work in this Province during the field season 1945–46. In modification of the prevailing system of a single officer stationed in Madras being in charge of the entire geological investigation, "mineral development" was separated from "mapping" with the result that the Southern Circle was converted into a purely mapping circle and mineral development was allotted to the development division with its headquarters at Calcutta. The Government of Madras were not satisfied with these arrangements. The Government of India were requested to increase to at least thirteen the strength of the geological survey

party working in this Province during the field season 1945–46. They were also requested to arrange to continue the officer-in-charge of the Southern Circle to be in immediate charge of all geological work in this Province, in view of the fact that the important duty of the Geological Survey of India was mineral development and that it was important that the Government of Madras should be in touch with the officer-in-charge of such work. The Government of India regretted their inability to increase the staff for the season 1945–46 but agreed to depute at least two additional geologists during the field season 1946–47. The reply of the Government of India was considered to be conciliatory by the Government of Madras who did not choose to pursue their scheme for the formation of a separate nucleus of geological staff for this Province. The Committee is strongly of the opinion that the requests made by the Government of Madras to the Central Government should be complied with forthwith. We feel that a geological survey is a necessary pre-requisite for the proper development of industries in this Province.

45. A reference to the number of leases for each mineral compared with the total production (Appendix I—Tables I and III) will give an idea as to the present unsatisfactory conditions of mining industry. At present, mining leases are granted to applicants with little or no qualification, with the result that there has been no systematic mining. Lessees of mines have been content to extract the crude ore to be shipped out of India and the Government has been content in collecting its royalties. A study of the mineral production of this Province given in Appendix I—Table III will indicate the extent and nature of development made so far. No serious attempts have been made to refine the minerals. The methods of mining are generally very primitive, conducted as they are without any machinery or technical assistance. Such haphazard development of mines will create difficulties if, at a later stage, it is decided to embark upon scientific and systematic mining. These considerations must have weighed with the Advisory Planning Board when they recommended that State ownership and management of coal, iron and mineral oils should be considered and that the following principles should be accepted as the basis of policy :—

(i) Minerals should be owned and exploited by nationals of the country and not by foreigners.

(ii) All mineral development should be regulated by Government, whether Central, Provincial or State.

(iii) In respect of certain minerals, there should be central co-ordination and regulation in order to ensure their wise utilization in the general national interest.

The National Planning Committee passed the following resolution :—

" The mineral wealth of the country belongs to the community collectively. The exploitation of minerals and development of mining and mineral industries should be reserved exclusively to be carried on as a public enterprise."

46. This Committee is in general agreement with this resolution and the recommendations of the Advisory Planning Board, and wish to make the following recommendations :—

(1) *All essential minerals should be nationalized.*—This should only mean that mining operations which are being undertaken by owners or lessees should be undertaken by the Government. The processing or refining of the mineral or metal may be done by State or private enterprise. In the latter case, as in the case of exports, the State will only assume the role of sellers of the ore.

(2) *All strategic minerals, viz., coal, lignite, petroleum, mica, beryl, chromite, ilmenite, sillimanite, manganese ore, monazite, rare earth minerals, all uranium and thorium bearing minerals and piezo quartz, should be wholly left to the control of the centre for development.*—Their mining and utilization will be a matter for negotiation between the Provinces and States on the one hand and the Central Government on the other.

(3) *All other minerals including sulphur, gypsum, gold, copper, lead and silver ores will be under the control of the Provinces and States.*—This should not mean that each Province should be free to follow its own line of development which may not fit into a general pattern which is considered desirable for India as a whole. For this purpose, we suggest the formation of a Central Co-ordinating Board of Mineral Development. The Minister in the Central Government in charge of Mines and the Director-General of Geology will represent the Centre. Every Provincial Government will nominate a representative to serve on the Board, who need not be a member of the Legislature. The States will be entitled to send representatives on the basis of some grouping. The co-ordinating authority will have power *to decide* on the assistance to be given to the Provinces or States in the matter of mineral development. Such assistance may be technical or financial. In the latter case, their decision will be recommendatory in the first instance, until it is accepted by the Central Government. The co-ordinating authority *will advise* on the mineral policy to be pursued by the Provinces and States and will endeavour to achieve a certain measure of uniformity in respect thereof.

(4) *Branches or units of the Geological Department of India should be set up in every Province with the necessary equipment and personnel to be able to take up survey and investigation of mineral resources.*

(5) *Provincial laboratories should be established where analysis of ores could be undertaken and researches conducted.*

(6) *The Provincial Governments and States should be free to employ foreign geological experts and technicians to supplement any survey or undertake investigation of particular minerals in their area.*

For the recommendations to be implemented, it will be necessary to hold a conference of Provincial Governments with Central Government representatives. Unless some measure of agreement on these matters is found impossible, we do not recommend the adoption by the Madras Government of an independent mineral policy.

Labour and Industry.

47. The post-war period has witnessed an epidemic of industrial unrest. This will be evident from the table in Appendix IV (*a*) which indicates the number of working days lost due to strikes and other causes during the years 1944 to 1947. The consequent fall in production, especially at a time when there is great scarcity of goods, has impaired the economic system of the country. The table appended (Appendix IV) gives the number of strikes during 1946, the number of workers involved and the duration of the strikes. Whatever may be the political causes behind strikes, the economic factors giving rise to them are the rise in the cost of living and the disparity in the incomes of the worker and the capitalist.

48. Fortunately, the legislators of this country are now bestowing serious attention on the labour problems. Amendments to the Factories Act have been effected in the interests of labour, and the recent passing of the Industrial Disputes Act is another example of the increasing attention which is being given to the problem of labour.

49. We do not propose to deal with the problem of labour in relation to industry from any political angle which assumes the existence of a classwar either between capitalists and labour or between organized Government and disruptive forces. We will assume that the future policy of the Government of this country will be to secure the establishment of industrial democracy, which has been defined as " control of industry by the workers and the management ; and this means all workers, managerial, supervisory, scientific and technical ; manual and operative ; answerable only to a higher economic general staff, which in turn is subject to the Government as a whole." (T. W. Agar.) If that ideal is accepted, the aim of organized labour as well as of Government should be to maintain for the workers a standard of living consistent with the national economy. The attitude of labour should, however, not be that they are not concerned with national solvency. The wage-level, the price-level and the flow of money, are all linked together. It is possible to raise the wage-level to some extent by cutting part of the profits of the capitalist. But, if the wage-level is sought to be raised still further, the price-level must inevitably rise. It may lead to closure of industrial establishments and unemployment. There must, therefore, be sanity in wage demands. We must not forget that in a poor country like India, the largest consumers of common goods are the poor. The raising of the wage-level beyond reasonable limits will only result in a rise in the prices of those very commodities which they themselves largely consume.

50. The policy of linking up wages with the cost of living index is a workable solution ; but it has its limitations. A general wage policy cannot satisfactorily be settled by the study of any one industry or of the conditions prevailing in any one locality. The nature of the industry, the hours of work, economic conditions of the locality, have all to be taken into consideration. The aim of the Government should be to secure for the worker a greater real wage than a greater money wage. This is only possible if Government assumes responsibilities for providing such social amenities as education, medical relief, insurance, housing, etc. The Government of India have passed an Act, called the " Coal Mines Labour Welfare Fund Act " (No. 32 of 1947). The object of the Act is mainly to provide housing accommodation to the workers employed in the coal mines, and in a subsidiary measure to provide for amenities such as medical relief, public health, sanitation, water-supply, education, recreational facilities and transport to and from works. The cost of such measures of benefit to the workers is to be met out of excise duties collected on every ton of coal and coke. If the Provincial Governments have the authority to decide their policy in relation to labour, we would suggest that some such legislation should be promoted in this Province, and made applicable not to any one industry, but to all industries. The revenue for the fund may be derived by levying a cess in the case of certain industries, and by a contribution collected from other industrial establishments based either on the total number of workers employed or as a percentage of the total wage bill. The advantages of such a central fund would be to ensure a uniform standard of labour welfare throughout the Province irrespective of particular areas. It will also ensure in the long run, the planning of industrial areas whether in urban or rural parts on modern lines.

51. In the industrial organizations in India, there exists a rigid line of differentiation between management, executive and labour. In western countries, it would be possible for a man who starts at the bottom as an operative to rise to the highest positions of trust and responsibility in the undertaking. The inadequacy of educational facilities and opportunities barr

any such career to him in this country. It is essential that labour should enjoy educational facilities in the neighbourhood of their houses. The aim of the industrialist and of the Government should be to eradicate even that little measure of hostility which now exists between these three groups, and to inculcate in them the idea that it is only by the co-ordination of these three groups that the success of the industry and the prosperity of the country can be achieved. The Industrial Disputes Act makes it compulsory to have Work Councils. This will undoubtedly help in the promoting of cordiality between management and labour. The provisions of the Act and the rules thereunder will be carefully examined by the Committee at a later stage.

52. Another step which would contribute to creating a real interest in the mind of the worker in the success of the industry which he serves, is by enabling him to share the profits of the industry. We would suggest an initial dividend on the capital out of the profits, and the redistribution of the balance of profits, after providing for reserves, between the management, executive and labour and the shareholders in certain proportions.

53. It is not possible at this stage to do more than indicate the general lines of enquiry on this subject. Final proposals can only be made after ascertaining the reactions of industrialists, labour leaders and the public.

Financing of Industries.

54. The growing size of the industrial unit of any major industry calls for the investment of a very large amount of fixed capital. It is now becoming recognized that if industrial development were to take place according to plan, private capital by itself would hardly be sufficient.

55. Madras was the first province to recognize the need to give State Aid to Industries; and as early as 1923, legislation was passed, called the "State Aid to Industries Act." One of the terms of reference to this Committee is to consider the working of the State Aid to Industries Act, and recommend whether it should be amended, repealed or replaced by any new legislation.

56. The State Aid to Industries Act came into operation on the 27th December 1923. Originally, cottage industries could not be financed under it, and so it was amended in 1941, and the Board of Revenue was empowered to grant loans not exceeding Rs. 500 to promoters of cottage industries. The main forms of assistance which the Government can give to industries under the Act are detailed in section 6 of the Act. They are—

(*a*) by granting a loan;

(*b*) by guaranteeing a cash credit, overdraft or fixed advance with a bank;

(*c*) by paying a subsidy in the case of cottage industries for any purpose, and in the case of any other industry for the conduct of research or the purchase of machinery;

(*d*) by subscribing for shares or debentures;

(*e*) by guaranteeing a minimum return on part of capital of a joint stock company;

(*f*) by making a grant on favourable terms of land, raw material, firewood or water, the property of the Crown for the purposes of this Province; and

(*g*) by supplying at concessional rates electrical energy from a source, the property of the Crown for the purposes of this Province.

57. It cannot be said that the object of the Act, namely, to accelerate the industrial development of this Province has been fulfilled to any appreciable extent by the working of the Act during these twenty-three years.

The assistance given by the Government during the years 1925–46 is tabulated below :—

Year.	Methods of Assistance.				
	Granting of loan.	Guaranteeing cash credit overdraft or fixed deposit with a Bank.	Paying a subsidy, etc.	Subscribing for shares or debentures.	Making a grant on favourable terms of land, raw material, firewood or water.
	RS.	RS.	RS.	RS.	
1925	4,64,600	Nil.	Nil.	Nil.	Nil.
1926	18,600	..	..	..	....
1927	..	(*a*) 1,34,469	..	..	....
1928	20,000	..	..	..	....
1929	21,000	..	..	..	....
1930	..	..	..	..	Lease for the extraction of soft wood from forests to East India Match Company, Rajahmundry.
1931	5,500	..	..	..	....
1932	48,000	..	..	..	....
1933	500	..	..	..	....
1934	500	..	..	.	....
1935	..	.	..	..	....
1936	50,000	..	..	.	....
1937	1,500	..	..		Concessions to Andhra Paper Mills, Rajahmundry—vide (*b*) below.
1938	750	..	108	(*c*) 47,850	Nil.
1939	12,300	..	..	.	....
1940	60,000	(*d*) 25,000	812	..	....
1941	15,000	.	100	(*e*) 7,500	....
1942	25,700	..	600	..	....
1943	..	500	..	..	....
1944	..	..	..	..	....
1945–1946	..	..	..	(*f*) 2,00,000	....
1947	(The Board of Industries sent its recommendations on applications received, and they are now under consideration of the Government.)				

(*a*) The Carnatic Paper Mills, Limited, Rajahmundry, was given an overdraft of Rs. 1,34,469-3-4 with the Imperial Bank of India. The mills are now defunct.

(*b*) The Andhra Paper Mills, Rajahmundry, were given the following concessions:—

(1) Grant of exclusive rights of cutting and removing bamboos from the Pulusumamidi Range in the Rakapalli forests for a period of ten years at an annual payment of Rs. 8,000 (rupees eight thousand).

(2) Permission to purchase and remove waste paper and press cuttings from Government offices for a period of five years from 1st April 1937 at Rs. 28 per ton.

(3) Permission to take water from river Godavari at a concessional rate of Rs. 1-8-0 per 1,000 cubic yards for one year.

The affairs of these mills are by by no means satisfactory now.

(*c*) The following concerns were aided by the Government subscribing for shares to the extent shown against each :—

	Rs.
(i) Kollegal Silk Filatures, Limited, Kollegal	17,850
(ii) The Andhra Engineering Company	20,000
(iii) V. L. Venugopal, Madras Stoneware and Company, Limited	10,000
Total ..	47,850

(*d*) Messrs. Rajah D. Mawny and Company, Madras, were granted an overdraft of Rs. 25,000 for a period of three years from . . .

(*e*) *The Surgical Cotton Mills, Limited, Rajapalayam.*—Subscription for shares to the value of Rs. 7,500.

(*f*) *The Radio and Electricals, Madras.*—The Government took shares to the value of Rs. 2 lakhs in 1945. The amount was disbursed in 1946.

A perusal of the table above reveals that methods of state aid other than granting of loans were rarely availed of and even in the grant of loans, the amount of loans granted per year on the average works out to less than Rs. 35,000. The industries assisted were button manufacture, manufacture of toys, paper industry, sugar industry, silk industry, metal industries, manufacture of fountain pens, manufacture of scientific instruments, manufacture and assembling of radio sets, etc. Most of the concerns wherein the Government subscribed for shares did not prove a success. The Kollegal Silk Filatures, Limited, and The Radio and Electricals are notable examples.

58. We have examined the annual reports on the working of the State Aid to Industries Act for the last five years. These reports show that most of the cases were rejected by the Board of Industries for one reason or another. The conditions required to be satisfied under the Act for the grant of state aid scared away many applicants. The procedure prescribed for getting state aid involves long delays. For these reasons, the facilities afforded by the Act were not availed of by industrialists to any appreciable extent. The Government, therefore, issued a press communiqué in 1944 inviting applicants for state aid and promising state assistance in a large and effective measure. Even this communiqué did not evoke any response from the public of the Province as the provisions of the State Aid to Industries Act had still to be followed to get state aid—vide section 4 of the Act, which prohibits state aid to industries, except under the provisions of the Act. The Committee is of the opinion that section 4 of the Act should be repealed immediately if a more suitable agency for financing industries is to be devised. They are definite in their view that this Act should have no application to industries other than cottage industries. On the question whether the Act should be continued for the purpose of financing cottage industries, they have no opinion to offer as cottage industries do not come within the scope of reference to this Committee.

59. In the United Kingdom, two corporations, Finance Corporation For Industry Limited, and Industrial And Commercial Finance Corporation, Limited, have been sponsored by the Government for the purpose of financing British industries after the war. Both the corporations are registered under the British Companies' Act. The capital of the Finance Corporation for Industry, Limited, has been subscribed by institutional bodies and that of the other corporation by the Clearing and Scottish Banks. The object of the finance corporation is to provide temporary or long-period finance for industrial businesses in the country with a view to their quick rehabilitation and development in the national interest, thereby assisting the maintenance and increase of employment. The primary purpose of the corporations is to provide finance and not to undertake the reorganization of the industry, themselves. The corporations are not intended to replace the normal channels of finance. The Government of Australia have also established a corporation to provide industrial finance. The Central Banking Enquiry Committee in 1929 recommended the establishment of an industrial corporation by the Provinces for canalizing governmental assistance to industries. The only Province in India which has so far set up a small corporation for the purpose of long-term loans to small industries is the United Provinces. It is too early to say how far the finance corporations in the United Kingdom have been financially successful. But it must be admitted that they have rendered substantial assistance to industries. A significant development in this field is the recent bill, introduced by the Finance Member of the Interim Government, for the establishment of an Industrial Finance Corporation in India

with the object of providing credit for medium and long-term capital requirements of the country. This corporation will have a share capital of Rs. 5 crores, the shares to be held jointly by the Central Government, the Reserve Bank of India, the Scheduled Banks, Insurance Companies, and Investment Trusts. The corporation will be authorized to issue bonds and debentures for amounts which together with the contingent liabilities of the corporation shall not exceed four times the paid-up share capital. It may accept deposits from the public repayable after not less than 10 years. The corporation will be authorized to make long-term loans to industrial undertakings, repayable within 25 years, and to underwrite the issue of shares and debentures subject to the provision that the corporation will be required to dispose of the shares or debentures acquired by it within seven years. The corporation will not be liable to pay income-tax or super-tax on its income and profits but the dividend to share-holders will be liable to these taxes. The surplus profits of the corporation, after the payment of a dividend not exceeding 5 per cent and after building up a reserve fund of Rs. 5 crores will be payable to the Central Government. The corporation will have special privileges in the matter of enforcement of its claims against borrowers. In our opinion, a corporation with a total working fund of Rs. 25 crores would hardly be sufficient to meet the requirements of India for industrial finance, within the next few years. Every provincial Government will have to establish a finance corporation within the province. The Madras Government have set aside a sum of Rs. 50 lakhs towards the share capital of a finance corporation to be sponsored by them. It is difficult to estimate the amount of financial assistance that may have to be rendered to industries within the next five years. We have assumed, roughly, that ten major industries and one hundred medium industries may apply for financial assistance to the Government. The capital required for each major industry, we compute at rupees one and a half crores, and for medium industries at Rs. 25 lakhs each. This will mean a total capital requirement of Rs. 40 crores. Assuming that the Government may be called upon to finance these industries to the extent of 33⅓ per cent of the capital requirements, the finance corporation will be required to invest about 13 crores. We would suggest that the capital structure of the financial corporation should be at least two crores and it may be permitted to borrow to the extent of ten times its paid-up capital. The next question to be considered is whether the financial corporation should be incorporated under the Indian Companies Act or under a special legislation. This Committee is strongly of the opinion that the finance corporation should be incorporated under a special Act of the legislature. But, in view of the urgency, if the requisite legislation cannot be passed within a reasonable time, the corporation may for the present be registered under the Indian Companies Act.

60. Another question considered by this Committee was whether the Government should own at least 51 per cent of the share capital. In this connexion the Committee examined four witnesses regarding the constitution and functions of the finance corporation; but, they were unable to find any unanimity of views in regard to the various details connected with it. The Committee, after careful consideration of the views expressed, feel that the Government should own at least 51 per cent of the share capital. The objection to the Government owning 51 per cent of the share capital, has been raised on the ground that the result would be to set up an official body which will be incapable of functioning on business lines, which will only mean a repetition of the worst features of the State Aid to Industries Act. This Committee appreciates the force of such criticism, but is of the opinion that it

is not insurmountable. The Government, by virtue of their owning 51 per cent of the share capital, need not nominate the entire Board so as to constitute it as an official body. A restriction may be placed that not more than one or two officials should be the members of the Board, and that the rest of the directors may be elected either by the rest of the share-holders, or some of them may be nominated by the Government from among non-officials possessing the requisite business experience.

61. The next question which the Committee had to decide was whether the subscription to the shares should be thrown open to all persons and institutions. Again, there has been diversity of opinion in this matter, some emphasizing the danger of industrialists cornering the shares and dominating the Board. Once it is conceded that 51 per cent of the share capital should be owned by the Government, we need not stress this aspect of the matter. It is always desirable that the holding of shares in this corporation should be as widespread as possible. There may be some point in confining the subscription to subjects of the Madras Province and not allowing subjects of Indian States or other Provinces to come in. We may also fix the maximum number of shares which any person or institution can hold. In order to prevent benami holdings, we can also have a suitable clause providing for every shareholder making a declaration that he holds the shares in his own right and not on behalf of any one else.

62. We have to consider the question of the composition of the Board of Directors and the nature of the management of the Finance Corporation. We are of the opinion that the Board of Directors should consist in the main of men who have a background of financial or business experience. The numerical strength of the Board should not exceed eleven and may preferably be confined to nine. We have already suggested that the Chairman and one of the Directors may be officials of the Government nominated to serve on the Board. Assuming that the total strength of the Board is nine, out of the seven members remaining to be elected, the Government may exercise their voting rights to electing three members, leaving the balance of four members to be elected by non-Governmental share-holders. The Government would thus be assured of a majority in the Board of Directors and at the same time the investors in the shares of the corporation will not be deprived of their rights of representation on the Board. The day-to-day management of the institution should be vested in a Secretary or a Manager having expert qualifications and sound experience and he should be remunerated on commercial scales of pay. Normally, the corporation should be the final authority for or against the granting of financial assistance to applicants. They should not be subject to day-to-day interference from the Government. But if it is thought fit, a provision may be made that advances over a certain amount say 10 lakhs of rupees should be made only after obtaining the prior sanction of the Government. The accounts of the corporation should be subject to concurrent audit both by the auditor of the corporation and an auditor appointed by the Government specially for this purpose.

63. The paid-up capital of the corporation would hardly be sufficient to finance industries, and it will have to resort to borrowings from the public. Before we discuss the nature of such borrowings, we will have to decide in what ways the corporation should finance industries. The first thing that suggests itself to any one is that financial assistance to industrial companies should take the form of subscriptions to their share capital. We would however rule this out as a normal method of affording financial assistance. In our view, wherever the Government is content with subscribing to the share

capital of a company, such subscription not amounting to a majority of the shares of the company, the Government places itself in a position of not being able to exercise any effective control over the affairs of the company. One or two instances have been brought to our notice where, on account of the Government being a minority shareholder, it was prevented from taking any step intended to place the affairs of the company concerned on a sound basis. We are, therefore, of the opinion that Government should not subscribe to the capital of a company unless it acquires thereby a majority interest in the company. Again, as the Government is proposing to finance industries from out of public borrowings, shareholding in companies would not afford sufficient security to the public. The normal method of financing should, therefore, be by means of loans secured on the property and assets of the companies. A further question will arise whether finance should be available only to established industries or also to industries which are in the process of being established. We are of the opinion that the financial assistance afforded by the corporation should be available at all stages to an industry. Before an industry starts production, the financial assistance may be in the nature of normal banking facilities. For instance, the corporation may guarantee the opening of a letter of credit for the import of machinery. Such advances at the initial stages of an industry should crystallize into mortgages on the security of the plant and machinery when they are erected. In our opinion, there should be no restriction, except as regards the holding of shares in the companies, as to the nature of the advances. When considering any application for financial assistance from any industry, the corporation should be influenced by the following considerations :—

(1) Whether the industry which is proposed to be financed is technically sound and is capable of functioning profitably ;

(2) Whether its management is entrusted to competent and expert hands ; and

(3) Whether the assets of the company afford sufficient security to the corporation for the ultimate recovery of the money advanced by it.

If the corporation is satisfied on these particulars, it should be free to choose the particular method of advance. The nature of the borrowings must be by debentures having the security of the undertakings which are proposed to be financed. The principal and interest on these debentures should be guaranteed by the Government. On this, there is unanimity of opinion among the witnesses examined by the Committee. The term of the debentures should not be less than ten years, and preferably not more than fifteen years. The interest payable on these debentures must be made slightly more attractive than the current rates of interest yield on provincial loans. It may be half a per cent higher. These debentures must receive recognition as trust securities and approved securities. They should be issued in the form of bonds transferable by endorsement without stamp duty or as bearer debentures with interest coupons attached, at the option of the subscriber.

64. There has been some discussion on the question whether the Government should guarantee any interest on the share capital. This Committee is of the opinion that it is not necessary that any dividend on the share capital should be guaranteed by the Government. But, it is essential to provide by legislation that the profits of the corporation should not be liable to income-tax or super-tax. Otherwise, it will not be possible for the corporation to build up substantial reserves within a short period. The dividend may be limited to 6 per cent.

65. Lastly, the possibility of attracting foreign capital should not be entirely lost sight of. Whether it should be by inviting subscriptions to the debentures issued by the corporation from nationals of other countries or by entering into arrangements for delayed payment in respect of industrial equipment and machinery to be imported into the Province, is a question which has to be considered.

66. Another aspect of this question is to ascertain to what extent private capital will be available within the Province. Private capital must necessarily come from the savings of the people. The savings of the people of this Province are invested mainly in Government securities, in insurance, in Government Savings Schemes, and in industrial equities. For instance, we find that about three crores of rupees are paid as premia by the people of this Province to insurance companies in India out of which possibly 50 lakhs will be the share of Madras companies. Again, when choosing an industrial investment, the private investor is apt to look to the names of the members of the Board of Directors of the undertaking and not to the location of the industry. He, therefore, prefers to invest in industries situated in Bombay and Bengal which are managed by men who enjoy a reputation for business ability all over India. A promoter of an industry in this Province naturally suffers on this account, for he cannot attract local capital unless he has already established a reputation as a successful industrialist. This Committee is, therefore, of the opinion that the Government should acquire the necessary powers to canalize as far as possible the savings of its people into investments within the Province.

67. The Committee has appended a list of industries (Appendix III) for the starting of which sanction has been given and they presume that they are making no progress for lack of capital. The promotion of some of these industries is of vital interest to the Government, as they are more or less of an essential character. The Committee is strongly of the opinion that the emergence of a finance corporation to help these industries is a matter of extreme urgency in any plan of industrial development. It is only on account of the urgency and importance of the problem that the Committee have thought fit in this particular instance to take evidence. The Committee urge the Government to take very early steps to see that a finance corporation is established in this Province.

Re-organization of Government Departments.

68. The difficulties which an industrialist has to face before he could start an industry are many. Chief among them are: obtaining the necessary permits and sanctions for capital issue, for licences to import machinery, for power, for acquisition of the necessary raw materials and industrial sites, for cement and steel required for the construction of the factory, for licences from local authorities and for acquisition of lands. To secure these, he is, so to say, driven from pillar to post. To raise capital, he has to apply to the Controller of Capital Issues at Delhi, for import licences to the Chief Controller of Imports, for steel to the Iron and Steel Controller, Calcutta, for cement to the Honorary Cement Adviser, for power to the local bodies, for raw materials, if they are minerals, to the Collector of the district. It often happens that there is no co-ordination between these various authorities in the matter of assuring the industrialist of these facilities. The fact that he has obtained permission to start the industry, and the industry is considered by the Government department concerned as sufficiently essential in

character is of no great value. We are aware of several instances where the industrialist has either to abandon the project or had to submit to inordinate delays.

69. On the other hand, in some of the Indian States like Travancore, Mysore and Baroda, who pursue a policy of encouraging the establishment of industries, the industrialist secures these facilities with ease and expedition. We feel that unless the Provincial Administration changes its methods and outlook, it is difficult to prevent the flight of industries and capital into Indian States. In the course of this report, we have made several recommendations, the effect of which would be to vest more powers in the Provincial Governments than they at present possess. If our recommendations are to be accepted and implemented, we are of the opinion that the departments of Government as at present constituted will be incapable of securing the desired results. We do not know if it is within our competence to recommend the reorganization of the department of Government dealing with industries. We, however, feel that it is our duty to make the following recommendations.

70. We suggest that a Board of Industries at a high level should be constituted in Madras, presided over by the Minister in charge of Industries. The heads of the several departments of Government, such as, the Director of Industries, the Chief Engineer for Electricity, the Director of Geology, the Commissioner of Labour, should all be members. The Secretary to Government in charge of Industries may be the Secretary to the Board. The Minister for Finance should attend the meetings of the Board whenever necessary. The Board will exercise the following functions :—

(1) To deal with the recommendations for issue of licences received from the Provincial Advisory Board of Industries.

(2) To deal with the recommendations of the Industrial Finance Corporation for granting of financial assistance to any industry.

(3) To approve the recommendations of the Production Boards.

(4) To grant to applicants in connection with industrial licence, all necessary permits, sanctions and priorities.

In the last case, it would be necessary for the Provincial Government to assume in themselves the powers of granting permits, priorities and sanctions which are now vested in various authorities including the Central Government. As far as possible, it should be the aim of the Government to afford all the facilities required for the starting of an industry through the medium of one authority.

We recommend that the Board should hold weekly conferences to deal with the various matters falling within its jurisdiction, instead of resorting to the system of circulation of papers.

The Committee strongly feels that unless some such reorganization is taken up immediately, all planning and all anxiety on the part of Government to speed up the industrialization of this Province will bear no concrete results.

71. This Committee is of the opinion that the Department of Industries should also be reorganized. In selecting the Director of Industries, the emphasis should be on his business experience rather than on his administrative experience. We suggest that the functions of the Department of Industries should be distributed among the following sections : the administrative section in charge of a member of the permanent Civil Service;

an expert section under a technical expert; a propaganda section in charge of a person having experience of industrial publicity; a bureau of information and statistics in charge of a statistician; and a managerial section in charge of a person possessing the requisite managerial experience of industrial concerns. The administrative section will be concerned with correspondence between the department and the various departments of Government and other administrative matters. The expert section should consist of personnel having specialised knowledge of industries and should be engaged in exploring the possibilities of particular industries and generally in the preparation of an industrial survey of the province. The publicity section should deal with the publication of periodicals and handbooks containing information of value to industrialists and should also undertake publicity for the sale of products manufactured by Government factories. The Bureau of information and statistics should be engaged in the collection of statistics and information relating to industries and they should also maintain a library of technical publications connected with industries. Every member of the public should have access to the Bureau and the Library for obtaining the information he may require in connection with industries. The managerial section should be entrusted with the higher management of industries owned by the Government and should function in the same way as the Board of Directors of a Joint Stock Company, except in cases where special boards have been constituted.

72. The Committee understands that in the appointment of District Industries Officers, no regard has been had to the qualifications necessary to undertake investigations of industries. At the present moment, the District Industries Officers are exercising control over the distribution of certain classes of goods. In this report, it has already been recommended that they should be entrusted with new responsibilities. We have suggested above that the Department of Industries should undertake industrial surveys of the Province. It is essential, therefore, that the District Industries Officer should be appointed from men who have some previous industrial experience or who have undergone industrial training before being appointed to the post.

73. There is no justification for having separate departments in the Secretariat for dealing with " Industries " and " Industrial Planning." To ensure co-ordinated action both the subjects should be dealt with in one and the same department by the same Secretary to Government. We also recommend that the same Honourable Minister should be in charge of " Industries " and " Industrial Planning."

Industrial Education.

74. Our educational system has not seriously attempted to visualize the needs of our industry for trained workers, technicians and executives. Under the traditional system, apprenticeship in industrial craft was generally confined to the family. With the advent of the machine age in India, when the factory replaced the home as the centre of production, a vacuum was created in apprenticeship training which remains unfilled. The increasing cost of labour in any industry can only be met if each worker is so trained in his job that his output and efficiency improve and conform to the standards laid down in western countries.

75. A great deal of thought and attention has been bestowed in the United States on the subject of proper training of apprentices. An act called " Filzgerald Act " was passed in 1937 authorizing the Secretary of Labour to set up standards to guide industry in employment and training of apprentices.

76. Industry calls for three classes of workers, the technician, the skilled worker and the semi-skilled worker, each requiring a different type of training. The systems of training required by these three classes of workers are respectively (1) popular professional training aimed at training engineers, architects, technicians and other professional people, (2) popular education in the neighbourhood of factories combining apprenticeship training with basic education, and (3) education in trade and business aimed at training men in business management, accountancy, banking, insurance and other like subjects. The ideal conditions under which training can be given for all the three classes is by training men in the job and by supplementing that training by theoretical education.

77. It will be necessary to institute a Provincial Apprenticeship programme by means of legislation which should be brief and flexible. The legislation should provide for the setting up of a central authority to determine the standards of apprenticeship training to be given to each class of worker. It should be the ultimate aim of the programme to see that only workers who have undergone a course of apprenticeship should be employed in industry. The central authority should constitute committees for each class of industry. The members of the committee should be drawn from the workers and the management. The Committee will decide the duration of the apprenticeship, the wages of the apprentice, the nature of the training to be given, and other similar matters. Each industry will have its factories as sub-units. The Committee will allot to the units the number of apprentices to be trained by them. They will appoint Inspectors to see that the standards set up by them are enforced.

78. The Committee is of the opinion that such an apprenticeship programme will not only succeed in providing industry with an adequate number of skilled workers in all recognized crafts and industries but will also considerably help in improving the output and quality of production. Moreover, it will bring management and labour closer together in the work of developing standards of industrial efficiency.

79. If the Government approve of the idea of introducing an apprenticeship programme as outlined above, the work of drawing up a detailed programme may be entrusted either to this Committee or to any other Committee specially constituted for that purpose.

80. The Committee places on record its appreciation of the valuable services rendered to the Committee by the Secretary Mr. A. S. Naik.

A. S. NAIK, *Secretary.*

S. PARTHASARATHY, *Chairman.*

B. V. NARAYANASWAMY, *Member.*

M. PALLAM RAJU, ,,

P. S. KUMARASWAMY RAJA, ,,

R. SURYANARAYANA RAO, ,,

B. S. SANJEEVA REDDI, ,,

A NOTE BY SRI R. SURYANARAYANA RAO AND SRI B. S. SANJEEVA REDDI.

The recommendation relating to a separate Industrial Financing Corporation is a very important one and it is hoped the Government would give effect to it immediately if the various industries in the province for which sanction of capital issues has been given are to become accomplished facts. But the constitution and functions of such a Corporation must of necessity prevent the Corporation itself undertaking the organization and management of industries. There are backward areas in the province in which adequate local support for any industry may be difficult to secure. We have in our mind the districts of Rayalaseema where it is recognized, the possibilities of industrial development are great, but the prospect of securing adequate capital, trained personnel, etc., are not rosy. If there are private enterprises strong enough to secure these facilities, they may be assisted through the proposed Corporation. In other cases we feel more radical and far-reaching measures are necessary to ensure success of any industrial enterprise in that tract. Assistance from the Corporation even up to the limit recommended in the report may not be of much avail. We would suggest to Government to consider the desirability of following the method adopted in the neighbouring State of Hyderabad where similar conditions prevail. The following appears to be the method proposed for the development of the textile industry. We would suggest similar assistance may be rendered to other industries as well which can be developed in this tract.

" The structure of the organization proposed for the industry (textiles) which is one of the basic industries to be controlled by Government, consists of two joint stock companies with a capital of nearly Rs. 3 crores—the Textile Mills, Limited, and the Deccan Agencies, Limited.

The second company will be entrusted with the actual management of the mills and will be started with a capital of Rs. 50 lakhs, of which the Government will contribute to the extent of 51 per cent. It is learnt that technical details of the scheme are being worked out and the Government of India has already been approached for the grant of the first priority for the purchase of the required machinery."

Government initiative in respect of this tract need not be postponed for want of efficient administrative machinery for the organization and management of industries. The Government can easily secure the services of men of business experience to organize and run the industries in this area.

R. SURYANARAYANA RAO.

B. S. SANJEEVA REDDI.

APPENDIX I.

TABLE I.—*Number of mining leases in the Madras Province.*

Mineral concerned.	Number of mining leases.							
	1935.	1936.	1937.	1938.	1939.	1940.	1941.	Total.
Barytes	5	3	2	4	5	3	5	27
Mica	2	2	5	25	17	9	5	65
Limestone	1	.	..	1	..	..	2	4
Phosphatic Nodules and Gypsum.	1	..	..	.	1	1	.	3
Asbestos	1	.	.	.		.	..	1
Kyanite	1	..	..	.	..	..		1
Steatite	1	..	.	1	1	..	..	3
Garnet Sand	1	1	..	..	..	.	..	2
Corundum	..	1	..	..	..	1	..	2
Aluminium Silicate	..	..	1	.	..	..	..	1
Iron and Manganese	.	.	.	1	.			1
Lead, Silver and Zinc.		.	.	1	..	..		1
Manganese	..	..	.	..	1	2	.	3
Gypsum	.	.	.	.	.	1	.	1
Barytes and Yellow Ochre.	..	..	..	.	..	1	.	1
Asbestos, Barytes, Red Oxide and Yellow Ochre.		.	.	.		1	..	1
Chromite	..			.	.	..	1	1
Red oxide of iron	..	..	..	..	.	..	1	1

TABLE II.—*Mineral production in All-India* (1921–1938).

Minerals.	1921.	1925.	1929.	1933.	1937.	1938.
Total value of production (Rs. lakhs) *	32,83	86,59	30,04	22,08	30,40	84,14
Quantity produced :						
1 Coal—						
British India (000 Tons)	18,397	19,989	22,309	18,162	22,337	25,278
Indian States (000 Tons)	905	915	1,110	1,627	2,700	3,065
2 Gold—						
British India (Ounces)	10,147	329	36	282	34	23
Indian States (Ounces)	380,780	393,513	363,797	335,774	330,710	321,115
3 Petroleum—						
British India (Gallons 000)	9,591	26,778	52,748	57,008	75,658	87,082
Indian States (Gallons 000)	..	.	.	.		..
4 Iron ore—						
British India (000 Tons)	240	479	1,391	620	1,588	1,422
Indian States (000 Tons)	625	1,014	991	572	1,283	1,322
5 Manganese Ore—						
British India (000 Tons)	614	711	751	53	800	766
Indian States (000 Tons)	65	128	243	165	251	202
6 Mica—						
British India (Cwts.)	32,269	45,891	53,065	41,005	103,599	108,834
Indian States (Cwts.)	219	599	166	70	879	14,335
7 Copper ore and Mattee—						
British India (Tons)	23,089	..	73,519	181,907	371,458	288,076
Indian States (Tons)	30	..	5	..	115	51
8 Salt—						
British India (000 Tons)	1,334	1,084	1,439	1,368	1,493	1,588
Indian States (000 Tons)	..	..	..	..	..	..
9 Illumenite—						
British India (Tons)	..	..	..	..	..	..
Indian States (Tons)	..	328	23,670	52,980	181,047	252,220
10 Building Materials †—						
Value (000 Rs.)	47,35	88,64	1,10,83	86,34	96,90	1,12,65

* Inclusive of Indian States and Burma. † Inclusive of Indian States.

TABLE III.--*Output of Minerals in the Madras Province.*

Name of mineral.	Year.	Output in tons.	Exports.	
			Total quantity.	Value in lakhs.
			TONS.	
Manganese	1935–36	7,859	428,356	77·35
	1936–37	14,958	324,960	64·23
	1937–38	21,164	631,404	128·22
	1938–39	31,813	256,540	61·59
	1939–40	34,640	377,968	94·05
	1940–41	29,536	337,919	99·44
	1941–42	14,625	211,060	75·70
			CWT.	RS. IN LAKHS.
Magnesite	1935–36 . ..	12,840	78,805	4·20
	1936–37	12,996	98,914	4·91
	1937–38 ..	23,782	171,670	8·33
	1938–39 . ..	23,052	147,302	4·46
	1939–40	29,903	232,741	9·22
	1940–41 . ..	37,305	331,331	12·53
	1941–42	36,527	284,567	7·76
Mica and Waste Mica . .	1935–36 . ..	438 / 342	15,096	10·48
	1936–37 .	579 / 802	16,479	11·23
	1937–38	684 / 1,984	32,166	20·24
	1938–39 . ..	693 / 3,029	26,634	15·18
	1939–40 .	1,057 / 1,531	32,349	25·62
	1940–41	2,061	10,862	13·64
	1941–42	711 / 1,036	18,786	25·24
Asbestos	1935–36	8	..	..
	1936–37	.	..	..
	1937–38	..	..	..
	1938–39	24	..	..
	1939–40	38	..	..
	1940–41	35	..	..
	1941–42 .. .	29	..	..
Garnet	1939–40 .. .	4·61	..	..
	1941–42 ..	3·98	..	..
Kyanite	1939–40	6·83	..	..
	1940–41	3·83	..	..
	1941–42	110	..	..
Corundum	1941–42	0·02	..	..
Celestite	1941–42	29	..	..
Limestone	1941–42	152,986	..	..

APPENDIX II.

Mineral resources of the Province of Madras.

The following note by Dr. M. S. Krishnan, M.A., PH.D., A.R.C.S., D.I.C., Superintendent in connexion with the proposals to establish laboratories for research in the Province gives particulars about the mineral resources of the Province. The notes on Apatite, Chalk and Fibrous Calcium Carbonate have been added to his note.

In this note the mineral substances occurring in this Province are reviewed briefly and arranged in the alphabetical order. It will be noticed in most cases even approximate data on the quantities available are lacking. This defect can be rectified only by intensive field examination by a numerically adequate Geological Survey Party.

Abrasives.

The natural abrasives used in industry are corundum, emery, spinel, garnet, quarty, etc., while artificial abrasives include silicon carbide (carborundum), alumina and artificial emery. Those mentioned as natural abrasives will be referred to in the proper places. So far, only artificial emery seems to have been made in this Province at Yercaud. If cheap power is available for industrial purposes, silicon and other carbide abrasives can be made.

Apatite.

About 5,000 tons occur within a depth of 30 feet from the surface at Sitaramapuram, Vizagapatam district.

Asbestos.

The asbestos deposits of Cuddapah belong to the variety known as Chrysotile. This variety is of excellent quality and can be used for spinning and making asbestos cloth. These deposits have been described in a memoir (Volume 64, Part 2, of the Memoirs of the Geological Survey of India, 1934) by Dr. A. L. Coulson. The best parts of the deposits between Brahmanapalle and Lingala in the Pulivendla taluk were investigated by drilling in 1941 and the veins proved to extend along the zone of contact of a bed of dolomite with an intrusive trap sill to distance of more than one furlong along the dip of the formations. The veins are rarely up to 6 inches thick but mostly ½ to 1 inch thick. Calculation shows that in a zone 3 miles long (between Brahmanapalle and Chinnakudala) the amount of asbestos available to a distance of 660 feet along the dip of the rocks is about 256,000 tons.

Another variety of asbestos (the amphibole variety) is known to occur in Salem and Coimbatore districts. It is not of so good a quality as the chrysotile asbestos. These deposits have not yet been examined.

Barytes.

Numerous deposits of barytes are found in the Cuddapah, Anantapur and Kurnool districts. Descriptions of these will be found in the Memoirs of the Geological Survey of India, Volume 64, Part I, published in 1934. They occur as veins in limestone or in the traps intrusive into the latter, the veins being of all dimensions ranging up to 3 or 4 feet in thickness and several furlongs in length. Important mining centres are Pulivendla, Vemula, Nandipalle and Chinnalpenta in the Cuddapah district, Nerijumpalle and Mutssukota in Anantapur, Balapalapalle, Valasala and other places in Kurnool. Though no estimates of reserves are available, it may be said that they are large enough to last for many years at the present rate of production.

Irregular veins of barytes occur on two hillocks about three miles east of Narravada in the Nellore district. The country rock in the immediate neighbourhood of the veins also contains some disseminated grains of the mineral.

An important occurrence is that near Alangayam in the Salem district described by Sir T. H. Holland. Two hills lying to the south of the village show a net work of veins composed of barytes and quartz in porphyritic gneiss. The veins are of all thicknesses up to several feet across. The rock is estimated to contain 30 per cent barytes. The veins extend for a distance of some seven miles from the above mentioned hills.

Only a few of the people engaged in the mining of barytes have resources for carrying on mining systematically, the great majority being men of small means. The industry is also largely at the mercy of the paint manufacturers who are able to dictate prices taking advantage of the lack of organization amongst the producers. It will be to the advantage of the latter to form at least a marketing organization to ensure economic price levels.

Much the greater part of the mineral coming out of the mines is off-colour and therefore low-priced. Laboratory investigations may be undertaken in order to improve this product.

Bauxite.

A few deposits of aluminous laterite (bauxite) have been located amidst the small cluster of peaks on the Shevaroy Hills, including the Shevarayan. One of the deposits which has been sampled in some detail by the present lessee is 20 to 30 feet thick and is estimated to contain 1,456,000 tons, a fairly large proportion of which is of good quality. All the deposits together contain about 6½ million tons of which about a third may be expected to be of high grade.

The deposits await detailed prospecting and development. At present a small quantity of the ferruginous material is used for making artificial emery. The deposits are favourably situated for working and transport by aerial ropeway to the railway on the plains below.

Building materials.

Almost every district provides building stones for local use. In general, however, none of these is quarried on a large enough scale—except the Cuddapah slabs—to be known over a large area.

The ancient crystalline and metamorphic rocks yield excellent *granites, gneisses* and *Charnockites* (" blue granite ") in many districts, e.g. Vizagapatam, Kistna, Bellary, North Arcot, Chingleput, Trichinopoly, Salem, Coimbatore, Nilgiris, Madura and Tinnevelly. They have been used in many famous temples, forts, palaces, etc., and are stones of great durability. A fairly commonly used rock in the Northern Circars is the garnetiferous gneiss, (Khondalite) exposed typically in Bezwada town and in the "Dolphin's nose" at Vizagapatam, but this is not a very durable rock.

Some slabby and *schistose quartzites* occur in the Cuddapah sedimentary basin as well as amidst the crystalline rocks. They are used locally for building and paving purposes. The *sandstones* available in the Cuddapah basin (e.g. near Pulivendla) and in the Gondwana rock of the Godavari, Guntur and Chingleput district find limited use though some varieties appear to be well suited for general building or for decorative purposes.

Slates with true slaty cleavage as well as inferior clay slates are quarried along a mile-wide zone stretching from Cumbum to beyond Markapur in the Kurnool district. The best part of the zone is, however, in the Nellore district (Venkatagiri Zamindari). These slates are used as school slates and for floor and roofs. The quarrying and preparation industries are in need of organization and improvement.

The well-known Cuddapah-slabs are slaty limestones or calcareous flagstones splitting into slabs of ½ to 4 or 5 inches in thickness and up to 8 by 4 feet in area. Occasionally even larger slabs can be obtained. They are very popular in all parts of this Province and in Southern Bombay for paving floors, courtyards and roofs; they are used also as door and window sills, for stair treads, table tops, for fencing, mileposts and even for monuments. They are quarried near Yerraguntla and Jammalamadugu in Cuddapah, near Betamcherla on Kurnool and in a few other places. The quarrying and preparation of these stones are still largely done in a primitive and highly wasteful manner. This is due in some measure to the presence of numerous small producers amongst whom competition is very keen. This industry needs a good deal of improvement.

Chalk.

There are about 2 million tons of nodules of high grade quality within a depth of 50 feet from the survey at Karai, Terani and other villages of Trichinopoly.

Fibrous Calcium Carbonate

There are some 76,000 tons for every 10 feet depth at Uttattur and Kallamedu in the Trichinopoly district.

Limestones.

There are a few areas of crystalline limestones and marbles in Tinnevelly, Coimbatore, Salem, Trichinopoly and other districts. These have not been developed to any extent.

Sedimentary limestones and dolomites are particularly abundant in two zones in the Cuddapah basin, viz., the Vempalle and Narji limestone stages. The latter is the more useful one as building stone, some very fine varieties of different colours—black and white, cream, ivory, red, pink, green and streaked, banded or variegated—are known to occur especially in the Palnad region of Guntur, and deserve to be better known as they are handsome stones of high decorative value.

Cretaceous limestones are locally used for building purposes in the Trichinopoly district. A shell limestone, consisting of a dark grey matrix in which numerous white molluscan shells are embedded, found in a few places amidst the same formations, can be made use of as a decorative stone. A coral limestone of recent age found along the coast of Ramnad and Tinnevelly is used for building purposes.

A few localities in the Cuddapah basin yield fine lithographic stones, specimens of which can be seen in the Madras Museum.

Nodular concretions of lime in the soil, known as *kankar* are used extensively almost everywhere, for burning into lime. In some places limestones are also used for the same purpose, almost irrespective of their quality.

Cement is now manufactured at Bezwada and Mangalagiri in the Kistna district, at Dalmiapuram (Kallakkudi) near Lalgudi in the Trichinopoly district and at Madukkarai in the Coimbatore district. They use respectively the Nanji limestone, cretaceous limestone and Archaean crystalline limestone in the areas near them. Other areas may also furnish suitable limestone for the manufacture of cement.

Laterite is a common and popular building stone found in many places in this Province, specially in the Malabar and Kanara districts. It is easily quarried and dressed when fresh and damp, but hardens on exposure due to loss of water. It is often used with little or no building material as its colloidal constituents bind easily with adjacent material of the same nature.

These include kaolin, fireclay and other types of clays, quartz, felspar and a few other materials.

Two or three small deposits of kaolin have been located in the Nellore district where it is likely that the weathered pegmatites in some mines may contain other deposits. Some deposits of kaolin have also been discovered under the laterite in Malabar and South Kanara, similar to those at Kundara in Travancore. They should be more extensive than the few quarries opened up so far. The felspathic gneisses in Wynaad (Nilgiri district) are extensively kaolinised and are likely to yield good kaolin in places. Other deposits may be found in one or the other of the several areas in which similar rocks occur in the Province.

Clays of different descriptions are available from several districts; from the ancient gneissic rocks in Vizagapatam, Nellore, Trichinopoly; from the Cuddapah and Kurnool formation in the districts of the same name; from the godowns formations in the Godavari, Guntur, Chingleput and Trichinopoly districts; from the Tertiaries in South Arcot and Malabar. Recent and alluvial clays in many areas. These include clays suitable for the manufacture of fire-bricks, stoneware, terracotta, bricks and tiles. Much has yet to be learnt about these deposits and others may be discovered by detailed examination.

Quartz is found in workable bodies as quartz veins frequently traversing the gneisses and schists in several districts. Systematic mapping will reveal large numbers of these veins.

Felspar is a constituent of several rock types but occurs in workable bodies particularly in granites and pegmatites which are abundant in some districts, e.g., Nellore, Salem and Trichinopoly.

Chromite.

The only deposits of this mineral known in the last century were some small pockets in the magnesite area near Salem but they yielded only a small tonnage several decades ago.

Some lens-like and irregular deposits occurring in association with basic charnockites were found in or about the year 1937 in the Kondapalle Hills of the Kistna district. Several deposits have since been found in these hills, but owing to their irregularity, it is not possible to make an estimate of the reserves. They have so far yielded probably 3,000 tons of chromite and may possibly yield several thousand tons more.

Chromite is a constituent of some pyroxene rocks in the corundum bearing belt of Sittampundi in the Salem district. This belt is over 16 miles long. The mineral can be separated by crushing and concentration by dry or wet methods. The proportion of chromite in the rock varies but averages 30 per cent. The crude ore contains around 20 per cent chromic oxide but the concentrates come up to commercial grades in a few samples so far tried. This belt is expected to yield on an average 100,000 tons of crude ore for every 10 feet of depth.

Coal.

There are three areas of coal-bearing Barakar rocks in the Godavari Valley: Lingala (18° 1′: 80° 50′); Totapalle (17° 37′: 81° 4′); Bedadanu (17° 14′: 81° 14′).

Lingala.—Coal exposures were found at the confluence of the Taleperu with the Godavari river near this place. Of the four seams found in the river bed, two 2-foot seams were on the British side, one 5-foot seam in the middle and one 2-foot seam on the Hyderabad side. The coal bearing area on the British side (East Godavari) is said to be about 5 square miles in area. A pit was sunk here in 1891 and about 70 tons of coal raised from a 5-foot seam which contained a shale parting 6 inches thick 2 feet from the floor of the seam. According to the East Godavari Collectorate, this field is estimated to be capable of yielding eight million tons after allowing one-third loss in mining.

Tattapalle.—A boring 86 feet deep, put down here in 1870 under the supervision of W. T. Blanford of the Geological Survey of India revealed the presence of two seams, each 3 feet thick, separated by 6 feet of carbonaceous shale. The upper seam was at a depth of 53 feet from the surface and gave the following analysis:—

Moisture 10·8 per cent; volatile matter 26·9 per cent; fixed carbon 42·7 per cent; ash 19·6 per cent.

The coal-bearing rocks here are said to be 16 square miles in extent of which 10 square miles may contain workable coal. A seam 5½ feet in thickness was found near the village Rajahzompalle and 2,000 tons of coal were raised from trial pits. This seam is expected to yield about 24 million tons of coal, allowing one-third loss during working.

This field was worked in a small way between 1891 and 1895 and a total of 3,657 tons raised. The enterprise was abandoned in the latter year.

Bedadanuru.—Dr. W. King of the Geological Survey of India estimated that the Barakars here covered an area of 5½ square miles. Borings put down in the seventies near the Bedadanuru village revealed the existence of a 4½-foot seam at a depth of 183 feet as well as some thinner layers.

Messrs. Best & Co. put down four drill-holes in this same area in 1901 and 1902. One of the bore-holes showed a section comparable to one of the earlier period and also encountered the 4½ seam.

At a still later date, in 1921, a drilling campaign was conducted by the Singareni Collieries Company near the village Swarnavarigudem some distance south-south-west of Bedadanuru. One of these (bore-hole No. 4) revealed thin seams of shale and coal each about 3½ feet thick between 818 and 828 feet while another showed a 5·6 feet seam at a depth of 225 feet. Thinner layers were met with in other bore-holes.

A concern called the Southern India Mining Syndicate had bore-holes put down at Venkatapalem near Gopalapuram (17° 6′ : 81° 32′) and encountered thin seams of coal of fairly good quality (volatile matter 27·5 per cent ; fixed carbon 45·5 per cent). This area was later visited by Mr. C. S. Middlemiss of the Geological Survey of India who advised deep boring. A bore-hole put down later under the supervision of one Mr. Beadon near Buchipalem (Atchipalem near Gopalapuram) showed carbonaceous matter at several horizons and thin coal at 250 feet, 380 feet and 482 feet [(?) a 2-foot seam at 482 feet). The bottom of the Barakars was not reached at 763 feet at which depth the boring was discontinued.

In 1942–43 two bore-holes were put down in the neighbourhood of Bedadanuru under the supervision of the Geological Survey of India. The first bore-hole, situated at a distance of 2½ furlongs south-west of the village, showed a 4-inch seam at 156 feet, a 1-foot seam at 193 feet, a 6-inch seam at 196½ feet and a 4-inch seam at 206½ feet. It had to be discontinued at 235 feet depth. The second bore-hole was located at a distance of 1,200 feet south-south-west of the first. It revealed a 3-inch layer at 259 feet and a 10-foot seam of coal and shale intercalated at 261 feet and a 1-inch layer at 280½ feet. This bore-hole was abandoned because of drilling difficulties at 351 feet.

The coal-bearing Barakar rocks are covered by Kamthi (Chintalpudi) sandstones which appear to be only a few hundred feet thick in this region except perhaps near their southern margin where they pass under the upper Gondwana rocks. The area occupied by these Kamthi sandstones lies amidst Bedadanuru (Sheet 65 C/4), Ashwaraopet (Sheet 65 G/4), Chintalapudi (65 C 16), Tundkalpudi (65 H/1), Ernagudem (65 G/12 , Gopalpuram (65 G/ 2) and Zangareddigudem (65 G/3), and occupies over 300 square miles. The borings put down so far cover only a small area near Bedadanuru, Swarnavarigudem and Gopalpuram, all near the northern edge of the field. Sir Cyril Fox has suggested (Memoirs of the Geological Survey of India, Volume LIX, page 336) that borings be put down to a depth of, say, 1,500 feet near Mulagamalpalle (17° 11′ : 81° 14′), Kammayyapalem west of the above, Zangareddigudem (17° 7′ : 81° 18′) and at Chintalpudi (17° 3′ : 80° 59′).

It would be useful to put down about half a dozen deep bore-holes equitably distributed over the central and northern parts of the field (occupied by the Kamthi sandstones), so that any useful seam present in a restricted part of it may be brought to light.

Copper.

There are fairly extensive traces of old workings near Garimenpenta in the Nellore district. Efforts were made to pen these up during the last century, but these did not lead to mining.

A part of the area was geophysically examined a few years ago, on behalf of a lessee, by a firm of German geophysicists who have pointed out certain zones where there were indications of the existence of ore-bodies at depths of 1,000 to 1,200 feet. As nothing has been done to prove these indications, the question of Government conducting some boring operations here may be considered if the deposits are not under lease at present.

A quartz reef near Hadabanta in the Coimbatore district, formerly worked for gold, shows the presence of copper sulphides and carbonate. At Alungundala in Guntur there are old workings in quartzites which show thin films of copper carbonates. Old workings are also present near Gani in the Kurnool district. All these might be cleaned up and examined especially by means of geophysical methods.

Corundum.

The neighbourhoods of Karutapallaiyam, Padyur and Kangayam in the Coimbatore district contain lens-like bodies of corundum-bearing felspar rocks. But there appears to have been no regular production of the mineral from here.

Corundum is reported to occur in several places in the Anantapur, Dharmavaram, Hindupur and Kalyandrug taluks of the Anantapur district but little is known of the deposits. They are probably all associated with pyroxenic rocks.

The mineral is also found in some stream valleys near Uppinangadi, South Kanara district, mostly as detrital material derived from the weathering of the underlying rock. The parent rock is apparently too poor to be worked.

The best deposits of the Province are in two areas in Salem. One group of these lies in a zone 40 miles long extending from Donnakuttahalli (12° 0′ : 77°57′) to Chintalakuttai (12° 31′ : 78°6′) in the Dharmapuri and Hosur taluks. The mineral occurs interspersed in lenses of felspathic (syenitic) rock of which it forms about 3 per cent. The weathered (detrital) material over this belt yielded a good output for several years but it has been practically exhausted. No attempt has been made to mine the parent rock and separate the mineral.

The second group of deposits occurs along a belt of anorthosites, pyroxene gneisses and amphibolites extending from Pattalur (11° 16′ 30″ : 77° 48′ 30″) in the west of Karungalpatti in the east (11° 16′ : 78° 0′) in the Tiruchengodu and Namakkal taluks, over a length of 16 miles the chief centre of production being Sittampudi (11° 15′ : 77° 54′). The corundum occurs in coarse

crystals often surrounded by a shed of calcite in the felspar rock (anorthosite). In most parts of the belt it is not abundant, so that only a small length of this belt around Sittampundi is at present being worked. This area has been worked for over half a century and the production has averaged about 100 tons a year, the present output being only 50 to 60 tons per year.

Garnet.

Garnet is a constituent of the schistose rocks in several areas but occurs in abundance only in a few places. Some of the schists in the Nellore mica belt now furnish a quality of garnet for abrasive purposes.

Coastal sands (sand dunes) rich in garnet have been worked near Ovari, Navaladi and Kuttankuli in the south-eastern part of Tinnevelly. The reserves of these area may amount 50,000 tons. There has been an export of garnet sand from here during the last few years, averaging 200 tons per year.

Gemstones.

Amongst the gemstones found in the Province are diamonds, beryl, chrysoberyl, cordierite, corundum, garnet and rock crystal.

Diamonds were mined in the past at several places in the Kurnool, Cuddapah, Guntur and Kistna districts mostly from gravel and alluvium. Mining activity became extinct a few decades ago but some stones are said to be found occasionally near Wajrakarur after the rains.

Beryl is found in the pegmatites of Nellore and Coimbatore. The light bluish green variety known as aquamarine used to be obtained near Padyur in Coimbatore. A small quantity of similar material can be obtained from Nellore where small transparent crystals are occasionally seen, as also patches of transparent material in the large crystals.

Chrysoberyl has been won from the felspathic rocks near Kangayam in the Coimbatore district. Little or no good material is noted here nowadays.

Cordierite.—Pale blue cordierite is associated with some crystalline limestone bands in the Kadavur Zamindari, Trichinopoly district.

Corundum.—Small grains of red corundum (ruby) are found in the corundum-bearing belt of rocks near Sittampundi in the Salem district, but flawless grains are uncommon. Some ruby also occurs in the crystalline limestones near Kiranur in the Kadavur Zamindari, Trichinopoly district.

Felspar.—A beautiful green microcline, known as amazonstone is found in some of the pegmatites near Saidapuram, Nellore district, but it does not appear to have been used as a semi-precious stone.

Transparent pale pink and pearly grey felspar is sometimes seen in the pegmatites of Nellore and other districts. This should also be worth using similarly.

Garnet.—Transparent garnet of gem quality is comparatively rare though ordinary rock forming garnet is quite common. A small quantity of red garnet (with a purplish tint) is got occasionally in the Nellore mica belt. Other places reputed to have produced gem garnet are Kondapalle near Bezwada where the low ground adjoining the hills south of the village yield a little after the rains; the neighbourhood of Sankaridrug in the Salem district; Melamathur in the Tinnevelly district and a few other places.

Rock crystals.—Transparent quartz crystals are occasionally found in cavities in the granite and pegmatite areas. The pegmatites and quartz veins of Nellore, Salem and Coimbatore yield small quantities occasionally. A stream draining the Tertiary conglomerates and gravel beds at Vallam near Tanjore brings down some transparent quartz pebbles which are locally used for making beads, trinklets and spectacle lenses.

Gold.

Gold-bearing rocks including quartz reefs are common in the Province but they generally contain too little to be used as sources of gold.

The Wynaad region of the Nilgiri district contains a number of reefs which were objects of speculation towards the close of the last century but most of them appear to be of a low average tenor, though containing comparatively rich pockets and patches. Some of the old workings are being re-examined by a mining company at present.

At Kuppam on the Mysore border there are apparently some deposits which may be worked on a small scale. A recent venture, however, failed but this may not be entirely due to the deposits themselves.

Gold-quartz reefs were worked near Ramagiri in the Anantapur district between 1910 and 1925, but the enterprise was abandoned in the latter year.

Alluvial gold has been won for a long time on a small scale in the Wynaad region. Attempts to work on a moderate scale seem to have failed.

Graphite.

Graphite is a common constituent of the garnetiferous gneisses (khondalities) extensively developed in the Eastern Ghats of the Northern Circars and of certain gneisses in the Tinnevelly region whose geology is a continuation of that of Ceylon.

Deposits of graphite have been worked near Reddi Bodair, a few miles north of Zangareddigudem in the West Godavari district. The deposit occurs as a veins amidst gneiss and khondalite on the spur of a hill. It is thought to be capable of yielding perhaps several hundred tons.

Deposits have also been worked near Sitapalle in the Chodavaram division of the East Godavari district. The Gokavaram area in this division and parts of the Vizagapatam district are reputed to contain some deposits, details of which are lacking

An occurrence near Kurunjankulam (or Pudukkulam) in the Kuruvikulam Zamindari in the Tinnevelly district shows veins and flakes in gneisses estimated to yield about 650 tons of pure graphite within a depth of 20 to 25 feet. A few other unimportant occurrences are also known in this district but the hilly regions may possibly contain workable deposits.

Gypsum.

Two groups of deposits of gypsum are known—one in the cretaceous rocks of the Perambalur and Lalgudi taluks of the Trichinopoly district and the other near Sulurpet in the Nellore district.

The Trichinopoly deposits occur in the form of thin veins up to six inches thick, forming 0 : 7 to 1 : 3 per cent of the cretaceous clays which they traverse. The gypsum bearing area is about 22½ square miles and is estimated to contain about three million tons for every ten feet depth or 15 million tons within a depth of 50 feet.

The deposits near Sulurpet are found forming thin layers within a depth of three or four feet in the marine silts of the area bordering the Pulicat Lake to the north. It is not known how much of this low-lying area of over 100 square miles contains gypsum. A preliminary examination of a few square miles showed that each square mile contains some 10,000 tons within the depth indicated. Further work must be done to ascertain the distribution areally and in depth.

Iron Ore.

Iron ores are fairly extensively distributed in this Province and include hematite, magnetite and lateritoid ore.

Hematite.—Several deposits occur along a fault zone near Veldurti and Ramallakota in the Kurnool district. The better parts of the deposits contain good hematite estimated to amount to 3·7 million tons within a depth of 100 feet from the surface of the out crops A few samples from these deposits showed a high percentage of iron (50 to 65 per cent), variable silica, very low phosphorus and a sulphur content of 1·3 to 1·8 per cent. Two analyses done by a firm of analysts for the lessee of one of the deposits showed only 0·008 and 0·072 per cent of sulphur.

Several deposits of siliceous hematite are known in the Sandur State, Bellary district, some of which are likely to contain high grade ore. They have yet to be examined in detail. Some of these grade into manganiferous ores.

Magnetite.—Banded magnetite-quartzites form a series of conspicuous deposits in the Salem, Trichinopoly and South Arcot districts, probably extending also into North Arcot. They are found in the Kanjamalai, Godumalai, Tirthamalai, Kalrayan Hills, Pachchamalai and Kollaimalai and also from hillocks in the Attur valley and the neighbourhood. The more prominent of the deposits, containing an appreciable proportion of magnetite (say over 25 per cent magnetite) have been estimated to contain the following quantities of ore within a depth of 100 feet from the surface of the out crops :

	MILLION TONS.		MILLION TONS.
Kanjamalai	54·6	Tirthamalai	47·5
Godumalai	12·5	Rasipur-Namakkal	33·9
Perumamalai	10·4	Kollaimalai-Tattayyangarpettai.	67·5
Attur area	11·7	Pachchaimalai	11·1
Chitteri hills	55·4		
		Total ..	304·6

The ores are granular or gneissic nearly half the quantity being coarse. They average around 35 to 40 per cent of iron but have a large range up to nearly the composition of pure magnetite. The phosphorus content ranges from 0·017 to 0·193 per cent (average around 0 08 to 0·9 per cent) and the sulphur content is quite low, around 0·007 per cent. From the fact that similar ores are worked in Sweden and in the New York State (U.S.A.) the question of feasibility of utilizing these ores for smelting may be examined.

Ilmenite (oxide of iron and titanium) occurs as a constituent of the coastal sands not of important at present as they are generally too low in iron. But when they contain an appreciable percentage of manganese they may be taken into consideration. Karampudi in the Guntur district. The ore indications seen at the present time are in the Sandur State.

Ilmenite.

Ilmenite (oxide of iron and titanium) occurs as a constituent of the coastal sands near Chowghat in Malabar and at several places along the coast of Tinnevelly, Ramnad and Tanjore. It is generally associated with monazite, zircon, garnet, rutile and other minerals and with a varying proportion of ordinary silica sand. These deposits are not comparable in richness to the Travancore ores but may yield something over two million tons of ilmenite as judged from a recent general examination.

Lead ore.

Lead ores are known to occur near Jangamarajupalle, Nagasampalle and Kotlur in Cuddapah, Basavapuram, Koilkuntla and Chiyala in the Kurnool district and at Kanuparthi in the Guntur district. The ore indications seem at the present time are poor since the ores originally exposed at the surface may have been removed by the early prospectors. It may however be possible to examine some of these by geo-physical methods for indications of any rich ore bodies at workable depths.

Lignite.

Lignite is known to occur in Malabar, South Kanara, South Arcot and Tanjore

Malabar.—An exposure 100 feet long is seen on the seashore at the foot of a cliff about a mile north of Fort St. Angelo at Cannanore. It is about four and a half feet thick (including a three-inch layer of clay about a foot above the bottom) and is overlain by 30 to 35 feet of laterite and clay. No other exposure is seen for at least two or three miles on either side along this coast. But similar lignite is said to have been met within some wells two to four furlongs to the interior at a depth of 35 to 40 feet. The quality of the lignite is variable but the upper part seems to be fair (moisture, 28·2 per cent, volatile matter 45·56, fixed carbon 13·4, ash 12·84 per cent). However the thickness of the upper band of the exposure (two to two and a half feet) is too small for working it economically. If thicker seams come to light in well sections in this region, they can be looked into.

An exposure of lignite was reported on the banks of the Tirthala river near Beypore in Malabar. It is said to have been seen from immediately below the old Traveller's Bungalow at this place for about half a mile up the river in an easterly direction. The seam was one to five feet thick under a thickness of laterite

South Kanara.—A lignite bed two or three feet thick was met with in a well at Kasaragod in the South Kanara district at a depth of 32 feet, and in another well half a mile away at 21 feet. A sample of the material examined by Mr. Bruce Foote of the Geological Survey of India was pronounced to be of fair quality. No further details are available of this find.

Tanjore.—Lignite (or more probably peat) was reported about a century ago by a Sub-Collector of Tanjore at a depth of 17 feet from the surface at a spot "situated near the promontory about 20 miles from Point Calimere." It was reported to be more than five feet thick (bottom was not reached) and to consist of recognizable remains of twigs and other vegetable matter. The same officer also stated that the deposit was seen for some 30 miles along that part of the coast.

This interesting occurrence, information about which was found by the Curator of the Madras Record Office, will be worth following up.

Pondicherry.—Two beds of lignite were reported by Polloy, a French Engineer, to have been met with in boreholes put down at Bahur (11° 48′ : 79° 44′ 30″) five miles north-north-west of Cuddalore, Aranganur two and a half miles north of Bahur and Kanniyakoil three miles north of Cuddalore, all in French territory.

At Bahur the lignite was 35 feet thick at a depth of 275½ feet ; at Aranganur a 27 feet bed was met with at 203 feet, and another bed five and a quarter feet thick some 94 feet deeper down; at Kanniyakoil a 50 feet bed was encountered at 330 feet. From the above data, the dip is deduced to be in a south-south-east direction at about 50 feet in one mile. The analyses of materials from the lignite bed vary greatly, probably because they may have been taken from different parts of the section, the best showing : 16·28 per cent moisture ; 38·55 per cent volatile matter ; 37·72 per cent fixed carbon and 7·45 per cent ash (and 5,318 calories). Other analyses showed an ash content of up to 32 per cent.

The area of these borings is surrounded by British territory so that above data can be checked by putting down boreholes at suitable places.

Cuddalore.—The abovementioned area is some 28 miles from Neyveli where the existence of lignite has been proved in recent years. Some years ago, some artesian wells driven by the Industries Department at Aziznagar Criminal Settlement encountered lignite at a depth of about 140 to 150 feet. This was later confirmed by a couple of boreholes put down by a private

firm. The lignite bed is 25 to 30 feet thick. Another borehole put down by the Industries Department at Neyveli, two miles to the east of Aziznagar, revealed a 50 feet bed of lignite at a depth of 204 feet.

The investigation of the lignite deposits of this area has now been taken up by Government and lignite (apparently the same seam as at Aziznagar) has been met with in three boreholes put down in the area north-east and north of Aziznagar at depths of 232 feet (51 feet thick), 149 feet (22 feet thick) and 167 feet (34 feet thick). The bed appears to dip N by E at about one in 80 and to thicken roughly in the direction of dip. Drilling is being continued in an endeavour to get the bed at as shallow a depth as possible by proceeding in westerly direction. The quality of the lignite—at least a good part of it which was recovered in cores—appears to be good, with low ash (3 to 5 per cent) and good calorific value (9,000—9,800 B.T.U.).

The question of the workability of this deposit will have to be considered soon, and if this is feasible, the area between Neyveli and Cuddalore can be taken up for investigation : at a later stage the neighbouring areas of Territory rocks will also be worth looking into.

Magnesite.

Large deposits of this mineral (magnesium carbonate) are found in the Salem district, the best known being those near Salem Junction Station. The mineral occurs as veins traversing partly altered olivine rock. The reserves (calculated to a depth of 100 feet in the case of deposits near Salem and to 50 feet in other cases) are of the following order :—

Deposits.	Reserve tons.
Near Salem—Southern area (1·1 square mile)	16,500,000
Northern area (4·4 square miles)	66,000,000
Siranganur (58 E/14—11° 44′ : 78° 46′ 30″)	105,000
Kundamalai near Jalakandapuram (58 E/14—11° 43′ : 77° 51′) ..	Not important.
Valaiyapatti (58 I/4—11° 7′ 30″ : 78° 14′)	18,000
Sirappalli (58 E/16—11° 12′ : 70° 57′ 30″)	325,000
Isvaramalai (58 I/6—11° 33′ : 78° 25′)	Not important.
Pavittiram (58 I/8—11° 8′ : 78° 22′) (part of the deposit is covered).	5,000
Tiruppangili (58 J/9—10° 56′ : 78° 39′)	Not important.

There are several other small deposits some of which may yield a few thousand tons a piece. They are generally obscured by soil and will have to be examined by prospecting pits.

Manganese.

Deposits of manganese ore are worked in the Sandur State in the Bellary district and at Kodur and other places in the Vizagapatam district. The ores of Sandur State include ferruginous varieties. They have been worked since the early years of this century. The Vizagapatam ores are also mostly of second grade and contain high phosphorus.

Mica.

Mica deposits are found in several districts but those of Nellore are by far the most important.

The Nellore deposits occur along a belt of country some 50 miles long and three or four miles broad, stretching roughly in a north-north-west direction from Gudur. The pegmatites are of varying sizes, some of the largest ones being as much as 1,500 feet to 2,000 feet long and 200 feet wide. Mica is generally richest at the foot-wall and hanging wall but may also be found irregularly distributed in the body of the pegmatite. Most of the mica is of a pale green colour but the 'ruby' variety is worked in a small area around Kalichedu.

Several useful pegmatites producing good mica are present in Wynaad in the Nilgiri district but they are not worked systematically at present owing to scarcity of labour.

A few small deposits are, or have been worked in the Vizagapatam, West Godavari, Trichinopoly, Salem, Coimbatore and Tinnevelly districts but no large groups of deposits are so far known in these districts.

Mineral pigments.

Mineral substances useful in the paint industry are barytes, red oxide, red and yellow ochres, carbonaceous slates and phyllites.

Barytes has already been dealt with. There are large deposits of this in the Ceded districts and Salem.

Red oxide is being won from Sandur State. Some quantity may also be available from Chabali near Pendlimarri in the Cuddapah district.

Red and yellow ochres are mined in the Ceded districts. Ochreous materials are also won in small quantities for local use in other districts (e.g., North and South Arcot, Trichinopoly and Pudukotta) and some of the sources may be able to yield appreciable quantities.

Phosphates.

Nodules of impure calcium phosphate occur in the cretaceous clays of the Trichinopoly district over an area of about 12 square miles, the quantity available here being estimated at about 2,000,000 tons within a depth of 50 feet. The nodules contain, on an average 20 to 25 per cent phosphoric oxide but are mixed with much calcium carbonate and clayey impurities.

Recent examination of a belt of cretaceous rocks in the South Arcot-Pondicherry area passing through Tutipattu and Akasampattu villages, reported to contain phosphatic material, did not reveal the presence of any workable deposits.

A small deposit of apatite is recorded to be present in a hill near Sitaramapuram, 25 miles north-west of Vizianagram. It is estimated to contain 5,000 tons within a depth of 30 feet from the surface.

Some of the manganese-bearing rocks of the Vizagapatam district are fairly rich in apatite but none of them can be relied on to produce any useful quantity.

Rare minerals.

Monozite, a phosphate of cerium, thorium and other rare metals, occurs in workable quantities in the heavy mineral sand deposits of the coasts of Malabar, Tinnevelly and Tanjore. These contain a few thousand tons.

Zircon is also a constituent of the abovementioned sands from which a small tonnage can be got. Other useful minerals in these sands are garnet rutile and sillimanite, besides quartz.

Columbite-tentalite.—This is a dark heavy mineral usually containing both columbium and tantalum in varying proportions. Reported occurrences in pegmatites near Vaiyampatti (South Indian Railway) and Kadavur were examined by prospecting pits but the yield was only about a hundredweight. The mineral is found also rarely in the mica pegmatites of Nellore.

Samarskite.—This is also a mineral containing tantalum. It has been recovered in small quantities from the pegmatites of the Sankara mine (at Griddalur) and of the Kodandarama mine (at Parlapalle near Podalakur).

Steatite.

The best known deposits of steatite (soapstone) in this Province are worked in the Mutsukota Reserved Forest in the Anantapur district. The steatite here is an alteration product of the dolomitic limestone of Vempalle stage. The main band is one foot thick but there are other thinner bands. The material is pale green or pale pink, the former being of the best quality. The best material is generally exported to America for making special insulators.

Good steatite also occurs near Betamcherla in Kurnool where it is ground to powder. Fine quality material useful for insulation is also obtained.

Impure steatite or potstone is found in several districts—Bellary, Anantapur, Vizagapatam Nellore, North Arcot, Trichinopoly, Salem and Coimbatore. The material is worked in several places and made into household utensils or carved into small objects and images, as at Omalu in Salem.

Strontium.

The sulphate of strontium, celestite, is found as veins in the cretaceous rocks of Trichinopoly in association with gypsum. In some places the veins are intercalated with thin layers of barytes. Its distribution is comparatively restricted in area, in a few villages around Uttatur and Karai. The amount available for a depth of every ten feet, being between 50,000 and 100,000 tons.

Sulphur.

Sulphur has been found to occur in the elemental state (native sulphur) in parts of the low-lying area around Kona village near Masulipatam, Kistna district. The area is inundated by sea water during the rains and is dry land during the summer months. The sulphur occurs in fine grained granules in the silts and clays of the region at and near the surface. Samples taken from here have shown anything up to 40 per cent free sulphur but the average material contains perhaps about 20 per cent. There is a likelihood of similar low-lying tracts on the coast in this and other districts revealing similar deposits.

A fairly thick veins of pyrrhotite (iron sulphide) occurs on a hillock near the Thaniar forest bungalow near Polur in North Arcot district. In some old prospecting pits at the top of the hillock the vein appeared to be 3 to 5 feet thick and to persist over a length of about furlongs. It dips steeply eastwards at about 65° or 70°. The sulphur content of the lode is perhaps about 20 to 25 per cent. A borehole was put down on the dip site of the outcrops of the hillock by a private firm but was discontinued before striking the lode which was expected at a depth of a little over 100 feet.

The gold-bearing lodes of Wynad generally contain much pyrites. A mining company now prospecting in this area has a project for recovering the sulphur from some of these gold-bearing pyrites lodes.

APPENDIX III.

A LIST OF INDUSTRIES FOR WHICH LICENCES HAVE BEEN GRANTED.

(Sugar Industry—Installation of new factories.)

(1) Sri T. S. Venkatraman, Promoter of the Panjanatham Sugars, Ltd., Thiruvadi Tanjore.

(2) Sri S. B. P. Pattabhi Rama Rao, Promoter of The Ramachandrapuram Sugars, Ltd. East Godavari district.

(3) Sri M. Madhava Rao, Promoter of the Rayalaseema Sugars and Allied Products, Ltd., Hindupur, Anantapur district.

(4) E. P. S. Albaquerque, Promoter of The West Coast Sugars and Allied Products, Ltd., Mangalore.

(5) Sri R. V. Guruswamy Naidu, Promoter of The Kamala Sugar Mills, Ltd., Udumalpet, Coimbatore.

(6) Sri W. P. A. Soundara Pandian, Promoter of The Madura Sugar and Allied Products, Ltd., Madura.

(Expansion of the Existing Factories.)

(1) The Deccan Sugar and Abkari, Ltd., Pugalur.

(2) Sri Rama Sugar Mills, Ltd., Bobbili.

(3) The Kirlampudi Sugar Mills, Ltd., Kirlampudi.

Vegetable Oil Industry.

(1) The Madras Oil Products, Ltd., Madras.

(2) The Hindupur Vegetable Oils and Refineries, Ltd., Hindupur, Anantapur district.

(3) The Guntur Vegetable Oil Industries, Ltd., Guntur.

(4) The Kanchi Oil Mills, Ltd., Big Conjeeveram.

Tobacco Industry.

The Tobacco Company, Ltd., Ongole.

Sugarcane Farms.

The Kirlampudi Sugarcane Farms, Ltd., Kirlampudi.

Cement Industry.

Serial number and name of district.	Name of firm or person	Capacity in tons per annum.
1 Tinnevelly ..	The India Cements, Ltd. (Sri S. N. N. Sankaralinga Ayyar)	100,000
2 Kurnool ..	Sri Rao Bahadur B. P. Sesha Reddy	50,000

Vegetable Ghee Industry.

(1) The Vizagapatam Vegetable Oil Products, Ltd., Bobbili, Vizagapatam district.

(2) The Madras Vanaspathi, Ltd., Villupuram, South Arcot district.

(3) The Sudarsan Oil Mills, Ltd., Katpadi, North Arcot district.

(4) The Bharat Vanaspathi Manufacturing Co., Ltd., Tadepalli, Guntur district.

(5) The Karnataka Vegetable Oils and Refineries, Ltd., Hospet, Bellary district.

(6) The Vegetobs, Ltd., Chittoor, Chittoor district.

(7) The East Asiatic Co., Ltd., Madras.

Textile Industry.

Serial number and name of district. (1)	Name of the mill. (2)	Name of the promoter or proprietor. (3)	Location proposed. (4)
	I. Extensions.		
1 Trichinopoly	The Trichinopoly Mills, Ltd.	Messrs. Mooljee Ramjee & Sons.	
2 Coimbatore	The Balasubramanya Mills, Ltd.	.	
3 Do.	The Kumaran Mills, Ltd.	The Partner and Managing Secretaries of the Mill.	
4 Do.	The Palamalai Ranganathar Mills, Ltd.	Sri G. Ramakrishna Nayudu	
5 Madura	The Mahalakshmi Textile Mills, Ltd.	.	
6 Coimbatore	The Sarada Mills, Ltd. .	. .	
7 Do	The Vijayalakshmi Mills, Ltd.	Sri R. V. Guruswamy Nayudu	
8 Do.	The Asher Textiles, Ltd. .	The Managing Director and Managing Agents of the Mill	
	II. New Mills.		
9 Bellary	The Rayalaseema Mills, Ltd. .	Sri H. Sitarama Reddy . .	Adoni.
10 Cuddapah	The Kamalapuram Spinning and Weaving Mills, Ltd.	Sri K. S. Krishnamurthy .	Kamalapuram.
11 Bellary	The Karnataka Spinning and Weaving Mills, Ltd.	Sir Rao Bahadur V. Mahabaleswarappa.	Bellary.
12 Anantapur	The Rayalaseema Textiles, Ltd.	M. L. Narayanaswamy	Tadpatri.
13 Do.	The Anantapur Spinning and Weaving Mills, Ltd	Messrs Anantapur Spinning and Weaving Mills, Penukonda.	Penukonda.
14 Kurnool	The Tungabhadra Textiles, Ltd.	Sri M. Madhava Rao . .	Nandyal.
15 Tinnevelly .	The Tuticorin Spinning and Weaving Mills, Ltd.	Sri A. M. M. Chinnamani Nadar .	Tuticorin.
16 Do.	The Kartikeyan Mills, Ltd.	Sri T. V. Sankarkumar . .	Viravanallur.
17 Do.	The India Textiles, Ltd. .	Sri S. Chenniappa Mudaliyar and S. M. Ramasubramanyam.	Tinnevelly.
18 Do	The Ganapathy Mills, Ltd.	Sri S. S. Arunachalam Pillai . .	Chatram Pudukulam.
19 Ramnad	The South India Textiles, Ltd	S. S. Natarajan	Virudunagar.
20 East Godavari	The Ramabhadra Textiles, Ltd.	S. B. P. Pattabhirama Rao . .	Near Rajahmundry.
21 Kistna .	The Krishna Textiles, Ltd.	Ramakrishna Prasad	Near Bezwada.
22 Madura	The Srinivas Mills, Ltd. .	P. S. Mani Ayyar	Tiruparankunram Road.
23 Malabar	The Cannanore Spinning and Weaving Mills, Ltd	Kavath Damodaran	Cannanore.
24 Trichinopoly	The Peerdan Textiles, Ltd.	Mr. J. Loomchand Sait . .	Sathanur.
25 North Arcot	The Rajeswari Mills, Ltd.	Sri M. A. Govindaraja Mudaliyar, K. M. Manicka Mudaliyar & Co.	Gudiyattam.
26 Tinnevelly	The Murugananda Mills, Ltd.	G. Subramanya Pillai	Pettai.
27 Do.	The Kandan Textiles, Ltd. .	The Managing Agents of the Mills at Madras.	Near Madras City.
28 Coimbatore	The Kannabiran Mills, Ltd. . .	Sri K. Venkataswami Nayudu . .	Coimbatore.
29 Do.	The Ramakrishna Mills, Ltd .	R. Doraiswami . .	Ganapathy village.
30 Do.	The Kadiri Mills, Ltd. .	V. Ramaswami Nayudu . .	Singanallur.
31 Guntur	The Haemalatha Textiles, Ltd.	Guntur Narasimha Rao . .	Any place in Guntur district.
32 Malabar .	The Aaron Spinning and Weaving Mills, Ltd.	The Managing Director of the Mill . .	Pappinnisseri.
33 Ramnad	The Shanmugar Mills, Ltd. .	Sri C. Arumugham, Managing Director.	Rajapalayam.

LIST OF INDUSTRIES FOR WHICH CAPITAL ISSUES HAVE BEEN SANCTIONED.

1 The Maclec Nutriments and Pharmaceuticals, Ltd. (Mr. K. V. Subba Rao).	Pharmaceutical drugs.
2 The South India Glass and Enamel Works, Ltd., Salem.	Glass.
3 The National Chemicals, Ltd., Masulipatam (Mr. A. Ramamurthy).	Chemicals, soda ash, etc.
4 The Micanite and Mica Products Co., Gudur (Sri P. V. Raghava Reddy).	Mica.

5	Andhra Pharmaceuticals, Ltd., Bezwada	Drugs and pharmaceuticals.
6	The Sree Rama Chemicals, Ltd. (Raja of Venkatagiri)	Sulphuric acid and cement.
7	Subhodaya Publications, Ltd., Madras (Mr. C. Nageswara Rao).	English daily paper.
8	New Era Manufacturing Co., Palghat, Malabar (Samuel Aaron and others).	Brush manufacture.
9	Malabar Oil Mills, Ltd., Narath P.O., Parassinikadani, North Malabar (K. V. Kunhiraman Nayar).	Oil mills.
10	Coimbatore Oil and General Industries, Ltd. (Sri G. Ramaswami)	Do.
11	India Services (Coimbatore), Ltd.	Radio and electrical goods.
12	The Techno Oil Refineries, Ltd., Calicut (Sri P. B. Kurup).	Oil milling.
13	The Rayalaseema Refineries, Ltd., Cuddapah (Sri M. L. Narayanaswami, Distiller, Tadpatri).	Do.
14	Tuticorin Salt Refineries, Ltd., Tuticorin (Sri M. M. Gurunath).	Salt and chemicals.
15	Modern Housing and Construction Co., Ltd., Madras (Sri S. Krishna Ayyar).	Buildings.
16	Amer-Hind Manufacturers, Ltd., Katpadi (T. S. Anantha Raman).	Typewriter ribbons and carbons.
17	The Hindustan Radios, Ltd. (Sri T. S. Venkata Raman).	Assembling of radio parts.
18	Stanes Amalgamated Estates, Ltd.	Amalgamation of coffee and tea estates.
19	Oriental Building Society, Ltd.	Building.
20	Super Radio Co.	Import of radio parts.
21	Home Properties, Ltd.	House construction.
22	Link Industries, Ltd.	Consumer goods.
23	Marine Industries, Ltd.	Deep-sea fishing and allied industries.
24	South Indian Flour Mills	Flour manufacture.
25	Southern Chemicals, Ltd. (Applicants—National Electrical and Chemical Industries).	Chemicals.
26	Link Chemicals, Ltd. (Applicants—Factors, Ltd.) ..	Soda ash.
27	Electric Laundry at Calicut	Washing machinery (no capital issue).
28	United Glass Works, Ltd.	Glass.
29	United Metalware Manufacturers, Ltd., Madras	Utensil manufacture.
30	Rayalaseema Paints, Ltd.	Paint, varnishes and lacquers, etc.
31	Modi and Modi, Madras (Manufacture of agricultural implements).	Import of machinery only.

LIST OF OIL MILLS FOR WHICH LICENCES HAVE BEEN ISSUED.

1 J. Krishnamurthy, Krishna Oil Mills, Dhone, Kurnool.

2 Sogu Venkataramanayya Setty, Sri Venkateswaraswamy Oil Mills, Dhone, Kurnool.

3 Jonnalagadda Padmanabiah Setty, Merchant, Dhone, Kurnool.

4 Venkateswaraswami Oil Mills, Tadpatri, Bezwada.

5 Sudersan Oil Mills, Katpadi, North Arcot.

6 The Pollachi Trading Company, Coimbatore.

7 Saraswathi Mills, Coimbatore.

8 Raichoti Veeranna and Sons, Adoni, Anantapur.

9 Oil Products Corporation, Ltd., Cuddalore.

10 Krishnamurthy Rao, Railway Military Contractor, Vriddhachalam.

11 Southern Oil Mills, Virudunagar.

12 The Madras Electric Lamp Manufacturing Co., Ltd., Messrs. Gammies, Ltd., Madras (Mrs. V. Ganapathy).

13 M. L. Narayanaswami, Tadpatri (through Messrs. Volkart Bros.).

14 Abdul Jameel and Abdul Salam and Company, Ranipet.

APPENDIX IV.

PARTICULARS OF STRIKES.

Serial number, name and address of factory.	Number of workers involved.		Duration of strike.
	Directly.	Indirectly.	
(1)	(2)	(3)	(4)
1 Sarada Mills, Podanur, Coimbatore	639	15	1st January 1946, 7 a.m. and ended on 7th January 1946, 7 a.m.—7 days.
2 Asher Textiles, Ltd., Coimbatore	799		12th January 1946, 8 a.m. and ended on 13th January 1946, 8 a.m.—1 day.
3 Coimbatore Spinning and Weaving Co., Ltd., Coimbatore.	1,440		28th January 1946, 7 a.m. and ended on 28th January 1946 at 2 p.m.—½ day.
4 Do.	54	669	29th January 1946, 7 a.m. and ended on 30th January 1946, 7 a.m.—1 day.
5 Sri Bajrang Jute Mills, Ltd., Guntur ..	550		16th January 1946, 6 a.m. and ended on 21st January 1946, 7 a.m.—5 days.
6 Printers Association, Tenali, consisting of: (1) Orient Press; (2) Laxmi Power Press; (3) Bharati Press; (4) Phabhat Press; (5) Andhra Ratna Press, Guntur district.	46	.	31st January 1946.
7 23, Tile Factories, Mangalore.	2,215	..	21st January 1946 and ended on 25th January 1946—4 days.
8 The Vasantha Mills, Ltd., Coimbatore .	739	41	4th February 1946 and ended on 8th February 1946—4 days.
9 Indian Metal and Metallurgical Corporation, Mettur, Salem district.	142		4th February 1946 and ended on 5th February 1946—1 day.
10 Thanalakshmi Mills, Coimbatore ..	662		21st February 1946 and ended on 23rd February 1946—2 days.
11 Coimbatore Spinning and Weaving Mills, Ltd., Coimbatore.	2,004	60	20th February 1946 and ended on 21st February 1946—1 day.
12 Do.	192		21st February 1946, 5 a.m. and ended at 1 p.m.—½ day.
13 Do.	901	60	22nd February 1946, 7-10 a.m. and ended on 22nd February 1946, 12-30 p.m.—½ day.
14 Do.	178	..	22nd February 1946, 5 a.m. and ended on 22nd February 1946, 6 p.m.—1 day.
15 Do.	1,280	60	23rd February 1946 and ended on 23rd February 1946—1 day.
16 Chitavalasa Jute Mills Co., Ltd., Chitavalasa, Vizagapatam district.	3,200	..	27th February 1946, 12-45 p.m. and ended on 27th February 1946, 12-53 p.m.
17 Do.	3,200	..	7th March 1946, 12-45 a.m. and ended on 8th March 1946, 6-15 a.m.—1 day.
18 Nellimerla Jute Mills .	2,200	..	6th March 1946, 10-30 a.m. and ended on 6th March 1946, 11 a.m.
19 Dhanalakshmi Mill, Tiruppur	132	1,216	24th March 1946 and ended on 30th March 1946—7 days.
20 Tile Works, Samalkot, East Godavari district.	200	..	12th March 1946 and ended on 14th March 1946—2 days.
21 Coimbatore Spinning and Weaving Mill Co., Ltd., Coimbatore.	1,031	..	16th March 1946 and ended on 4th April 1946—20 days.
22 Ordnance Clothing Factory, Madras	1,373	300	11th March 1946 and ended on 13th March 1946—2 days.
23 Sri Balasubramania Mills, Ltd., Singanallur.	175	167	13th March 1946 and ended on 13th March 1946—1 day.
24 National Tobacco Co. of India, Ltd., Guntur.	935	..	10th February 1946 and ended on 13th February 1946—3 days.
25 Nellimerla Jute Mills, Nellimerla ..	500	1,700	15th February 1946 and ended on 15th February 1946—1 day.
26 Kaleswarar Mills, Coimbatore . .	712	..	4th April 1946 and ended on 4th April 1946—1 day.
27 Vasanta Mills, Singanallur .. .	220	91	10th April 1946 and ended on 10th April 1946—1 day.
28 Nellimerla Jute Mills Co., Ltd., Nellimerla.	458	1,742	16th April 1946 and ended on 19th April 1946—3 days.
29 Sri Balasubramania Mills, Singanallur .	534	18	19th March 1946 and ended on 20th March 1946—1 day.
30 Messrs. A. and F. Harvey Mills, Papanasam, Tinnevelly district.	1,800	..	28th February 1946 and ended on 1st March 1946—1 day.
31 Thirumagal Mills, Gudiyattam, North Arcot district.	207	371	27th February 1946 and ended on 12th April 1946—44 days.
32 South India Silk Mills, Gudiyattam, North Arcot district.	126	..	27th February 1946 and ended on 12th April 1946—44 days.
33 Railway Workshops, M. & S.M. Ry., Perambur.	6,628	..	25th February 1946 and ended on 26th February 1946—1 day.
34 Lotus Mills, Podanur	272	431	8th May 1946 and ended on 9th May 1946—1 day.
35 Sri Balasubramania Mills	671	52	8th May 1946 and ended on 9th May 1946—1 day.
36 Sri Sarada Mills, Podanur	861	77	9th May 1946 and ended on 10th May 1946—1 day.
37 Kasturi Mills, Singanallur	8	..	11th May 1946 and ended on 13th May 1946—2 days.
38 Cambodia Mills, Sinaganallur	2,157	..	8th May 1946 and ended on 9th May 1946—1 day.
39 Kasturi Mills, Singanallur	592	..	8th May 1946 and ended on 9th May 1946—1 day.
40 Janardana Mills, Singanallur	988	..	8th May 1946 and ended on 9th May 1946—1 day.
41 Kamala Mills, Singanallur	120	..	16th May 1946 and ended on 16th May 1946.
42 Kaleswari Mills, Coimbatore	607	22	15th May 1946 and ended on 15th May 1946.
43 St. Joseph's Industrial School and Press, Coimbatore.	104	..	15th May 1946 and ended on 15th May 1946.

Serial number, name and address of factory.	Number of workers involved. Directly.	Indirectly.	Duration of strike.
(1)	(2)	(3)	(4)
44 Madukkarai Cement Works, Madukkarai.	1,169	4	30th March 1946 and ended on 15th May 1946—1 month and 17 days.
45 B.S.T. Saw Mills, Kallai ..	130	70	6th May 1946 and ended on 7th May 1946—1 day.
46 Janardana Mills, Singanallur	254		16th May 1946 and ended on 17th May 1946—1 day.
47 Do.	260		19th May 1946 and ended on 20th May 1946—1 day.
48 Kaleswara Mills, Coimbatore	2,571	110	23rd May 1946 and ended on 24th May 1946—1 day.
49 Mettur Industries . .	2,011		19th May 1946 and ended on 21st May 1946—2 days.
50 Salem Rajendra Mills, Salem .	299	.	17th May 1946 and ended on 17th May 1946—1 day.
51 Do. ..	149	336	23rd May 1946 and ended on 24th May 1946—1 day.
52 Kasthuri Mills, Singanallur	46	..	24th May 1946 and ended on 25th May 1946—1 day.
53 Dhanalakshmi Mills, Tiruppur	448	8	26th May 1946 and ended on 26th May 1946—1 day.
54 Lakshmi Mills, Coimbatore	1,472	50	23rd May 1946 and ended on 24th May 1946—1 day.
55 Somasundaram Mills, Coimbatore	1,491	70	23rd May 1946 and ended on 24th May 1946—1 day.
56 Kothari Textiles, Singanallur .	458	10	24th May 1946 and ended on 25th May 1946—1 day.
57 M. & S.M. Rly. Carriage Works Wagon Shop, Perambur.	749		21st May 1946 and ended on 22nd May 1946—1 day.
58 Coimbatore Spinning and Weaving Co., Ltd., Coimbatore.	2,445	105	23rd May 1946 and ended on 27th May 1946—4 days.
59 Chittivalasa Jute Mills, Vizagapatam .	3,400	.	5th April 1946 and ended on 13th May 1946—39 days
60 Janardhana Mills, Singanallur . .	621	22	3rd June 1946 and ended on 3rd June 1946—1 day
61 Sarada Mill, Podanur, Coimbatore	225	10	8th June 1946 and ended on 8th June 1946—1 day
62 Janardhana Mills, Singanallur	903	30	6th June 1946 and ended on 6th June 1946—1 day.
63 Balasubramania Mills, Singanallur	609	11	10th June 1946 and ended on 10th June 1946—1 day.
64 Lotus Mill, Podanur, Coimbatore	188	1	1st June 1946 and ended on 1st June 1946—1 day.
65 Jayalakshmi Mills, Singanallur	274	6	12th June 1946 and ended on 12th June 1946—1 day
66 Kamala Mill, Singanallur	345		8th June 1946 and ended on 8th June 1946—1 day.
67 Sri Ramalinga Choodambikai Mills, Tiruppur.	420		7th June 1946 and ended on 7th June 1946—1 day.
68 Oriental Tile Works, Mangalore	50		23rd May 1946 and ended on 4th June 1946—13 days.
69 The Dhanalakshmi Mills, Ltd., Tiruppur, Coimbatore.	1,463	.	16th June 1946 and ended on 17th June 1946—1 day.
70 Coimbatore Cotton Mills, Singanallur	70	48	19th June 1946 and ended on 20th June 1946—1 day
71 Do.	318		19th June 1946 and ended on 20th June 1946—1 day.
72 Kothari Textiles, Coimbatore . .	12	728	16th June 1946 and ended on 20th June 1946—5 days
73 Calicut Cotton Mills, Hosiery Department.	40	9	6th May 1946 and ended on 10th June 1946—35 days.
74 Sri Krishna Jute Mills, Ellore	788	.	3rd June 1946 and ended on 10th June 1946—7 days.
75 Mettur Industries, Ltd., Mettur . .	2,100	.	12th June 1946 and ended on 21st June 1946—10 days.
76 Loco Wokshop, Perambur . .	3,100	150	25th June 1946 and ended on 4th July 1946—10 days.
77 Carriage Workshop, Perambur ..	3,060		27th June 1946 and ended on 5th July 1946—9 days.
78 Electrical Workshops, Train Light Workshops and staff of Electrical Carriage Works, Perambur.	353		27th June 1946 and ended on 5th July 1946—9 days
79 Staff of Electrician's Loco Works, Perambur.	66	..	25th June 1946 and ended on 4th July 1946—10 days.
80 Indian Leaf Tobacco Development Co., Ltd., Chilakaluripet.	500	100	10th June 1946 and ended on 27th June 1946—18 days.
81 Kamala Mill, Singanallur	9	.	2nd July 1946 and ended on 2nd July 1946—1 day.
82 Do.	20	111	4th July 1946 and ended on 4th July 1946—1 day.
83 Do.	18	99	10th July 1946 and ended on 10th July 1946—1 day.
84 Chittivalasa Jute Mills Co., Ltd., Vizagapatam.	3,200	.	26th July 1946 and ended on 26th July 1946—1 day.
85 Somasundaram Mills, Coimbatore ..	1,121	..	27th July 1946 and ended on 27th July 1946—1 day.
86 Dhanalakshmi Mills, Tiruppur	272	..	27th July 1946 and ended on 27th July 1946—1 day.
87 Kaleeswarar Mill, Coimbatore	2,941	..	25th July 1946 and ended on 26th July 1946—2 days.
88 Somasundaram Mill, Coimbatore ..	1,847	..	25th July 1946 and ended on 26th July 1946—2 days.

Serial number, name and address of factory.	Number of workers involved. Directly.	Indirectly.	Duration of strike.
(1)	(2)	(3)	(4)
89 C. S. & W. Mills, Coimbatore	3,056	..	25th July 1946 and ended on 26th July 1946—2 days.
90 Lakshmi Mill, Coimbatore .. .	770	..	25th July 1946 and ended on 26th July 1946—2 days.
91 Dhana Lakshmi Mill, Coimbatore .	1,400	.	25th July 1946 and ended on 26th July 1946—2 days.
92 Madukarai Cement Works, Madukarai. ..	909	.	25th July 1946 and ended on 26th July 1946—2 days.
93 Brooke Bond Tea Co., Coimbatore .	550	.	25th July 1946 and ended on 26 July 1946—2 days.
94 Indian Sugars and Refineries, Ltd., Hospet.	226	..	19th July 1946 and ended on 27th July 1946—9 days.
95 Sri Palamalai Ranganathar Mills, Periyanayakanpalayam.	129	.	7th August 1946 and ended on 7th August 1946—1 day.
96 Murugan Mills, Coimbatore	54	21	6th August 1946 and ended on 8th August 1946—3 days.
97 Nellimarla Jute Mills Co , Ltd , Nellimarla.	2,200	..	9th August 1946 and ended on 10th August 1946—1 day.
98 Rajalakshmi Mills Singanallur .. .	330	..	9th August 1946 and ended on 9th August 1946—1 day.
99 Thirumurthi Mill, Udamalpet . ..	50	.	10th August 1946 and ended on 10th August 1946—1 day.
100 Do. .. .	470	.	12th August 1946 and ended on 12th August 1946—1 day.
101 Asoka Betel Nut Factoy, Coimbatore .	94		7th August 1946 ended on 9th August 1946—3 days.
102 Do. ..	94	.	7th August 1946 and ended on 7th August 1946—1 day.
103 Sri Palamalai Ranganathar Mills, Periyanayakanpalayam.	201	109	16th August 1946 and ended on 17th August 1946—2 days.
104 Rajalakshmi Mill, Singanallur .	262	.	10th August 1946 and ended on 16th August 1946—1 day.
105 Kothari Textiles, Singanallur . .	13		16th August 1946 and ended on 16th August 1946—1 day.
106 Jayalakshmi Mill, Singanallur . ..	15	.	16th August 1946 and ended on 16th August 1946—1 day
107 Kasthuri Mill, Singanallur. . .	2,608 Strike. 641 Lockout.		16th August 1946 and ended on 17th August 1946, Lockout ended on 21st August 1946—6 days.
108 Kothari Textiles, Singanallur .	412		15th August 1946 and ended on 15th August 1946—1 day.
109 Kasturi Mills, Singanallur .	18	5	15th August 1946 and ended on 15th August 1946—1 day.
110 The Andhra Paper Mills, Co., Ltd., Rajahmundry, East Godavari.	26		5th August 1946 and ended on 13th August 1946—9 days.
111 Sri Venkatesa Mills, Udamalpet . .	907	.	24th August 1946 and ended on 25th August 1946—2 days.
112 Cambodia Mills, Singanallur	24	..	25th August 1946 and ended on 25th August 1946—1 day.
113 Janardhana Mills, Singanallur . ..	49	67	25th August 1946 and ended on 25th August 1946—1 day.
114 Sarada Mills, Podanur . ..	188		26th August 1946 and ended on 26th August 1946—1 day.
115 Tirumurthi Mills, Udamalpet ..	127	..	14th August 1946 and ended on 14th August 1946—1 day.
116 Do. .. .	38	..	15th August 1946 and ended on 15th August 1946—1 day.
117 Do. . ..	83	.	21st August 1946 and ended on 21st August 1946—1 day.
118 Jayalakshmi Mills, Singanallur ..	16 strike 132 Lockout.	220	22nd August 1946, 7 a.m. strike, 9 a.m. Lockout and ended on 26th August 1946—4 days.
119 Rajalakshmi Mills, Singanallur . .	6	700	2nd September 1946 and ended on 3rd September 1946—2 days.
120 Coimbatore Kamala Mills, Singanallur .	86 in strike 563 in Lockout.	170 strike Nil Lockout.	3rd September 1946, 7 a.m. strike, 3rd September 1946, 8-30 p.m. Lockout and ended on 15th September 1946—13 days.
121 Nellimarla Jute Mills, Nellimarla.. ..	60	2,140	9th September 1946 and ended on 12th September 1946—4 days.
122 Sri Balasubramania Mills, Singanallur ..	40	..	3rd September 1946 and ended on 3rd September 1946—1 day.
123 Janardhana Mills, Singanallur .. .	485	..	15th September 1946 and ended on 15th September 1946—1 day.
124 Do.	450	..	21st September 1946 and ended on 21st September 1946.
125 Scindia Steam Navigation Co., Ltd., Vizagapatam.	2,400	..	1st September 1946 and ended on 16th September 1946—16 days.
126 Balasubramania Mills, Singanallur ..	142	..	22nd September 1946 and ended on 22nd September 1946.—1 day.
127 Luthern Press, Guntur	..	..	2nd October 1946 and ended on 10th October 1946—9 days.
128 Lenese Photo Mount Manufacturing Co., Madura.	18	..	Lockout 11th October 1946 and ended on 14th October 1946—4 days.
129 Bazrang Jute Mills, Madura	..	..	11th October 1946 and ended on 16th October 1946—6 days.
130 Chittivalasa Jute Mill	124	..	17th October 1946 and ended on 17th October 1946—1 day.
131 Nellimerla Jute Mill	67	..	22nd October 1946 and ended on 4th November 1946.—13 days.

Serial number, name and address of factory.	Number of workers involved.		Duration of strike.
	Directly.	Indirectly.	
(1)	(2)	(3)	(4)
132 Brooke Bond (I) Ltd., Coimbatore ..	480	22	25th October 1946 and ended on 26th October 1946—2 days.
133 Somasundara Mills, Coimbatore	1,520	..	11th November 1946 and ended on 18th November 1946—8 days.
134 Kaleswara Mills, ...	2,520	..	11th November 1946 and ended on 18th November 1946—8 days.
135 Brooke Bond (India) Ltd., Coimbatore ..	480	..	11th November 1946 ended on 18th November 1946.—8 days.
136 Lakshmi Mills, Coimbatore	1,700	..	11th November 1946 and ended on 18th November 1946—8 days.
137 Dhanalakshmi Mills	1,450	..	11th November 1946 and ended on 18th November 1946—8 days.
138 Asher Tirupur Textile, Tiruppur	850	..	11th November 1946 and ended on 18th November 1946—8 days.
139 Nellimarla Jute Mills, Nellimarla ..	67	..	11th November 1946—1 day.
140 Sri Venkatesa Mills, Udamalpet	20	..	18th November 1946 and ended on 19th November 1946.— 2 days.
141 Jayalakshmi Mills, Coimbatore	468	..	20th November 1946 and ended on 23rd November 1946—4 days.
142 Chittivalsa	..	..	22nd November 1946—1 day.
143 Sri Ranga Vilas Ginning, Spinning and Weaving Mill, Peelamedu.	95	..	27th November 1946 and ended on 27th November 1946—1 day.
144 The Universal Tile Works, Samalkot ..	44	..	5th December 1946—1 day.
145 The Coimbatore Cement Works, Madukarai, Coimbatore.	650	..	8th December 1946—1 day.
146 The Brooke Bond (I), Ltd., Coimbatore ..	199	..	9th December 1946 and ended on 11th December 1946—3 days.
147 The Asher Textiles, Tiruppur	780	..	10th December 1946—1 day.
148 The Dhanalakshmi Mills, Tiruppur ..	1,491	..	11th December 1946—1 day.
149 Sri Ranga Vilas Spinning and Weaving Mills, Coimbatore.	1,552	..	13th December 1946 and ended on 16th December 1946—4 days.
150 The Radhakrishna Mills, Peelamedu, Coimbatore.	116	..	11th December 1946 and ended on 13th December 1946—3 days.
151 Sri Balasubramania Mills, Singanallur ..	187 Strike 537 Lockout.	..	Strike 14th December 1946 and lockout 16th December 1946—3 days.
152 The Beehives Foundry, Madras	140	..	16th December 1946—1 day.

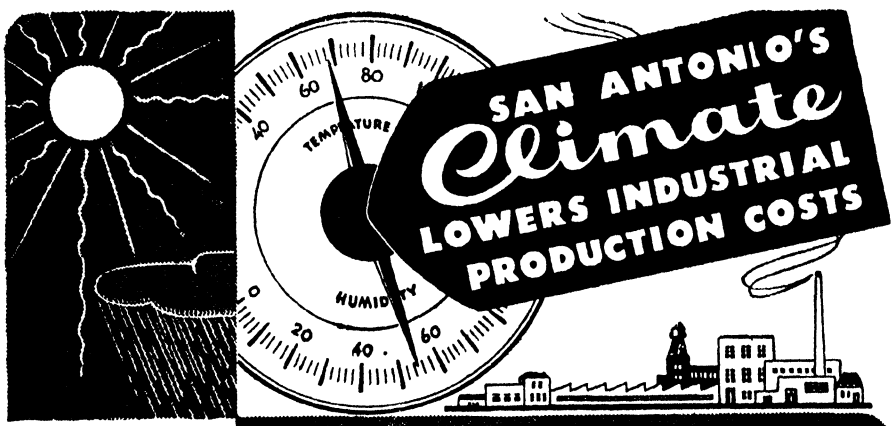
APPENDIX IV-A.

NUMBER OF WORKING DAYS LOST DUE TO STRIKES.

Year.	Number of days.
1943–44	87,906
1944–45	81,715
1945–46	191,440
1946–47	2,238,993½

APPENDIX V.

SAMPLE OF ADVERTISEMENTS MADE BY LOCAL BODIES IN AMERICA.



INDUSTRIES ADAPTED TO SAN ANTONIO

- **FOOD** processing and packing
- **GARMENTS** – ladies', men's, sports', infants' wear, lingerie
- **WOOL** processing and knitted goods
- **GLASS** container manufacturing
- **LEATHER** tanning and leather products, including garments
- **FURNITURE** and novelty manufacturing in wood and metals
- **STEEL** and metal fabrication
- **PLASTIC** fabrication
- **CERAMICS** – pottery, clay products
- **CHEMICALS** in many fields.

WITH LABOR and other manufacturing costs steadily rising – consider the production savings enjoyed by 733 manufacturers in sunny San Antonio.

Here – the annual mean temperature is 69.1° Humidity is low: winter afternoons average 56%, summer – 52%. A rainfall distribution of two inches monthly. Virtually no fog or snow. 266 sunshiny days yearly.

This mild, dry climate saves production costs several ways:

Fewer manhours are lost due to bad weather or winter ills. Workers lose less time getting to and from work. Heating costs are negligible. Investments in buildings are lighter – with shed type structures often being adequate. Product spoilages or machinery damages caused by humidity or sudden weather changes are almost unknown. Daily temperature variations are seldom more than 20°.

Productivity of labor is higher in San Antonio's climate – sought by thousands of tourists every year. For workers and executives get more fun out of life here. Living is so much easier, less expensive and more pleasant.

All these advantages and others are explained further in the new book: "San Antonio Sets the Stage for Industry." Outlined also are: the city's low industrial gas rates – lowest of any large Texas city for smaller industries; the rapidly growing nearby markets of the Southwest and neighboring Latin America; the remarkable labor supply, adapted through heritage and training to artistic, manual and mechanical skills; the abundant artesian water supply – ideal for manufacturing processes and air conditioning, and other factors important in deciding plant locations.

So attach your letterhead to the coupon below and ask your secretary to mail it today. Address: Arthur E. Biard, Chairman, San Antonio Municipal Advertising Commission, 705 Insurance Building, San Antonio, Texas.

San Antonio
Sets the stage for industry

ASK YOUR SECRETARY TO MAIL THIS COUPON TODAY.

ARTHUR E. BIARD, Chairman
San Antonio Municipal Advertising Commission
705 Insurance Building
San Antonio 5, Texas

Please send the new book "*San Antonio Sets the Stage for Industry.*"

Name .....
Company .....
Address .....
City. . . Zone No . State. .