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NOTES AND COMMENTS

Dangers of Peace
Factors of Foreign Policy
Codification of Law
Frugal Temperament
Local Self Government

MINERALS AND THE ECONOMIC DEVELOPMENT
OF CEYLON

K. Kularatnam

INDUSTRIAL DEVELOPMENT OF INDIA

1918 to 1943

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HYDRO-ELECTRIC DEVELOPMENT IN CEYLON

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BOOK REVIEW

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FIRST QUARTER

No. 1.

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Notes and Comments:

Dangers of Peace

The people of Ceylon have almost forgotten the distress and suffering they had to pass through during the Great Depression of the thirties. Unemployment and loss of income had devitalized the vast majority of the population to such an extent that they could hardly offer any resistance to the malaria epidemic when it broke out in 1935 and took a toll of about one million souls. Fortunately for Ceylon, the war came to her rescue; the war expenditure of the allies caused a brisk rise in the demand for her products and created employment and income for the population. The cold-war of the post-war days, the hot-war of Korea and Indo-China and the stock piling of the U.S.A. maintained the demand for her products and prevented her prosperity from sagging.

With peace in Indo-China the hot-war has now come to an end. Despite the occasional outbursts of bellicose individuals, the people of the world do not seem to be prepared to embark on another war, so that it is becoming more and more difficult to keep the cold-war going. The world, so it would seem, is threatened with peace.

The danger of peace for Ceylon lies in the possibility of her export market dwindling as it did in 1930. Expert opinion is divided about the possibility of a slump in U.S.A. and in the rest of the world. The prosperity of the U.S.A. has been maintained during recent months, by heavy investment in capital goods for replacement of plants, and expansion of new industries, mostly durable consumer's goods industries. These new lines of investment will not necessarily lead to a demand for the products of Ceylon. Thus even if the U.S.A. succeed in avoiding a slump, it does not necessarily follow that the demand for Ceylon's products will be maintained.

The long period prosperity extending over a decade, that we have been experiencing since 1942, gave us a rare opportunity of strengthening our economy and putting it on a firmer foundation. But this was not done. Many of our leaders do not appear to have any conception of what sort of economy was needed for our country. Consequently they were lulled into inactivity by the easy money that was obtained during the war and post-war years and indulged in ostentatious spending—which wasted the little surplus we had had in hollow and pompous projects.

Even today, few of our present-day leaders show any understanding of the basic problems and needs of our economy. Most of them still believe in plantations, in tea, rubber and coconuts, as the backbone of our economy. They have learnt from books

that Ceylon's economy needs diversification. But diversification to them does not mean anything more than a few more paddy fields, a little of dry farming, sugar plantations, and perhaps, a few acres of cotton land. In other words their conception of the future economy of Ceylon revolves round agriculture and not industry. It is no wonder, therefore, that the budgets that are presented to Parliament, year after year, are dull and lack novelty. They are not meant to introduce any significant change in the economy.

Can this state of affairs continue? Signs of strain on the economy of Ceylon are already apparent in many spheres. For example, the money supply, as calculations of the Central Bank show, has rapidly decreased during the last few months. Secondly, the loans of the commercial banks to private industry and commerce shows a rapid decline. This fall can only be interpreted to mean a decline in business activity. The fall in the volume and value of exports has been prevented for the time being, thanks to the China Pact. Our imports have recorded a decline during the last few months.

Is not it opportune, therefore, that the whole question of the diversification of our economy be once again examined afresh? We assert that the salvation of our economy lies in undertaking a programme of quick and intensified development of industries. The whole of the taxation and expenditure programme of the State, the efforts and activities of all Government departments and semi-public organisations should be geared to this central State objective. It is only through an extensive and quick industrial development programme that the effects of the threatening depression can be counteracted and at the same time a new chapter in the history of Ceylon begun.

So long as agriculture remains the main prop of our national economy, escape from the effects of depression will be impossible, and we will remain hopelessly at the mercy of foreign monopolistic interests.

Factors in Foreign Policy

The interest shown by Parliament, the Public and the Press in regard to the South Asian Prime Ministers' Conference and more recently with reference to the American sponsored SEATO, is sufficient proof that this country is awakening to the importance of external relations if national welfare is not to be sacrificed out of ignorance or inaction. Even so, we feel that this awakening is more the result of an intuitive reaction to the developments around us, rather than the consequence of careful study and thought.

Interest in international relations which lay dead or dormant for nearly 150 years since the British conquest of the Kandyan

Kingdom, has once again been revived because of two factors. Firstly there was the attainment of Dominion Status, which placed in Ceylonese hands the power to decide our external relations, subject to the External Affairs Agreement. The Government of Mr. D. S. Senanayake showed little interest in the larger issues of foreign policy and confined its attention to the narrower problems of international trade, immigration and emigration and to such like problems which had arisen in the Donoughmore period. In the large his Government was satisfied with following British Leadership.

By the time the 1st Parliament had run its term and Mr. Dudley Senanayake came to the helm of affairs, the seeds of radical change in the international scene had grown into mature problems. The centre of gravity of world problems shifted from its West European centre with Britain in the lead. A new balance of power developed with U.S.A. and Russia as the leading powers and the entry of China and India to world affairs shifted world problems to a world stage.

The Cold-war became even more intense. New inter-state ideologies like Communism, anti-Communism, Pan-Asianism, came up to confound purely nation state relations. In short, Ceylon was acutely made aware that she cannot remain isolated or inactive.

In the world we live in today, the foreign policies of the major powers are directed as far as Ceylon is concerned either to make her act in a manner favourable to themselves or to prevent her acting in a manner favourable to others. The foreign policy of each and every country is in fact conditioned by its own concept of its welfare, foreign policy being the projection into the external sphere of the policy of a government in power. The major proposition we wish to make, therefore, is not to delude ourselves with the thought that some countries are spending their energies in our interest rather than their own. The second factor that Ceylon should remember is that the pattern in which international action takes place is set by forces outside Ceylon's control. Ceylon's international actions should therefore be those which protect her national welfare in terms of a pattern set by others. That is why Ceylon's foreign policy should be a series of short-term arrangements to accommodate the nation's interests in the best possible manner to changing world patterns. The second major proposal we suggest then is that Ceylon is too small to concern herself with what is good for the world in the short-term or the long-term.

The conclusion of this syllogism is therefore simple and clear. Ceylon must decide her interests in terms of her domestic welfare and act in a manner conducive to that end without being dragged into world crusades to reform mankind.

Codification of Law

The need for a coherent statement of our Law "which remains for the most part in huge, indeterminate mass of legal lore buried in tomes of medieval Latin and Dutch, which are the terror of the modern lawyer" was recognized as early as 1908. It is this inaccessibility of our Common Law in its present state that shows the worst feature of our Law. Translations into English of the Latin and Dutch texts, which constitute Roman-Dutch Law have been few and the fact that even lawyers of today know little Latin (to speak nothing of Dutch) has reduced the law to a mystery. It is necessary that we should be fluent in two foreign languages other than English to reach the sources of our Law but even this is not very helpful in determining the Law, for in the amorphous mass of literature which constitute Roman-Dutch Law a diversity of opinion could be found expressed on every conceivable point. For layman and lawyer alike therefore, the common law is not only unintelligible but extremely uncertain. It is not surprising that for many years we have been systematically subject to a process of judicial legislation and that too often by (English trained) judges whose knowledge of the system of law they were expected to administer was only slight.

This is but one unsatisfactory feature of our law. The presence in addition to the Roman-Dutch Law of the various personal Laws—Kandyian, Muslim & Thesawalamai, all more or less in an uncertain state, the introduction of English Law on certain matters, and the invasion of statutes into the field of the Common Law, have hopelessly confused the state of the Law. It is a state which demands codification to give the law what it most lacks—simplicity, symmetry, intelligibility and logical cohesion. This opportunity should be taken to question the need for the preservation of these personal laws in a country which has achieved political independence and national and economic unity. It was as much the anomalous condition of the law as the desire for achieving political unity that led to the German and French Codes. There can be little doubt that a single code to replace the heterogeneous mass of legal rules in force today is not only desirable but essential.

It is not to be expected that the preparation of a Code is an easy matter. The technical difficulties in the way of codifiers

could not have been better shown than by Savigny and the danger of adopting a set of rules which have no inner organic consistency or which do not reflect the economic and social structure of unity, is ever present. The success of the German Code is largely attributed to the industriousness with which the German jurists applied themselves to the study of the existing Law. This in itself was the work of years. It is not to be expected either that a Code would dispel uncertainty in the Law altogether. It is not possible that legislators could conceive of every future case and lay down the rule to govern it or to hope that the rules should always be free from ambiguity and obscurity. Even so, the urgent need for codification is emphasised now more than ever. We are now no more a colonial possession where the conflicting and incongruous provisions of several sets of personal laws can be allowed to be perpetuated. We are one Nation. Codification would, we hope, result in the co-ordination of all these laws into one common denominator.

Nor can we think that the Law is as permanent as Mona Lisa's smile. "Law," as Roscoe Pound so ably argued, "is a social institution to satisfy social wants—the claims and demands involved in the existence of civilized society—by giving effect to as much as we may with the least sacrifice, so far as such claims given effect by an ordering of human conduct through politically organized society." If this contention is right the Law will change most vitally in a period of social change like the present. Codification will become more and more difficult when the social change demand legislative action. What we expect of the Code is not to provide the Law for all time but to pin-point the law at a particular period in history from which vantage point society can decide what branches of law need. Unless therefore more development codification is expedited, it may become a more academic pastime.

Nor is this all. The ultimate aim of the Government is to make available to the people the law that governs them in a language they understand. If this is so a rapid codification is the necessary prerequisite to their translation into the Swabasha. If ignorance of the law is no valid plea against its transgression, then it is the Government's duty to make the law known in a manner readily available to the people. Codifiers may discuss at length the significance of "may" and "shall" in particular provisions in the law; yet till the whole body of law is codified and translated the greater majority of the people of our country will move in bewildered amazement at the majestic impartiality of our law.

Frugal Temperament

Sir Sydney Caine, Economic Adviser to the Government, mentioned three characteristics which he argued were necessary for the economic development of Ceylon. The severe (a) the influx of foreign capital to start the process of capital accumulation (b) a frugal temperament to prevent the excessive consumption of wealth which could be diverted for capital accumulation and (c) an unequal distribution of wealth to reduce the share of those members of the community whose propensity to consume is greater.

We regret we are unable to agree with most of Sir Sydney's arguments. We cannot imagine for instance that despite all our entreaties foreign capital will enter this country in adequate quantities because of obvious political reasons. For, whatever the government in power may say or do, there is no doubt that the opposition is committed to the nationalization of foreign property. As far as foreign capital goes, the risk of the opposition coming to power is a great one. Foreign capitalists cannot for instance plan for the security of their capital in their new investments for say thirty or fifty years because from their point of view, even the next ten years give no guarantee of certainty. Moreover, as Mr. Natarajan has argued with copious statistics, the World Bank which is dominated by America is excessively conservative in its loan policy. Some American Firms charge unconscionably high prices and generally American trade with India is disgracefully profitable. (American Shadow over India by L. Natarajan. New Century Book House, Madras). If the price of foreign capital is "disgracefully" high profits going abroad, the remedy may indeed be worse than the disease. Nor can we be unmindful of the political consequences of foreign capital from powerful "free enterprise" countries entering small nations. No powerful nation would permit the curtailment of the privileges of its capital invested abroad. It is not necessary to repeat the consequences of British capital in Egypt in particular and Anglo-American capital in the Middle East in general. The throttling effect of British capital in India backed by political control on the development of indigenous industries is now one of the commonplaces of economic and social history. Being a small nation, the danger is even greater for us.

Nor can we view with equanimity the suggestion of Sir Sydney to increase the disparity of wealth among the members of our community. Apparently Sir Sydney in the tradition of the classical economists does not exclude starvation from the armoury of economic tools. If the price of economic development by the free enterprise method is to be a further attack on the standard

of living of the majority of the people, then the choice between adherence to "free-enterprise" and a low standard of living for a section of the people could be solved in no other way except by excluding the former. Many economic theories have been tried and abandoned since David Ricardo and Adam Smith wrote. It is a pity that Sir Sydney decided to advise us to follow these great names which indeed served their time well enough, but are surely entitled to a rest in these more hectic and turbulent times.

Even so the need for frugality which Sir Sydney stressed is one we would like to endorse most heartily. In a welfare state frugality would be imposed by steep income taxes, high death duties, taxes on inheritance, purchase tax on luxury articles and a clamping down of imports. Such methods were tried successfully in Labour's first government in 1945. Labour Britain progressed far more steadily than France with copious foreign aid. In collectivist societies, these administrative actions may be supported by the state taking over most investment work on the basis of a national plan. In Ceylon where Government has decided to make private enterprise the basis of economic development the need for creating a frugal temperament is even greater. We think that the Labour experiment in Britain is one from which we could learn more than from the free enterprise method of Sir Sydney. Even so, if the government is committed to a definite line of policy, that policy should be carried out with earnestness and purpose.

To create a frugal frame of mind in Ceylon is a difficult task if persuasion and example are to be made its instruments. In England in the period of capital formation the Puritans made capital accumulation the proof of God's grace. Calvinists made frugal living the art of those predestined to go to Heaven. In Ceylon we cannot expect a new religion for spending less. We do not even possess a Gandhi to spin at the Charka. That is why if the government is really earnest, it must give the lead in frugality. Expensive dressing habits, expensive entertainments, expensive motor cars, expensive tours abroad, weekly racing, etc., which the government has not yet given up is creating in the minds of the people a feeling that social recognition is to be judged by display of wealth. If the Government gives a lead, the country will follow. We cannot mention here in detail what the Ministers and Members of Parliament should do. Would not however the people follow suit if Ministers graced public life by appearing in home-spun cloth? How many hard pressed junior officers in government would purchase motor cars if Ministers deigned to travel by bus? What proportion of indebtedness among public servants would disappear if their families did not seek social prestige in expensive display? One cannot ask the people to act in a way which their

representatives decry by their example. We do not think that the example of the government alone will solve the problem but if we do not get even this far, the need for a frugal way of living will continue to remain a pious aspiration.

Local Self Government and the Local Authorities [Terms of Office] Act

Local government is not merely an institution of convenience for administrative devolution. It is a system whereby the area of responsibility is enlarged to enable the citizens of a country to share in the responsibility of government at the widest possible scale. No one denies that local government has moved far from the days of eighteenth century England, when the Central government was largely interested in law and order at home and relations abroad leaving the provision of local services entirely to local authorities. Nor would anyone deny that the increasing area of efficient administration has led rightly to the entry of Central control to regulate matters which were formerly left to local authorities. Every student of Government is aware that the last two hundred years have brought about a transformation whereby local authorities have become more and more "responsible" to Central government institutions.

Local authorities are primarily bodies exercising delegated powers. In the result every new service which local authorities deemed necessary to be provided had to be sanctioned by central legislation. This British tradition stemming from a nineteenth century idea that less government is good government has inhibited unnecessarily the full development of local services. The struggle to obtain permission to run a Municipal Trolley Bus Service in Colombo is only one case in point. We have in short shackled the development of local self-government by following a British tradition and excluding modern trends whereby Municipal authorities have been given concurrent powers in most except a few national problems leaving the ultimate right of veto in Central government institutions.

The result is that local authorities are frequently faced with law suits titled under various headings like quo warranto, prohibition, certiorari, ultra vires, injunctions and declarations. Except

the provision for mandamus which like any other legal process, being expensive limits its benefits to few private persons who suffer from acts of omission of local authorities, the earlier mentioned remedies are those which invariably benefit vested interests anxious to inhibit local regulation.

Thus far for judicial control. Financially, the sources of local revenue have been so narrowly demarcated that most services depend on central grants. While no one questions the equalizing effect of a properly based central grant, no one should be unmindful of the greater extent of central control that this implies. Whatever the grant system may be, it is followed by a host of auditing, checking and inspection by central officials. Administratively, central government now controls local authorities by control over officers, confirmation of bye-laws, approval of schemes conferring powers, control over loans, appellate functions, powers of acting in default and by powers in respect of local legislation.

We are not here attempting to justify or declaim these provisions. We are only attempting to draw attention to the enormous extent of central power over local authorities. To this extent everyone will admit the local authorities are "responsible" to the Central government.

This is all the more reason that a democratic society should jealously guard against any further encroachment on that sphere of local function for which local authorities are responsible to their electorates. Our argument is the simple one that today, by and large that area of responsibility is a small one. That area in fact has been confined to the narrow one of exercising a limited discretion in matters largely regulated by higher authorities. It is on the question of exercising that discretion only, that local electorates can now exercise their will and pleasure. Local elections have become tests by which city fathers and local representatives are judged according to the way they have exercised their limited discretionary authority.

If at this juncture a central government decides to remove that power from the people, local self-government becomes meaningless. If local authorities tenure of life depends on the action of a Minister of the Crown—as the recent Local Authorities Terms

of Office Act does—then, even that element of responsibility to the people for exercising discretion will vanish. The danger in this type of Act is essentially directed against the democratic nature of Local Government. There is a danger that local discretion will be exercised in a manner that might be agreeable to the Minister and not to the people. There is a danger that some local authorities may prefer to postpone appealing to the people at the due time. There is a danger that the Minister may be influenced by the needs of local members belonging to the party in deciding the term of office of that particular authority. All these would attack the foundations of local democracy.

It is good to remember when matters of this nature are decided, that the issue today is one between those who equate democracy with existing "parliamentary" institutions and those who want to re-interpret it in terms of new social needs of large social classes. To wash away the existing "parliamentary" institutions would only go to prove the contention of those who wish to re-interpret democracy that parliamentary institutions will be maintained only so long as they are advantageous to those in power. The Local Authorities (Terms of Office) Act will remove one of the main planks of liberal democracy—the right to choose local representatives at definite stated intervals.

Minerals and the Economic Development of Ceylon

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Many things go to make up the wealth of a country—material and non-material. The material wealth of a country can be classified under the following heads, following Dr. M. I. Newbigin (Commercial Geography. Home University Library Series):—

1. Those commodities which owe their origin to causes wholly beyond man's control and are independent of the ordinary processes of biological growth and reproduction. To these the term *Minerals* in the wide sense is applied. It includes water, soils, rocks and their mineral contents. The supply of these is fixed; they cannot be renewed when once exhausted. Their supply is therefore also inelastic.

2. Products normally due to the processes of ordinary growth and reproduction, uncontrolled by man. This includes natural forest products, fishery products, etc. As man advanced in the scale of material civilisation, his wants have expanded both in variety and in volume and natural processes of reproduction have generally proved incapable of keeping pace with man's destructiveness, so that these natural commodities are always tending to diminish in amount and to be supplemented in the markets of the world by substitutes and other substances otherwise due to man's activities. The natural forest vegetation yields place to cultivated wood-land, wild rubber is replaced by plantation rubber and also by synthetics, fish are farmed, fur-bearing animals are bred under captivity, etc. Thus efforts are made to meet the demand for these commodities by augmenting natural resources in other ways.

3. Animal and vegetable goods due to natural processes of growth and reproduction but controlled and aided by man. These are the products of agriculture and animal husbandry without which it would not be possible to support the world's increasing population today. In this class of goods it is possible to adjust Supply to a fair extent to meet the vagaries of Demand. The Supply of these goods can therefore be treated as "elastic."

4. Manufactured articles produced from any of above three sources and whose value depends among other factors to a great extent on the labour, skill and scientific knowledge crystallised

therein and their superior characteristics above the products of nature, etc. Here, supply creates demand and vice versa; under normal conditions, "short-supply" is only a theoretical abstraction.

From the fore-going, the fact emerges clear that Minerals stand in a class entirely different from others and therefore create special problems, needing the assistance of the geologist for their solution. They are fixed in quantity, their extraction is not compensated by regeneration or replacement, and so they are a *diminishing asset* of a country. Therefore, as much or even more attention has to be paid to *conservation* as to *extraction*.

Contrary to the popular belief that has found currency in recent years, in Ceylon, that "Ceylon is richly endowed with enormous mineral wealth", the cumulative efforts of the Mineral Survey which has functioned for some fifty years now, reveal that Ceylon's mineral resources are actually restricted in quantity as well as in variety, though in proportion to her size and population she might be considered rich in a few minerals such as graphite, ilmenite, quartz-sand, clay and gemstones. The history of the mineral industry of Ceylon on the other hand is one sorry tale of wasteful exploitation—robbing of the earth at the expense of the living and the yet unborn generations. This is the inevitable result of public wealth being left to the mercy of "ill-informed private hands". Private enterprise, particularly in mineral matters has only one aim, namely quick and maximum returns from minimum expenditure and effort. Its "get-rich-quick" or "picking-the-eye" policy naturally leads to "dig and grab" methods, whereby;

(a) every available bit of the more easily accessible exposures is grabbed and the site then abandoned, thus obliterating for ever the evidences of underground extensions. Much wealth is lost to posterity in this manner for want of observation and recording.

(b) The present methods of exploitation result in considerable avoidable waste. Vast quantities of the so-called "inferior" grades dug out of the earth are thrown into the dump heap, which under more enlightened conditions could be transformed into valuable grades by the application of inexpensive beneficiation treatment.

(c) The outlook of private enterprise being narrowed to the immediate market, there is further loss incurred from the wrong or inappropriate and uneconomic frittering away of valuable deposits for purposes where inferior qualities would more than suffice.

(d) The export of certain minerals in the raw, crude state altogether, when even preliminary treatment or semi-processing would enhance their value considerably is another way in which the country loses much revenue.

This depletion of minerals without commensurate benefits to the country has gone on for several decades and definitely calls for bold state intervention. A radical change in the Mineral Policy of the country from one not merely of indifference, but of "reckless exploitation" to a long range plan of economic utilisation with emphasis on conservation of stocks, to meet the needs of a growing population and of rising industries is imperative, urgent and overdue. Considering the small size of the country and the period of time the Department of Mineralogy has functioned under various distinguished experts, (about 50 years), it may not be unreasonable to assume that the majority of the economically workable deposits which could be detected by the usual methods available today, have been brought to light. The progress of the systematic geological survey of the Island may perhaps add a few more to the list. The adoption of the latest geophysical methods of prospecting using the more advanced but delicate seismic, gravitational and electrical techniques may also prove some more occurrences, but all will not be economically workable under ruling prices owing to the prohibitive costs of depth mining, excepting, of course, precious metals. Thus we see how urgent and pressing the question of conservation is for Ceylon, though so far, little notice has been taken of it.

Minerals lend themselves to classification along various lines according to whether their geological origin and mode of occurrence, or age, or chemical composition, and physical properties, or their present and potential economic utility is the prime criterion. In an account such as this, which deals primarily with the aspect of economic mineralogy, minerals may, for convenience, be grouped under the following heads:

A. MINERALS FROM THE SEA.

B. MINERALS FROM THE LAND.

The latter group may be further divided into:—

1. WATER, for domestic, agricultural, industrial and power purposes.
2. AGRICULTURAL MINERALS, mineral fertilisers, etc.
3. INDUSTRIAL MINERALS (and munitions)

}	<ol style="list-style-type: none"> a. Metals: iron and non-ferrous. b. Non-metals: Ceramic minerals, graphite, mica stone, lime and cement materials.
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4. POWER MINERALS. Coal, oil, gas and peat
5. PRECIOUS MINERALS. Precious metals and gemstones.
6. RARE EARTH MINERALS.

Besides building stone and the salts of the sea, Ceylon could be considered well supplied with the following minerals only :

Graphite, Ilmenite and Monazite, Glass-sands and Clays, Cement materials and Gemstones.

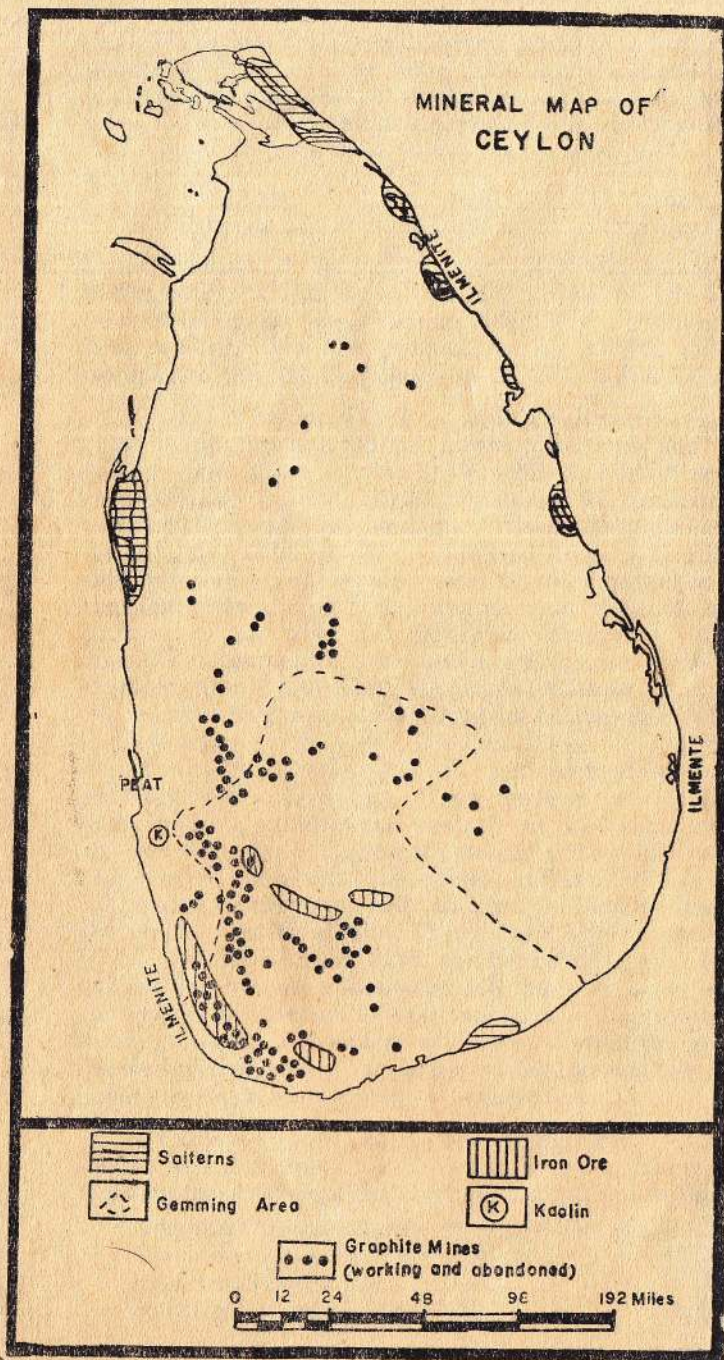
Though meagre, the iron-ore resources, in view of their high quality, are capable of remunerative development by electro-smelting in small furnaces to meet a part of the home needs in steel for some decades. The deposits of kaolin and other clays are fairly extensive and could be expected to leave a margin for export (refined and manufactured) after meeting home requirements. The other minerals exist in smaller quantities and include some mica, silica, magnesite and abrasives.

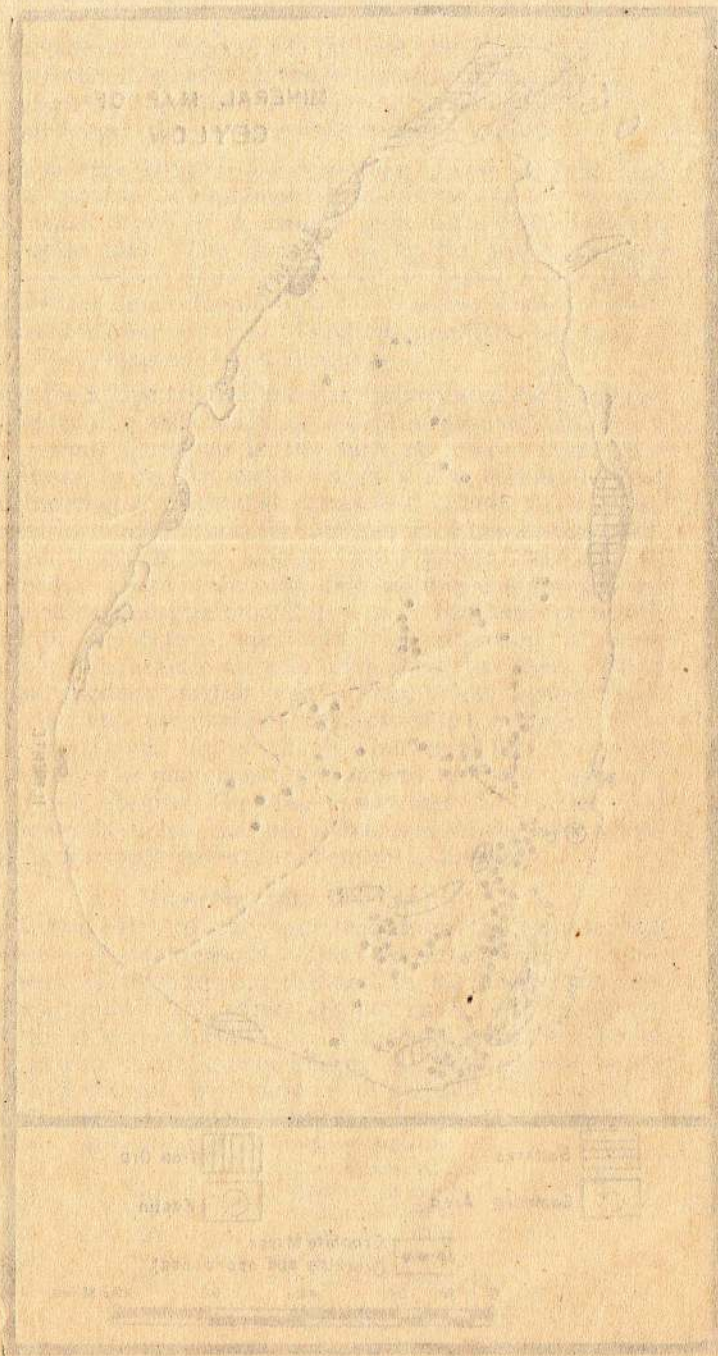
Against the above credit items have to be noted the country's striking poverty in a wide range of essential economic minerals. The most serious handicap is the lack of power minerals—Coal, oil and gas, (with the exclusion of a few low-grade peat fields). Fortunately, geological structure and climate have generously stepped in to make good this deficiency by providing nearly fifty water-falls which can supply cheap power for all the country's needs. There is a similar deficiency in the agricultural minerals, nitrates, phosphates and potash. But here too water-power will in the future ameliorate the situation, through the production of synthetic nitrates and other fertilisers. With regard to the "modern" metals such as aluminium, copper, lead, tin, nickel, zinc, etc., economic deposits of these are absent from the rocks of the Island. Other metals which now find new uses in metallurgy such as manganese, chromium, tungsten and antimony are equally absent. The same can be said also of the vital industrial minerals such as sulphur which provide the raw materials of the increasingly important chemical industries.

Minerals from the Sea

Though the salts of the sea come from the sea, they are included here for logical reasons. Their extraction is intimately connected with factors affecting the land, such as the geomorphology of the coasts and inland waters, climate, nature of the bed-rock and soil in the collecting basins, etc. The sea is a vast storehouse of minerals and so, countries which have sea frontages or inland seas are blessed not only with supplies of fish and trade facilities, but also with certain essential chemicals. Sea-water contains:

27. 2	parts per 1000	sodium chloride
3. 8	do	magnesium chloride
1. 65	do	magnesium sulphate
1. 26	do	calcium sulphate
0. 86	do	potassium sulphate
0. 12	do	calcium carbonate
0.076	do	magnesium bromide.
35	do	total salts.





Ceylon's normal requirement of common salt is in the neighbourhood of 800,000 cwt., per year. This figure is tending to increase with the establishment of industries such as soap manufacture, curing of fish, hides and skins, dyeing coir, making manures; etc. But annual production in recent years varied within limits below home needs.

1941	1942	1943
450,000 cwt.	365,000 cwt.	270,000 cwt.

Later, production fell even below these figures and (a) reserves had to be drawn heavily upon and (b) some of the deficit had to be made good by imports from Aden, etc. Production has now been revived. The 1945 production was 832,000 cwt.; in 1951 it dropped to 615,000, but again rose in 1952 to 906,605 cwt.

Ceylon is favoured with a suitable climatic régime, a long extent of appropriate coastal features, lagoons and back-waters (which have brine up to 10° B, while in normal sea-water the concentration is only about 3° Baume) for the harvest of salt produced by solar evaporation. While 1000 gallons of 3° B sea-water are required to be evaporated to get a hundredweight of salt, 300 gallons of lagoon water at 10° B would be enough for the same quantity of salt. Evaporation depends on degree of dryness of air also, *i.e.* saturation deficiency. This in turn depends on temperature as well as the source of the wind. For example, the South-west monsoon wind blows from the sea to the South-west coasts of the Island; it is therefore a humid wind, in these areas. But in the north and east of the Island, it is a dry wind as it has passed over land and released its moisture before arriving there. (Note that Cape Comerin in the tip of South India projects to about the latitude of Puttalam and therefore on the west coast of Ceylon, Puttalam is the southern most point where salt is collected). Cloudiness and rainfall are detrimental to the solar-evaporation salt industry. In the Dry Zone of Ceylon, the annual rainfall is below 75 ins. and what is more important is that 200-250 rainless days can be relied upon. Thus, May to October has become a successful salt manufacturing season, being the season of the South-West monsoon. The South-West monsoon is a steady and violent wind of over 40 miles per hour. This causes high waves in the brine enclosures and therefore, three times the surface is exposed to evaporation.

There is no doubt that by the development of her salterns, Ceylon would be able to produce salt even for export. The average capacity of each of the existing four areas is estimated at :

Northern Area (including Elephant Pass.)	230,000 cwt.
North-western area (Puttalam, etc.)	260,000 do
Eastern (Nilaveli, etc.)	50,000 do
Southern (Hambantota, etc.)	150,000 do

It is not unreasonable to expect a large-scale expansion of this figure, if the present salterns are extended and new ones brought into commission in these areas. Mechanization will lead to bigger harvests.

Among the by-products, the scope for the manufacture of Plaster of Paris (calcium sulphate), epsom (magnesium sulphate) and magnesium chloride is considerable. Their cost of production is low, as they are more or less obtained as complimentary gifts in the process of common salt manufacture. In 1944, the Salt Department produced 6700 lbs. of Plaster of Paris, 40 boxes of school chalk (one gross each) and 200 lbs. of lump chalk. But in 1945, the production of Plaster of Paris rose to 20,160 lbs, and of school chalk to 30 gross per day. Magnesium sulphate and milk of magnesia are also produced. Among the by-product chemicals which are expected to be produced on a large scale are caustic soda, chlorine gas, bleaching powder, magnesium sulphate (of which 35,000 cwt. is used in Ceylon every year), sodium sulphate (Glauber's salt), potassium and sodium bromide, potassium chloride (muriate of potash), magnesium carbonate and chloride, etc. For some of these, cheap power is an essential pre-requisite. There are nearly 50 waterfalls in Ceylon, big and small. "So we may hope that the sparkling falls of even little streams, meeting in armed combat the foaming billows of the sea will win many a bounteous treasure hid in Neptune's secret cells, for the health, wealth and happiness of almighty man."

According to the Report of the Salt Commissioner, (Government of Ceylon), upon the potentialities of the Salt Industry of Ceylon, Sessional Paper XIII of 1948), under the proposed scheme the following could be produced:

Sodium chloride	2,000,000 tons.
Magnesium products	200,000 do
Gypsum	450,000 do
Potash salts	70,000 do
Chlorine	240,000 do
Bromine	6,000 do
Hydrogen	7,000 do
Other products	300,000 do

Minerals from the Land

I. Water.

This vital mineral is today in short supply in many parts of the Island, though as the economist would put it, it is one of the free goods of nature. The water-supplies of most Ceylon towns and villages are inadequate and precarious. The surface geology of Ceylon is unfavourable to the storage of considerable volumes of underground water and the discovery of aquifers calls for

expert geological investigation such as contour mapping of sub-soil topography, petrological analysis of rocks, geophysical sounding, structural and stratigraphical examinations, etc. Generally speaking however, Ceylon has to look more to the sky than to the earth for this mineral, *viz.* to meteoric or surface water. Despite favourable rainfall, the surface water resources of the Island are also meagre, due to rapid run-off and evaporation. Constructive and coordinated effort on the part of the climatologist, the geographer, the geologist and the engineer in the direction of conservation of rain-water in reservoirs alone can solve this problem. Here the geologist's function will be to locate suitable sites, having regard to the rainfall regime and geological features of the areas, to minimise loss through seepage, percolation and sub-terrestrial drainage, to determine foundations for bunds and spillways, distribution channels, etc; and to provide accessible quarries for constructional materials, stone, lime, clay etc. Power water, on the other hand exists in abundance in Ceylon. Thanks to the geological structure of the Island and its monsoonal rainfall régime, in the rivers radiating fanwise from the Central Highlands of Ceylon, are to be found no less than fifty waterfalls whose energy when properly harnessed is estimated to generate as much as one million Horse-power, including the quota from the multipurpose projects. Ceylon is an agricultural country, the main products being tea, rubber and coconuts. To prepare these for world markets, she requires a large amount of motive power. The tea industry alone uses 30,000 HP. She imports every year Rs. 10 million worth of coal and Rs. 50 million worth of liquid fuel exclusive of kerosene and petrol for motor vehicles. The water-falls are no doubt in inaccessible, mountain areas with small populations. So, though this water is not of much avail for domestic purposes, electric power being easily transmissible, can be carried to the populated and industrial areas and is thus a direct asset to the country.

II. Agricultural Minerals.

This group includes phosphates, nitrates, potash and carbonates. Ceylon rocks are extremely lacking in these minerals excepting the last-named, lime which can be obtained from the sedimentary Miocene beds of Kalpitiya to Jaffna, the coastal coral accumulations and from the crystalline limestones of the Khondalite system. The deficiencies can of course, be made good to some extent by extracting the salts from the sea and by the manufacture of electro-chemicals using the atmosphere and cheap electricity as raw materials. One very large project of the Ceylon Salt Department aims at meeting the Island's full needs of 50,000 tons of potash salts together with 100,000 tons of gypsum and magnesia as by products.

III. Industrial Minerals.

Iron Ore. Except for some iron and titanium ore, Ceylon possesses no metals in economic quantities. In a separate paper* are detailed the location of the iron-ore fields, their modes of occurrence, chemical composition, quality, origin and future utilisation. The distribution of these is markedly regional, being confined for the most part to the following compact areas:

- (a) Ratnapura to Balangoda.
- (b) Kalutara to Baddegama.
- (c) Matara-Akuressa.

Smaller occurrences exist in Ruanvella, Kandy-Matale and Chilaw areas. The principal modes of occurrence of the ores are as (a) float ore (nodules and pellets), (b) massive blocks and (c) insitu ore bodies. All of these are surficial concentrations. The total estimated is five to six million tons. Ceylon's annual requirement of steel, of all types, amounts to only 30,000 tons. The average ore analyses nearly 50% iron and being confined to the surface, obviates expense in mining. It is of spongy texture, assisting smelting without the aid of high grade coal and is best suited to electro-smelting in small furnaces for direct conversion into high grade steel as is done in the Scandinavian countries. Being small in quantity and of high quality for the making of specialised steels, it would be uneconomic to work the ore for ordinary iron goods.

2. *Ilmenite.* This ore of titanium metal does not occur in commercially workable forms in the rocks of Ceylon. It occurs only as a minor accessory in the granites and gneisses as small pockets with magnetite in some stray pegmatite veins. But owing to its special physical and chemical properties, when rocks weather or decompose and the products of decay are transported by natural agencies such as running water, the sparsely scattered ilmenite grains of the rocks get gravitationally concentrated and form extensive beach deposits along suitable coastal tracts. Between Pulmoddai and Kokkilai in the north-east coast of Ceylon stretch deposits of 50-60% concentration amounting to three to four million tons or more. Others exist at Thirukkovil (about 1/2 million tons) south of Batticaloa and in the south-west of the Island near Induruwa, Pamunugama and elsewhere. Titanium white (di-oxide) is the base for superior paints (motor-car spray paints), lacquers and varnishes and the metal is used for alloying with steel to produce ferro-titanium, a munitions metal.

Whereas the price of raw ilmenite was 10 to 15 shillings per ton, that of refined di-oxide ranged from £100 to £120 per ton before the war. The export of raw ilmenite would therefore be discounted, the stocks being held up for the future when an industry could be started in the country.

*Bulletin of the Ceylon Geographical Society. Iron Ore Deposits of Ceylon.

But in this case, there is another aspect to the problem. Beach deposits of mineral sands are not permanent. Their deposition and accumulation being due to the conditions of the sea, the ocean currents and tides, the same forces also can operate to wash and carry them away according to the varying conditions of the seasons. Limited observation which the present writer carried out for a few years seemed to indicate that there is alternate enrichment and impoverishment with the seasons in the shallow margins between the tidal limits. Should detailed and long range observation confirm this view, then it would not need any economist to tell us that if their refining and manufacture cannot be undertaken immediately, the wiser policy would be even to export the crude raw sand at any available price, than to live in a fool's paradise in the belief that the deposits are ever growing with time, while Nature is quickly disposing of them in her usual sweet way. The present policy of the Government in refusing exports of ilmenite sand, therefore needs to come under the scrutiny of the geologist.

The normal processes of titanium extraction need sulphuric acid, for the manufacture of which sulphur or the other raw materials do not exist in Ceylon. Other economic processes have therefore to be invented for the purpose. Ilmenite sand is actually associated with monazite and zircon sands which often form workable percentages of the beach deposits and could be profitably extracted as by-products. Though the proportion of monazite to ilmenite rarely rises over about 2%, higher percentages are found in specially favoured spots as at the bay at Kaikawela village on the west coast and among the rocks off Kudremalai point. At Kaikawela the average content of monazite is about 15%, but some streaks contain as much as 40% monazite. The whole deposit was estimated to contain three to four hundred tons of monazite at Kaikawela and about a hundred tons at Kudremalai. Fresh deposits will no doubt continue to accumulate in these favoured spots. Monazite contains certain elements which are a source of atomic energy. Therefore India which used to be an exporter of monazite has now banned its export. Ceylon has become an exporter today earning good profits at £ 200 and over per ton of sand.

Among the other ferro alloys, manganese and molybdenum are known only in small quantities while chromium, vanadium, tungsten, tin, copper, zinc and nickel do not occur in workable lodes at all. The ilmenite sand contains only about 0.36% vanadium.

3. *Graphite.* Ceylon produces the world's best graphite and there is yet no cause to fear that synthetics will drive this

into disuse in metallurgy, where it is most used in crucibles, foundry facings, etc. Geological survey work carried out by the present writer under the direction of Dr. Wadia in the Nikaweratiya-Dambulla-Horowapotana-Vavuniya quadrangle proved the northward extension of our graphite-bearing khondalites. This is the mineral in which the Island is particularly gifted. It is also the mineral which undergoes much wasteful handling by man. The unsatisfactory feature of graphite mining in Ceylon in general is the shallow nature of the workings without any system of lateral drives.

There is no doubt that in many of the pits the workers have left considerable reserves untouched before they were abandoned through lack of funds or due to other causes. Abandoned mines are unsafe to reopen in Ceylon owing to the absence of Survey plans. Large and deeper-seated reserves thus remain obliterated and unextractable and in many cases dangerous to recover owing to water-filled uncharted tunnels. Another disconcerting feature of the Ceylon graphite industry is that this valuable mineral for over a century has been allowed to leave the country in its crude "minimum value" form by private enterprise while the authorities have complacently witnessed this loss with apparent unconcern and lethargy. Ceylon can easily undertake the dressing, grinding and purifying of this mineral, if not manufacturing some of the simpler products such as electrodes, dry batteries, pencils, crucibles, graphite paints and lubricants. The graphite industry gives illustration also of the avoidable waste that takes place in Ceylon. Through reluctance to spend a little extra labour, much graphite is thrown into the dump, adhering to the rock. In short this principal, long-established, mineral industry epitomises all the defects in our mineral outlook which need early remedying. From the labour stand-point too, even in the shallow pits the mining methods with a few notable exceptions, are several times more dangerous than in the deepest mines elsewhere owing to the non-observance of elementary mining rules and safety measures by the proprietors as revealed by the number of accidents, (eg. 1941, 16 deaths and 17 injured.)

According to the Report (Sept. 1952) of the Mission organised by the International Bank for Reconstruction and Development. "many production economies could improve. Ceylon's competitive

position and rate of returns. Similarly, mining methods have created dangerous hazards, and at the same time have been wasteful of reserves."

The following figures indicate the raw plumbago exports in recent years:—

1939 — 22,000 tons	1944 — 12,000 tons
1940 — 24,000 do	1945 — 8,000 do
1941 — 27,000 do	1946 — 8,000 do
1942 — 27,000 do	1951 — 12,621 do
1943 — 20,000 do	1952 — 7,659 do

These figures tell their own story of our failure to return our markets in post-war years.

The value of the exports has ranged from Rs. 3 1/2 to 13 millions per year.

These figures also give a measure of the money the country loses by exporting the mineral raw.

Graphite mining employed 1,601 men in 1951. The figure dropped to 1,223 in 1952.

4. *Mica*. The Ceylon mica industry has always remained under a cloud. Mica mining is highly speculative, because unlike in the case of graphite, even if large chunks of the mineral are met with, they have no value unless found flawless and free from impurities. The export of Ceylon mica in 1939 was only 6 cwt., to Germany. During the war years, when the United Nations were in need of this essential munitions mineral, Government spent considerable money to foster this industry, by establishing a special mica branch in the Department of Mineralogy. Yet, in 1940, the export amounted to only 45 cwt. There is now some renewal of mica mining activity. In 1952, 179 cwt. of mica were exported, mainly to India, while in 1946, the exports were only 6 cwt. Because of the risk element involved, puny private enterprise which alone has been interested in this industry has been shy to dig deeper and by its shy surface scraping methods which lead to browsing here and there—which means quick abandoning of shallow pits after the exposed portions of deposit have been removed—not only are the richer underground veins rendered unavailable to the future prospector because of concealment, but as mica decomposes on exposure to air and water, these are also allowed to decay through water percolation. Embarking on mica-mining without expert geological advice is seeking sure ruin; it also needs more capital than graphite. Mica occurs mainly in the Central Province, Uva, Sabragamuwa and North-Central Provinces. Ceylon Mica is of the amber variety, though muscovite is also found in some places.

In the process of cutting and trimming for export, 90% of the mica actually goes to the dump heap, a good part of which can fetch money if a micanite industry can be set up.

5. *Ceramic Minerals.* Clay, Felspar, Quartz, etc.

The resources of Ceylon in Kaolin and other clays are extensive. Good kaolin fields occur every-where, in the wet south-west of the Island, in lowlying 'denya' lands between Negombo and Galle as well as elsewhere. Near Colombo, at Boralesgomuwa alone, within two square-miles area occur nearly ten million tons of pure china clay. As it is known that no ceramic industry in Ceylon can consume all the stocks, part of the clay may be exported, but after refining to enhance its value and reduce freight as there is a good market for it in Australia and India.

Ceylon kaolin equals the best cornish clays. Its principal use is in ceramics for porcelain; other uses are as filler in paper, textiles, paints, special cements and in pharmaceuticals. Clays for bricks, tiles, and pottery are universally distributed over the Island.

Dolomite for furnace linings occurs with the crystalline limestone bands in many localities.

Good grade glass sand is also practically unlimited in the Point-Pedro-Mullaitivu coast, Chavakacheri dunes and Madampe-Nattandiya regions, leaving large exportable surpluses. But here too, as the sand contains a small percentage of iron impurity, export after preliminary treatment is recommended. According to an expert, Ceylon is the glassmaker's paradise.

6. *Cement Materials.* For the manufacture of cement, about 70% lime and 20% clay enter the kiln, the other ingredients being small amounts of gypsum. The best limestone for cement should be rich in calcium carbonate and free from magnesia and other impurities. Thus the sedimentary limestone beds from Puttalam to Jaffna which analyse 96% calcium carbonate are the best. It is also available in any quantity. The highland crystalline limestones and marbles are normally dolomitic, *ie.* they contain magnesia impurity. These can of course be used for producing agricultural lime and for mortar in the building industry, for white-wash and sculptural work. From the former carbonate up to British Pharmacopia standard can be made for therapeutic purposes. Cement consumption in Ceylon today is estimated at 70,000 tons per year. The factory at Kankesanturai is expected to put out 200,000 tons p.a.

7. *Building Stone, Road Metal, Monumental and Architectural Stones.* Ceylon is liberally supplied with pink Tonigala and bluish-grey charnockite granites. There are also beautiful foliated

and "marbled" gneisses, garnet set khondalites, mottled white granulites and white, streaked and green marbles, very little used in our buildings today, despite the fine polish they take. The import of Italian marble and Aberdeen granite is, to say the least, a conundrum.

IV. *Power Minerals*

No coal or oil or gas occurs in Ceylon. The geology of the Island does not indicate the possibility of any of these being discovered. The low-lying areas on either side of the mouth of the Kelaniganga and in the Muthurajawela swamp have about fifty million tons of low grade peat. It contains twenty percent ash free coke (according to an analysis made by the present writer) and 40% volatiles. It can be distilled for some tar and creosote. Ceylon has, however, to depend on water imports of coal, etc., for her power.

V. *Precious Minerals*

With the possible exception of Brazil, no other country produces such an abundance and variety of precious and semi-precious minerals as Ceylon. Though alluvial gold has been found in a few localities, nowhere does it occur in economically workable quantity. Silver and platinum are extremely rare. With the exception of diamond and emerald (which are not found), Ceylon is rich in other gemstones from A to Z, Alexandrite to Zircon. Since the dawn of history, Ceylon gems have remained famous. Ptolemy in the 2nd Century A.D. mentions these amongst the products of Ceylon.

The prolific gem fields of Ceylon which constitute one of her principal mineral assets show little sign of depletion despite centuries of extraction. This veritable "Sinbad's valley of Gems" the Ratnapura gem district covers an area of about 800 to 1,200 square miles, lying between Avisawella—Kamburupitiya—Balgoda and Moragala, comprising the denyias and owitas. In pre-war years, the export income from Ceylon gems was well over three million rupees, (which no doubt multiplied during wartime?). The mining methods are very primitive, consisting of shallow pits about 20 feet in depth. This method is wasteful in the extreme, since the whole gem-bed is not explored and the area that lies between pits is not worked. Further, more than one illam (gem gravel) layer lies underground, but the gemmers being unaware of this fact, stop work as soon as the first layer is worked. More scientific hydraulic mining backed by moderate capital will ensure that the whole layer is worked and the layer beneath. Improvements in washing techniques are also urgently called for. Though in the early days, Ratnapura enjoyed a just reputation for her gems in the markets of the world, the condition of the industry

today can confer on Ceylon only utter disrepute. Ratnapura is the place where fakes, imitations and "Chechoslovakian glass" are freely marketed. The Ceylon ruby, though paler than the pigeon blood of Burma has better "fire." Likewise, Ceylon aquamarine has better lustre than the highly coloured Brazil stone. Chrysoberyl, garnet, moonstone, topaz, amethyst, tourmaline, zircon and star stones are others for which Ceylon would be famous.

With a few exceptions, the industry is in the hands of unscrupulous persons who are ever ready to barter away the fair name of the Island for petty personal profits and large "unearned incomes." Primitive methods of mining, bad and unscientific cutting and finishing, dishonest practices in marketing and State indifference have all contributed to depress the national revenue from this source to a mere fraction of its potential.

In 1919, Government stirred and a Special Committee was appointed which issued a report as Sessional Paper XI of 1921. Then it fell into deep slumber until January, 1937 when a Sub-Committee of the Executive Committee of the Ministry of Labour Industry and Commerce was appointed to "go into the whole question of mining, cutting and marketing of gems in Ceylon", whose report was published in 1939 as Sessional Paper XVI. It must be said that the whole question was "gone into" by this Sub-Committee with enthusiasm and thoroughness and sound recommendations were made to the Government. But nothing has been done until today!

Minerals of the precious and semi-precious group provide scrap and flawed pieces which can form the basis for a thriving industry for the manufacture of jewels for watches and precision instruments, abrasives such as garnet and emery, etc.

VI. Rare Earths

Amongst the so-called rare-earth minerals found in Ceylon are a number of feebly radio-active minerals such as thorianite, thorite, and monazite which have received much publicity recently for their use in atom bombs. Pitch blende, the chief source of Uranium has also been reported from Koggawela and Kurunegala and the sands of Getaheta Oya. But these occur only in small pockets, not possessing uniformity of content or continuity of vein. Monazite contains about 10% Th. O₂ but it is found only as a 2 to 10% ingredient in the ilmenite sand deposits. About 100 tons of monazite were exported from Kaikawela in 1923-26, for its 10% thoria which was used in the incandescent mantle industry. From thorianite can be obtained meso-thorium and

radio-thorium which are radio-active and therefore substitutes for radium. But these are not so permanent as radium itself, (Half value period 2,000 years) but decay soon, (5.5 years for radio-thorium) and (16.2 hours for meso-thorium). Further, it must be emphasised that the radio-and meso-thorium content of Ceylon thorianite is, according to Prof Megnad Saha F. R. S.

$$1 \text{ gm Th O}_2 \left\{ \begin{array}{l} = 4.3 \times 10^{-8} \text{ gms. radio-thorium.} \\ = 2.45 \times 10^{-8} \text{ gms. meso-thorium.} \end{array} \right.$$

Thorianite is said to be fairly widely distributed on the Island. Because of the increasing demand for thorianite a survey of the deposits and their exploitation should prove a source of considerable revenue.

Conclusion

From this brief survey, it is evident that for many of her requirements in minerals and mineral products, the country has to depend on foreign supplies, which have to be paid for. Even for the processing and manufacture of some of the local minerals, other mineral ingredients have to be obtained from foreign sources. Some of the few major minerals of the Island exist in quantities far in excess of domestic needs so that by careful husbanding of these through long term schemes of economic utilisation and conservation a few permanent and vigorous manufacturing industries can be set up which would be able to pay for at least a part of the imports. Thus while the geology of the Island is opposed to complete economic self-sufficiency in the matter of mineral goods, yet it favours strongly the development of some mineral industries in Ceylon to offset at least in part and pay for her deficiencies. While the task of discovery and mapping of mineral deposits is the concern of the Department of Mineralogy, the urgent need of a central economic organisation to plan a long range mineral Policy for the Island, direct and regulate the mining and export of mineral produce, advise on and promote the establishment of mineral industries, having regard to the country's present and future needs, cannot be under-rated.

In this connection, it is hoped that reference to the Report of the Mineral Development Committee of the United Kingdom presented by the Minister of Fuel and Power to Parliament by command of His Majesty in July 1949 would be found very helpful. The M.D.C. was appointed not only to inquire into the resources of minerals in the U. K., but also to consider possibilities and means of their co-ordinated, orderly and economic development in the national interest, and to make recommendations in regard thereto.

It recommended the creation of a new permanent organisation to be known as the Mineral Development Commission and that mineral rights should be vested in it. It should, in other words, own the mineral resources of the country on behalf of the State. Strong technical, financial and other arguments were adduced in favour of nationalising the mineral rights and dealing with them by way of administrative powers which will ensure adequate exploration, development and efficient working through a positive long term policy.

In the United States, President Eisenhower has recently set up the M. P. G. (Minerals Policy Group) to be in charge of the questions of exploitation and conservation of the country's mineral resources.

In Burma they have already set up a Mineral Resources Development Corporation, with a Director-General and four Departmental Heads for Mining, Engineering, Metallurgy, and Economic Geology. This functions as a separate co-ordinating and development body from the Government Geological and Mines Department. Ceylon would do well to emulate these examples.

The Industrial Development of India 1918—1944

S. S. RAJARATNAM

Indian handicraft goods had a very wide market all over the world for a long time. Even as late as the 19th century, Indian goods had found markets in Europe. Handicraft goods like calico, enamelled jewellery and other artistic goods had been distributed widely by European traders, especially the French, and India had been able to hold this market purely through the fineness and high quality of her goods. It has been said of the Indian calico, that a yard of it could go through a ring of a finger. Most of these industries had been distributed throughout the rural areas. Even through certain areas like Rajputana, Kathiawar and Kashmir, contributed more towards the export market, the rural peasantry throughout India produced these goods as a bye-industry. Certain industries like metal and enamel had been mainly concentrated in the towns. The general prosperity some of these industries enjoyed had considerably declined by the second half of the 19th century. The decay as such had started very much earlier than the 19th century. The death of Aurangzeb in 1707 can be taken as a starting point of this decline. The political and economic chaos cut off the regular European market and thereafter the handicraft industries continued to decline. In spite of later economic and political stability most of these industries could not revive, and by the second half of the 19th century there were hardly any large scale handicraft industries in India. There were yet certain handicrafts, cotton spinning and weaving, woollen goods, but most of these industries were unable to re-establish the position which they once enjoyed. The rapid decline of these industries in the 19th century is due to a large number of political and economic forces which cumulatively affected the handicraft industry. The chief reason however, is political. The unsympathetic government policy laid open the entire Indian market to the English machine manufactured goods. The policy of the Indian government throughout the 19th century was *laissez-faire*. After all, the Indian governmental policy was dictated from England. With the result cheaply manufactured machine made goods flooded the Indian market and helped further to destroy the already declining handicraft industries. There was absolutely no protection, encouragement or even sympathy towards the handicraft industries. The French on the other hand, had actively encouraged the handicraft industries. They had provided a ready market, and supplied some of the raw material. They had even attempted to maintain the high quality of some of the commodities by providing a regular market. The decline of French influence in India

and also the decline of French importance generally after the Franco-Prussian War removed one important prop of the handicraft industries. Further, the growing British influence and the introduction of new modes and tastes weakened the demand for handicraft goods. The railways and the improvement in the transport system opened up the country-side to the influx of the foreign commodities. Some of the handicraft industries had depended on the feudal organisation. These industries had specialised in the production of bells, swords and other ceremonial adjuncts of feudalism. These industries too declined with the decline of the Indian handicrafts. So that by the first decade of the 20th century, practically the entire rural handicraft industry had declined and the urban handicraft industry was just able to maintain itself. In the second half of the 19th century we see three important trends in the industrial organisation of India. Firstly, the handicrafts had declined; the only industry that survived the effect of the new forces was the urban handicraft industry. Secondly, most of the surviving urban handicrafts had abandoned the manufacture of high class and artistic goods. And thirdly, we find the rise of the plantation and heavier industries. Certain aspects of the handicraft industry survived the impact of the new forces and came to be influenced by the extension of the market and the use of machinery, and can be found even to this day in the villages and the remote towns. In many branches of the handloom industry, factory organisation is impossible and these industries continued to flourish. Especially in the cotton industry the small weaver continued to prosper and the factory organisation could not be extended because profits were not large enough. The organisation of the silk industry was also on similar lines. Most of the silk weaving was carried out under the piece work system. These handicraft industries reacted only by extending the production on their commodities. There was to a certain extent a greater specialisation and localisation than before. The working conditions of the workers however deteriorated. Some of the industries lost their significance as bye-industries or secondary industries. There was more of specialisation and together with this sweated labour and bad working conditions. The independence of the handicrafts workmen was now completely destroyed. This is the main trend of industrial development before 1900.

By 1900, we find the development of certain larger industries like cotton and the iron and steel industries. This emphasis on the heavier industries started by about 1905 with the Swadeshi movement. There is also perceptible capital investment by the Indians. However the industrial progress was very slow. This is a very significant feature of Indian industrialisation. Considering the industrial progress made in the first thirty years of the

present century, there is hardly any change made in the entire Indian economy by the process of industrialisation. It is true that a large amount of capital was flowing in and larger numbers of people were now depending on the cotton and jute mills. But the predominance of Indian agriculture is visible even to this day. The proportion of the urban population to the total population was not changed significantly. Between 1872 and 1902 there was only a 3% change in the proportion of urban to the total population.

The Proportion of Urban to Total Population

1872	—	8.72
1881	—	9.41
1891	—	9.46
1901	—	9.88
1911	—	9.42
1921	—	10.2

Taking the more complete occupational Census of 1931, only about 11% of the total population is urban.

Occupational Census of 1931*

Total population	318,898,000
Rural population	274,754,000
Urban population	44,144,000

Of the total population of 318,898,000 only 44 millions were living in the towns. The extent of the urban population may not necessarily indicate the extent of industrialisation. The occupation distribution however shows more clearly the extent of industrialisation.

The Percentage of Workers in Various Occupations (44% of total)

Agriculture	67%
Mining and Industries	10.2%
Trade and Transport, etc.	22%

Only a very insignificant portion of the total population is actually involved in industrial production.

According to the census of 1931, only 44% of the total population was enumerated as workers, and of this 44% only about 10.5% were actual industrial workers. This slow development cannot be attributed to a single factor. The main difficulty however is the lack of capital. Considering the *per capita* income of India, the country is very poor. Agriculture, the main occupation of the people is carried out in small units. There has been excessive fragmentation of land and the land tenure system does not contribute towards the accumulation of capital so necessary for industrial development. Even the available capital finds its way into

* Indian Year Book.

commerce, shopkeeping and money lending. There were no organised institutions to harness the capital. Organised banking outside the important trade centres was quite unknown and even the few in existence did not think it feasible to finance industrialisation. Most banks in India today specialise in commercial capital, especially in export trade, and even the railways and shipping concerns in the community look to the export trade rather than to the internal development of the country. The banks also pursue the policy of keeping their capital free during the harvest time for commercial lending, and this discourages the granting of industrial loans. The smallness of India's capital resources, the competition for it from both agriculture and industry; and the profitability of shopkeeping and money lending prevent large investments in industries. India however has an advantage in low paid labour. But this tends to increase the cost of production. Indian labour is very cheap and lower paid than in any other country. But this leads to the general inefficiency of the Indian labourer.

Average Wages in 1939 for Agriculture*

For Men	— 2 — 5 Annas	(13 — 32 Cents)
For Women	— 1½ — 4 Annas	(9 — 25 Cents)
For Children	— 1 — 2 Annas	(6 — 13 Cents)

This lowness of the agricultural wages only shows the general standard of the Indian wage system. In the absence of uniform figures for industries, agricultural wages are sufficiently representative. And so long as Indian labour is so cheap, it is also going to be inefficient. If Indian labour is better paid and trained it can be as efficient as any other labour. Japanese labour was low paid and inefficient but with better factory organisation and wages, it turned out to be as efficient as European labour. The inefficiency of Indian labour is due to three main reasons. Firstly, it is the low standard of living in India generally. The *per capita* income in India before the war was Rs. 65/-. This is a fraction compared to the annual *per capita* income of other countries.

The Annual Per Capita Income in Rs. for 1931†

U. S. A.	1406	France	621
Canada	1038	Germany	603
U. K.	980	Japan	218
Australia	792	India	65

Secondly, the inefficiency of Indian labour is due to the illiteracy prevalent in India, especially among the working class. The percentage of literacy above the age of 5 in India today is 14.6. In some of the materially more advanced countries, the percentage is

* A Plan for the Economic Development of India.

† The Conference Board, Economic Record.

more than 80%. "Extreme forms of poverty will prevail among the masses in India as long as the overwhelming majority of the Indian people are able neither to read nor to write."* Thirdly, the inefficiency of Indian labour is due to the lack of comprehensive factory legislation and labour regulations. The Factory Act of 1892 which tried to remedy the labour conditions was a dead letter from the very beginning on account of insufficient inspection machinery. As a result of this, a factory commission sat in 1908 and enumerated a comprehensive plan of labour regulation. A bill was introduced in 1909 and it passed out as law in 1911 by which the working hours of the children were reduced to six and adults to twelve. Now provisions were also added as regards factory sanitation and inspections. A working class movement also started in India with the formation of the Madras Labour Union in 1918. Similar organisations sprang throughout India and with a large number of successful strikes after the war, the wages continued to improve. The mining industry had been ignored for a long time and in 1923 the Mining Act remedied the defect. It prohibited the employment of children under 13; it restricted the hours of work of the adults to 60 hours per week overground, and 54 hours per week underground; and it also prescribed a day of rest in every working week. In spite of these improvements, the conditions of work are yet bad. About 60% of the working population live in one-room tenements.

India has large industrial reserves, and she has ample facilities for the development of some of the larger industries like cotton and iron and steel.

Total Iron reserves	27,000,000 Tons.‡
Total Coal reserves	10,000,000 Tons.

With insufficient capital and insufficient labour, Indian industrial development is hampered by other factors as well. There is a dearth of technical men and India has to depend on Foreign experts and engineers. Finally, the unsympathetic policy of the government should take over a lot of blame for the industrial lethargy. The Government has been indifferent to industrial development till recent times. No protective legislation was possible so long as pressure from Manchester and Dundee was continued. After all the government was only reflecting the particular political philosophy prevailing in England. This *laissez-faire* policy was suicide to India's industrial development. The stream of imports from England and Japan continued to flow into India throughout the 20's and apart from the decline of the handicraft industries, the heavier industries too were faced with heavy losses. So that the obvious line of industrial development

* W. M. Kotschnig: Unemployment in the Learned Professions.

‡ Geographical Survey of India.

in India has always been held to be, firstly, the protection of the Indian industries by the government, and secondly, the preservation of the local markets, so that the home industries would have a regular market. This could only take place through the raising of the per capita income of the people and the improvement of standard of living of the people. Also the manufactured goods should be produced cheaply, and this means the application of the latest types of machinery in industrial production. It is also clear that the industrial development of India should go hand in hand with agricultural development and the abolition of the land-holding system.

However, inspite of difficulties in finding capital there has been a significant increase in the larger industries in India after the outbreak of the war. This movement as seen already started with the Swadeshi movement in 1905, and a larger number of Indian companies has been opened up. Most of the capital is private capital. In most industries, specially among the newer industries like sugar and paper, public issue of capital has played a very unimportant part. Out of the 60 mills mentioned in the Investor's Year Book of 1935-36, only 35 had ordinary shares, 25 had preference shares, the percentage of preference share capital to the total paid up capital was very small. For 1935 it was only 18% and due to the lack of a proper banking organisation most industries can only look to public and private deposits for capital. Most of the cotton mills of Bombay and Ahmadabad look to public deposits to finance their working capital. The interest on public deposit capital is low; it is about the same as the bank rate. But the weakness in this type of capital is that with even a hint of depression, there is a rapid withdrawal by investors. During the depression of 1925-1929, the cotton mills were stranded without capital. On the other hand, the smaller industries like matches, paper and sugar, get most of the capital from private deposits and private accounts. This type of capital is steadier than public deposits. The people who give the capital like an interest in the industry, and there is no withdrawal during the bad periods. Yet, both these types of financing industry weaken the general investment market. From 1914 most of the industries showed prosperity. The war gave a certain amount of protection and behind this protection wall, there was a rapid growth of companies and industries.

The Cotton Mill Industry

	No. of Mills	No. Employed
1900-01	191	156,355
1913-14	264	260,847
1924-25	305	376,062
1926-27	306	384,082
1927-28	297	388,284
1928-29	292	380,596
1929-30	304	392,533
1930-31	300	407,189
1931-32	317	441,739

The number of people employed in the cotton mills doubled within 15 years. This increase in the number of industrial units and the number employed is seen throughout the larger industries.

The Jute Mill Industry

	No. of Mills	No. Employed
1900	36	111,272
1913	64	216,288
1925-26	90	331,320
1928-29	95	343,868
1930-31	100	307,606

The Woollen Mill Industry

	No. of Mills	No. Employed
1900	4	2874
1913	7	4053
1925	16	8773

It is in the production of iron and steel that the greatest increase is seen. Towards the end of 1919, a new company called the Bengal Iron Co. Ltd., was incorporated with a share capital of £2.5 million and it took over the various undertakings of the Bengal Iron and Steel Corporation. The older and the pioneer industry in iron and steel productions, the Tata Iron and Steel Co. Ltd., was registered with a capital of £1,545,000 and by 1918, it had increased to a paid up capital of £7,014,166. This rapid rise of the iron and steel ventures in India was largely attributed to the protection offered by the war. The prosperity of the Indian industries can also be seen in the number of Joint Stock Companies formed immediately after the war.

Joint Stock Companies—British India*

1923-24	—	4820
1924-25	—	4822
1925-26	—	4926
1926-27	—	5156
1927-28	—	5388
1928-29	—	5795
1929-30	—	6313
1930-31	—	6675
1931-32	—	7092
1932-33	—	7544

The question arose whether these industries which showed so much progress behind the protection of the war could maintain their prosperity without adequate protection. A large number of smaller industries had also sprung up. In Bombay, the industrial conditions were generally prosperous. Paper, flax, and oil mills were established throughout the province. In Madras, the leather industry got a filip, and also the soap making industry.

With the depression of 1924, the weakness of the industrial organisation was seen. Apart from the sudden withdrawal of capital, none of the industries were able to cope up with the cheaply produced goods from the United Kingdom and Japan. The depression in India after 1924 was more serious and protracted than in the other countries and the depression was further worsened by the currency policy of the government. The Rupee which has sunk below the previous level in 1920 continued to be equal to 1s. 4d, and this affected the Indian industries adversely. In 1926, the Tariff Commission inquired into protection but it was not able to determine the extent to which the industries suffered, through foreign competition. The Fiscal Commission suggested various methods of subsidising but the government rejected these proposals and imposed a duty of 5% ad valorem on cotton goods only. This 5% was very small, and foreign cotton specially English and Japanese continued to flood the Indian market. Earlier in 1918, the Industrial Commission had presented its report and the Commission's report was based on the fundamental principle "that in future the government must play an active part in the industrial development of the country in the aim of making India more self sufficient in respect of men and material." This Commission made a number of suggestions:

(a) Improvement of the departmental organisation for encouragement and control of industries. Most of the administrative work was to be in the hands of the provincial governments with centralised control from the Director of Industries.

* A Statistical Abstract for British India.

(b) Improvement of technical education in the country.

(c) Technical and financial aid to industries. This was to take the form of granting loans and subsidies to those industries that required aid. In 1921, was created the permanent Imperial Department of Industries. And in spite of the suggestions of the Inchcape Retrenchment Commission to cut down all unnecessary expense and departments, this department continued with the policy of industrial encouragement. With the world depression of 1930's the question of protection and industrialisation came up again. But the government was unwilling to give up its passive policy of encouragement rather than protection. It was only after the war, largely due to India's new political status that anything was done towards the active industrialisation of the country.

In 1944, a very interesting plan of industrialisation was put forward by a large number of industrialists in India. This plan, popularly known as the Bombay Plan, was not accepted by the government. All the same it showed the weakenings of the Indian economy and the possible ways of remedying it. The purpose of the plan was to give every citizen, by planned development of agriculture, industry and services over a period of fifteen years, a sufficiency of food, clothing, housing, educational and health facilities. The authors* of this plan suggest that this could be achieved by a trebling of the national income by an original investment of £7,500,000. Over the fifteen years the standard of living is to be raised as follows: food 2800 calories, an average of 30 yards of cloth instead of the present 16, and a minimum standard of health and housing conditions. According to this plan, there will be a national planning committee in which the various interests would be represented and their function would be the co-ordination of economic development. The principal objective is the **doubling of the per capita income over the fifteen years**. An important part of the proposal was the industrial development during the initial stages. But it was not purely an industrial plan. Its ultimate purpose was the social well-being of the individual and the authors believed that this would take place only through a greater development of the industries. They proposed a threefold increase in India's national income; and this was to be brought about in such a way that, while the present overwhelming predominance of agriculture, would be maintained, a greater proportion of investment was to be made in industries.

National Income

	1931-52	Proposed
Industries	17%	35
Agriculture	53%	40
Services	22%	20

* Thakurdas, Tata, Birla, Lalbhai, Mathai, Shroff, Dalab and Sri Ram.

The threefold increase in the National Income would be as follows:—

	National Income in 1931-32	Net Income expected after 15 years	Percentage increase
Industry	£ 280½ million	£ 1680 million	500%
Agriculture	£ 874½ million	£ 2002½ million	130%
Services	£ 363 million	£ 1082½ million	200%

The development of basic industries was given top priority, for the authors realised that the inadequacy of the power supply and the lack of capital goods retarded the development of India's industrial resources. The list of the basic industries included power, electricity, mining and metallurgy, engineering and machinery, heavy chemicals, armaments, transport and cement. There was no reason why cottage industries could not function side by side with the large industries, and the plan proposed a total investment of £ 3,360 millions in both large scale and small scale industry. The total investment of capital was to be as follows:—

Industry	£ 3,360 millions
Agriculture	£ 930 millions
Commodities	£ 705 millions
Education	£ 367½ millions
Health	£ 337½ millions
Housing	£ 1,650 millions
Miscellaneous	£ 150 millions
	<hr/>
	£ 7,530 millions

The money spent on agriculture would also involve the reduction of the indebtedness of the Indian peasantry. The financing of the plan in the initial stages would depend on external capital and as the plan develops, the dependence on foreign capital would gradually decline. The sources of capital, external and internal are as follows:—

External finance: the hoarded wealth of the country, mainly gold, short term loans to the U.K., Sterling securities held by the Reserve Bank of India, the favourable balance of trade, and foreign borrowing.

Internal finance: Savings of the people and new money created on securities. Nearly half the capital was to come through created money. According to the plan "In a planned economy, we are primarily thinking in terms of commodities and services. Money or finance, therefore, is completely subservient to the requirements of the economy as a whole." This explained the

proposed financing of the plan through created money. They believe that created money would increase the productive capacity of the nation and ultimately repay itself. It is the contention of the planners that there is hardly much difference between Socialism and Capitalism. According to them, Capitalism today has been transformed almost beyond recognition by direct state intervention. Similarly Socialist economy has been modified by the absorption of certain Capitalist principles. The authors of the plan admit that there would be state interference. Besides co-ordinating the economic development and managing the finances, the state would assume more positive functions. Even so, the functioning of the plan would be capitalistic.

(The concluding article for the period 1945 to 1952 will appear in the next issue).

A Development Corporation for Ceylon *

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Industrial and agricultural development in Ceylon is essential for the creation of a sound economy and ensuring a reasonable standard of living for the common man. Among the factors which promote such development, the availability of credit facilities is perhaps the most important. Agricultural and industrial projects require finance for three main purposes: (1) initial capital for acquiring land or plant and equipment before starting a new concern; (2) medium and long-term capital for replacement and expansion of concern; and (3) short-term working capital for payment of wages and for the purchase of raw materials, fuel, transport facilities, etc. The first and second may be called "permanent capital" and the third "revolving or floating capital."

A well-managed agricultural or industrial concern in Ceylon has access to floating capital from the commercial banking system but permanent capital is much more difficult to obtain.

The normal sources of permanent capital for a new or an already existing private concern are:

(1) Trade suppliers, business acquaintances, relatives, and ploughed-back profits, reserves, etc.

(2) Specialised institutions—the Agricultural and Industrial Credit Corporation and the State Mortgage Bank. The first source is tending to dry up, and the second is limited because of the rigidity of the regulations.

Thus we have in Ceylon a situation where short-term capital is available for economic development, but long-term capital is in limited supply. This is the well known "Macmillan Gap" which assumes greater proportions in under-developed economies as that of Ceylon. At the present stage of her economic development, it is mainly long-term capital that is required by private enterprise in the country.

Capital formation at the level of private entrepreneurs has not been adequate enough for the setting up of industrial projects on a large scale. The Government has not in the first place created the necessary confidence among the people in industrial ventures. The number of factories closed down and running at a loss is ample evidence. Private enterprise, further, needs assistance in overcoming its inexperience, assurance that once started

* (This article represents the views of its author and not necessarily those of the Central Bank).

it can keep going, information on the economic resources of the country and markets, and technical personnel.

Private capital in Ceylon besides being shy to industries, is also more inclined towards real estate which is more secure. Investment in real estate is of no benefit to the country as it is only a transfer of investment and not a net addition to investment.

With all these facts in mind, the World Bank Mission recommended the establishment of a Ceylon Development Corporation as an agency to promote economic expansion in productive fields where private enterprise is lacking. This Corporation is expected to take the initiative in the creation, direction and operation of individual enterprises. It will supply all or part of the equity capital required for such enterprises and frequently assume responsibility for management and control.

The main importance of the Corporation lies in its being a pioneering device. Once it is able to show that the working of industries also results in handsome profits, the way would be cleared for private investment in industrial undertakings.

As a means of promoting their economic development several under-developed countries have established Development Corporations in the recent years e.g., India, Pakistan, Philippines, Turkey, Ethiopia, Mexico and some Latin American countries. The Development Corporation is meant to concentrate public effort in more specific form than by general administration and in definite fields of investment having priority in economic development. It thus increases the volume of investment and at the same time improves its direction. It may be defined as a public corporation with authority to plan, finance, stimulate and administer programmes of economic development.

The alternative to a Development Corporation in Ceylon is "mixed" banking where commercial banks participate directly in industry as in pre-war Germany. But an intimate connection between banks and industry is unsuitable, as the fortunes of the banks will then be linked to the vagaries of trade.

The failure of banks in India which undertook long-term, industrial finance after the World War I, has, moreover, not given us much hope.

It is accepted in most countries that the object of deposit banks should be the temporary augmentation of a borrowers floating capital, and not lending on long-term, or providing funds to be invested in permanent assets. A Development Corporation possesses the advantages of mixed banking without its defects.

Financing

The World Bank Mission recommended a Corporation with Rs. 100 million capital subscribed by the Government, Central Bank, Commercial Banks and the investing public. One of the important criteria for the financing of the Corporation is that the Corporation shall be able in turn to make funds available at relatively low rates.

Therefore, it should be able to secure funds at low cost. Finances from the Government and the Central Bank have the advantage that they can be made available at very low cost. But funds from the commercial banks and the public are normally not so readily available at charitable rates.

A major device, however, for attracting private funds at low cost, as tried out by other countries, is the Government guarantee of minimum dividends and repayment of principal of the Corporation's shares. Business institutions will invest in the shares of the Corporation even with low returns because they are quite safe with the Government guarantee.

Exemption of the dividends from taxation is another device to attract long-term funds at low cost. In the Industrial Finance Corporation of India, the Government has guaranteed a minimum annual dividend of $2\frac{1}{4}$ per cent; funds were forthcoming even at this rate. In the case of Ceylon, the minimum dividend should be so varied as to attract private funds.

Besides the commercial banks and the public, insurance and finance companies and co-operative banks should also be allowed to invest in the Corporation's shares. They have subscribed to the Corporations in most of the other countries. In the case of India, however, the subscription from the co-operative banks has been inadequate.

Another important criterion to consider is the inflationary impact of various methods of financing the Corporation. Development expenditure often has this inflationary impact, but its size depends partially upon the source of funds.

Capital that is not abstracted from current consumption income or financed by import surpluses is inflationary. From this point of view, allocations from the current budget of the Government are the least inflationary. The use of the reserves of the Central Bank and the funds of insurance and finance companies and the public is also inflationary to a certain extent, but finance from the commercial banks, in being created money, is the most inflationary.

A certain amount of inflation may be necessary, but it must be avoided in its severe form as it will then distort the pattern of capital formation e.g., wealthy citizens may put their money into real estate instead of investing in the Corporation. Thus the Corporation must not borrow excessively from commercial banks.

The Government should have an extraordinary budget to supply a part of the initial capital of the Corporation and regular allocations from the subsequent budgets for the supplementary capital. Every year, a certain percentage of the budget should be allocated for the Corporation—it is 2–10 per cent in Venezuela. In some countries the revenue of certain taxes are earmarked every year for the Corporation e.g., the taxes on foreign copper companies in Chile, and on petroleum companies in Venezuela. With the tax revenue dependant on the fluctuations of primary exports, this method of financing is highly unstable and incompatible with the principle that the work of the Corporation should be conducted on a stable and permanent basis.

The Corporation's need for finance can be met to a great extent, if the Government gives it access to the various trust funds under the Government's charge e.g., Ceylon Savings Bank, Post Office Savings Bank, Local Loans and Development Fund and the Loan Board. All these funds could be channelled by the Corporation into specific fields of development in the country. The Rehabilitation Finance Corporation of Philippines, for example, administers the Postal Savings Bank Fund and the Government Service Insurance Fund for building construction. The trust funds under the Ceylon Government today are acting independently of one another without a common objective; some of them are invested in foreign securities and some are lying idle. The Corporation should be authorised to administer them, and channel them into the country's development.

There is the possibility of attracting funds from the public in the form of fixed deposits. The Industrial Finance Corporation of India is empowered to accept deposits from the public repayable after the expiry of a period not less than 5 years. But so far it has not succeeded; nor has this scheme been very fruitful in Latin American countries. One reason for this, is that the public do not like to have their funds "frozen" for such a long period. The Corporation can, however, attract fixed deposits from the public if it pays an interest higher than that of commercial banks; but then it competes with the commercial banks. This must be avoided at any cost, as the Corporation's function is to supplement the credit facilities of commercial banks and not to

compete with them. Further, if such competition is envisaged, the commercial banks will be reluctant to subscribe to the Corporation's capital.

The Corporation must have the power to augment its funds whenever necessary, by issuing its own bonds or debentures. This power has been granted to all the Development Corporations. The Industrial Finance Corporation of India is authorised to issue bonds to the extent of five times the amount of its paid up capital and reserves. The principal and minimum dividend should be guaranteed by the Government as in the case of shares. This is helpful in mobilizing domestic capital which is not venturesome without some Government assistance. Bonds of the Corporation can be made more attractive if the principal and interest are exempted from taxation as in the Philippines. The Corporation should also follow the example of the Philippines Corporation and issue bonds redeemable on demand bearing interest as follows: 1 per cent during the first year, 2 per cent during the second year and 3 per cent during the third and succeeding years. (These rates may be varied if desired). This will induce the public to invest for long-term. If the maturity of the bond is fixed at 10 years, then the average interest will work out to 2.8 per cent per year. At present in Ceylon, current deposits in the commercial banks earn no interest, and fixed and savings deposits earn 1 per cent—2½ per cent per annum. Thus people will find investment in these bonds more profitable than saving in banks. Further, though the interest is low compared to other investments, the principal here is safer, and what is more these bonds are like a current account as they are redeemable on demand at the option of the holder and earning interest. Of course, the Corporation should keep a cash reserve to meet the demands for conversion. The Philippines Corporation keeps 20 per cent of the bonds issued in cash form for this purpose.

The borrowing power of the Corporation should be subject to consultation with the Central Bank in order that the timing of their issues will not compete with other public securities and that the totals will not exceed amounts considered convenient and appropriate. There is the further problem of whether and when the issues should be for the Corporation as a whole, or some of its specific projects.

The Corporation does not need all the Rs. 100 million to start operations. It should call only a part of the capital—about 50 million—and call the rest when its responsibilities increase. If the Government desires to have control, then it must subscribe 51 per cent of the capital as in Pakistan; but if it is to be an independent body with no one controlling authority, equal subscriptions from the parties concerned is desirable. Or, we can

have it like the Industrial Finance Corporation of India where the initial capital of Rs. 50 million was subscribed as follows:—Government, 10 million; Reserve Bank, 10 million; Scheduled Banks, 12.5 million; Insurance Companies and Trusts, 12.5 million and Co-operative Banks, 5 million. It may be necessary for the Government to provide a major part of the capital, if the private investors are reluctant to give the start. It should be emphasised in the words of the United Nations, "that if a public Corporation has been set up, the primary duty of financing it pertain to the Government and not to the private banking system." The Government must give to the Corporation the resources required to carry out the assigned task even if private funds are not forthcoming.

The developmental projects require foreign exchange to import machinery and technical personnel. According to the World Bank Report, the foreign exchange element of the country's development programme is 35 per cent. The launching of the programme will mean in the absence of external aid, the reduction of our external assets, and the consequent aggravation of the existing balance of payment difficulties. The Corporation should, therefore, obtain a loan (in foreign exchange) from the World Bank before starting operations. Turkey, Ethiopia and Mexico, all, borrowed from the World Bank to start their Development Corporations. The grant of a loan by the World Bank will initially have a disinflationary impact, since investments made by the Corporation will be to some extent offset by the import surplus arising from the inflow of foreign capital; this effect is reversed when foreign capital has to be repaid by the Corporation. Repayment of foreign capital borrowed by the Corporation also raises problems of the balance of payments. Since policy respecting balance of payments is clearly a matter for Government and not for the Corporation itself, the importance of fitting the Corporation into general economic policies becomes apparent.

Administration

Control of the Development Corporation should be lodged in those who are authorised to subscribe to its capital. If the Government owns 51 per cent of the shares, then it will automatically have a greater say in the administration. In the Pakistan Industrial Finance Corporation where 51 per cent of the capital is subscribed by the Government, there is a Board of 9 Directors—5 appointed by the Government, 3 by the other shareholders and one Managing Director by the Government; though the Government owns a big share, still it is run on commercial lines. In the case of the Industrial Finance Corporation of India, on the other hand, where the Government's contribution is not greater than that of any other party, there is a Board

of 12 Directors—3 nominated by the Central Government, 2 by the Reserve Bank, 2 elected by scheduled banks, 2 elected by insurance companies and other financial institutions, 2 elected by co-operative banks and 1 Managing Director appointed by the Government. A Managing Board of this nature, where the Government does not have single control, is suitable for our country to encourage ready participation of private interests. If this Board is too large, the immediate responsibility for operations may be lodged in a smaller Executive Committee.

Business Transactions

The aims of the Corporation should be first to support and stimulate new private enterprises and expansion and modernization of existing ones; second to encourage participation of domestic and foreign capital in the country, and third to encourage and promote private ownership of securities pertaining to Ceylon industry and agriculture, and assist the development of a securities market. To attain these objectives the Corporation should be authorised to carry on the following kinds of business:—

- (a) granting loans or advances to or subscribing to debentures of industrial concerns, repayable within a fixed period—25 years in India;
- (b) guaranteeing loans raised by agricultural and industrial concerns which are repayable within a fixed period, and are floated in the public market;
- (c) underwriting the issue of stocks, shares, bonds or debentures of industrial concerns repayable within a fixed period—25 years in India;
- (d) establish with own funds new enterprises which if left to the private enterprise would be considerably delayed. (This is the main function of the Pakistan Industrial Development Corporation);
- (e) provide technical and administrative aid to private enterprise.

The Corporation should be authorised to grant and guarantee loans only against the security of tangible assets for reasons of safety. Accommodation may be given against sufficient pledge, mortgage, hypothecation or assignment of Government or other securities, stocks, shares or secured debentures, bullion, movable and immovable property, and other tangible assets. The Corporation should be further required to dispose of any shares or bonds it may have to take up in fulfilment of its underwriting commitments as early as possible, so that it will have funds to invest in new ventures where development appears appropriate. We should, however, not be very optimistic regarding the

guaranteeing and underwriting powers of the Corporation, as both the Industrial Finance Corporation of India and the Pakistan Industrial Finance Corporation have not yet (though they have the powers) undertaken guaranteeing and underwriting commitments because of the unfavourable situation in the money market and the stock exchange. The argument is that the Corporation are justified in guaranteeing loans or underwriting issues of shares and bonds, only if they are satisfied that there is likely to be an adequate response from the public and the market. If unfavourable money market conditions prevail in Ceylon, it may be that the Corporation, like those of India and Pakistan, will have to confine its activity to granting loans and advances only.

The Industrial Finance Corporation of India, is prohibited from subscribing directly to shares of public limited companies. Further, it cannot enter into any arrangement with single industrial concern for an amount more than 10 per cent of the paid up capital of the Corporation—but in any case not exceeding Rs. 5 million. Placing an upper limit in this way is required on grounds of safety.

The fields of investment are determined by the specific purposes of the Corporation. Sometimes Corporations operate generally over the economic field, although usually they are confined to specific fields. The Industrial Finance Corporation of India and the Pakistan Industrial Finance Corporation, for example, are authorised to extend accommodation only to those concerns engaged in the manufacture or processing of goods, or in mining, or in the generation or distribution of electricity or any other form of power, while the Rehabilitation Finance Corporation of the Philippines extends to all fields of economic activity—agriculture, industry, commerce, housebuilding, public works, etc. In practice all Corporations have tended to operate particularly in providing economic “overhead” capital. Operations in the social overhead field, such as health and education, are considered more appropriate for Government operation by usual departmental practice. In determining the distribution of its investments among different fields and projects, the Development Corporation should act within the limits of its capitalization.

An important point to consider is whether the proposed Corporation should extend accommodation to both industry and agriculture, or to industry only. Its participation in agriculture is necessary to encourage the increased production of rice, cotton and sugarcane, and to finance the rehabilitation of rubber and coconut. In this field, however, lack of registered titles will present a big problem to the Corporation. This can be surmounted

to some extent, as in the Philippines, if the owner of the land is requested in the absence of a Torrens title, to show that he and his predecessor had possessed and cultivated the land for the last 10 years. When registration of titles is very expensive, such a scheme would suit the requirements of the Corporation. The Philippines Corporation has even granted loans to buy big estates and distribute them among peasants, and the Venezuela Corporation for cattle raising and fisheries.

If the proposed Corporation is meant to help industry only, then the creation of another Corporation for agriculture becomes imperative. This means additional expenditure which could be avoided if one Corporation covered both the sectors. But many countries have separate Corporations for agriculture and industry. Whether, loans to agriculture, are to be given from the same Corporation or by a new one, it is better to grant them as far as possible in kind (as in Pakistan) as this would eliminate the chances of the loans being utilized by the agriculturists in wasteful and unproductive expenditure.

The Corporation can also cover the field of housebuilding as in Philippines and Guatemala. At present the Housing Loans Board is a Government Department. The proposed Corporation can undertake its functions with more capital from private interests. In the final form the Corporation can have three separate departments, each having its own funds. The Industrial Credit Department, the Agricultural Credit Department, and the Low-cost Housing Department. Once the Corporation is established on these lines, there is no necessity for the separate existence of the Agricultural and Industrial Credit Corporation, the State Mortgage Bank and the Housing Loans Board. All these three should be incorporated in the new institution which should take over their liabilities. The Agricultural and Industrial Bank in Philippines was dissolved when the Rehabilitation Finance Corporation was established, and the Agricultural and Commercial Bank of Ethiopia was incorporated in the Development Bank of Ethiopia.

Terms

In the case of India and Pakistan, assistance from the Development Corporation is limited to public companies and Co-operatives. Since a vast majority of business is not likely to be done by public companies, such a practice in Ceylon would mean that the resources of the Corporation may not be fully drawn upon. The rate of interest on loans and advances of the Corporations vary from country to country—5 per cent in India, 4 per cent in Philippines and 4½ per cent in Pakistan. The Ceylon businessman pays 6 per cent interest even for his short-term

loans; the utilization of Government and Central Bank funds, and cheap borrowing from private interests will enable the Corporation to charge a low rate of interest.

The maximum period for the repayment of the loans should also be fixed—it is 15 years in India, 20 years in Pakistan and 30 years in the Philippines. Repayment could be made in instalments. The size of the loan too could be varied. The Indian Corporation generally advances on a first mortgage of the fixed assets of the borrower—land, buildings, plant and machinery. It does not grant loans against hypothecation of stocks of raw materials and finished goods for working capital. The Corporation further requires the properties mortgaged to be insured for full value against fire, etc., and the loans to be guaranteed by the Directors of the borrowing company in their personal capacity. The Corporation should also have officers to inspect the operations of the borrowing concern and report on its progress.

While sanctioning accommodation to any project, the following factors must be taken into account: (1) National importance of the industry or agricultural scheme. (2) Competence of management. (3) Feasibility and the cost of the scheme. (4) Quality of products. (5) Nature of security offered. (6) Adequacy of supply of technical personnel and raw materials and (7) Country's requirements of the products manufactured. It may be necessary to reject some applications which do not meet the requirements of the Corporation. During the three year period 1948-51, the Industrial Finance Corporation of India rejected half the number of applications on grounds of unsuitability.

Provision of Entrepreneurial Initiative and Technical Advisory Services

The number of persons able to provide entrepreneurial judgement, management skill, and technical advice are quite limited in Ceylon. One advantage of the Development Corporation, is that it offers the possibility of making available a pool of such resources for use in several fields. This is especially the contribution of the Development Corporation. The ability to conceive, plan and put into operation various investment projects is a much more limiting factor in the country than the amount of financial resources available. The decisive factor may well be the business leadership and stimulus provided. This places a special responsibility therefore on the Directors of the Development Corporation and its technical staff.

The experience of other countries has shown the importance of technical advisory services both to initiate activities and to

guide and assist them. The problem of getting down highly qualified people and providing training facilities to increase their number is a matter of major concern and can be approached in part through international arrangements.

Closely linked with general managerial services rendered by the Corporation is the promotion of economic and technological research. This can be undertaken by the Corporation itself. The World Bank Mission, however, has recommended an Institute of Applied Research for this purpose. The Corporation should work in close co-operation with this body. Research is an activity which does not pay directly but which is essential to economic development.

Pioneering Activity

The purpose of promoting economic development often leads to operations which may be called "unsound" by commercial institutions. The function of introducing innovations and speeding up the period of adaptation to new methods is particularly important. In this the Development Corporation fulfils functions which, in different circumstances are performed by private individuals, banks or Government. Among such activities may be mentioned surveying for natural resources, analysis of land, installation of pilot plants and projects, establishment of experimental stations or laboratories and demonstration of new techniques of machinery. The Corporation should allocate funds for these pioneering activities. Pioneering activities do not usually yield direct returns to the Corporation, and hence the extent of such activities is determined by the financial structure of the Corporation.

It is important to understand that while private capital is shy, there is also a definite scarcity of clearly located and demonstrable investment opportunities. Ceylon may have substantial opportunities for investment, but to determine whether this is so would require the Corporation to engage in intensive exploration and experimentation. This is a prerequisite for any development. To enable it to do so, it should have sufficient funds.

Conclusion

Many of the Development Corporations have been in operation for too short a period to assess their effectiveness. The experience of those which have been in operation for longer periods indicate that there is no magic in the device of the Development Corporation. The record shows both success and failure. It should be remembered that the Development Corporation is only one of the tools which underdeveloped countries

have used to accelerate their development. There are other devices too which stimulate private investment *e.g.*; tax concessions and protection. Further, when steps are taken to establish a Development Corporation, its work should not be blocked or offset by other policies or acts. The areas of major concern here are:—

- (1) Steps taken by the Government and banks to maintain healthy monetary and credit conditions;
- (2) Import and exchange regulation policy and regulations with special reference to capital goods and raw materials;
- (3) Taxation policies and operations relating to investment;
- (4) Policies of the Government to facilitate long-term development.

A number of countries have been abolishing sales taxes and import duties on capital goods and raw materials, revising taxation laws and making tax concessions to increase investment. The policy of Ceylonization too may handicap the work of the Corporation. The task of development further cannot be fully accomplished without an increased and steady flow of foreign capital. It is only as the establishment of the Development Corporation is integrated into a whole series of related policies and measures that its activities can become effective. The existence of such an institution provides a vehicle along with others by which proposals for such broad integration can originate.

Hydro-Electric Development in Ceylon

E. B. TISSEVERASINGHE

It is roughly estimated that there are at least 1 million kilowatts of continuous potential hydro-electric power in Ceylon. The power created and dissipated during periods of flood is perhaps many times this amount, but obviously cannot be taken into account, as it lasts only a few days. At the other end, we cannot ignore water which runs for several months in the year merely because the stream flow may dry up for a short period. Such intermittent flows can be stabilised by proper treatment of the catchment and by creating large storage reservoirs or by a pumping-back management policy, utilising surplus current to conserve water by pumping it back into high level storage reservoirs which may not fill with run-off water.

Taking the average potential as 1 million KW, the question arises what use can be made of this potential. At present the utilisation factor is very low indeed, being less than 3%. Over 97% of the power goes to waste. It must be remembered that this power, if not used up at the time, is completely wasted, unlike minerals or agricultural products, which can be preserved intact for later use. The average cost of electricity in Ceylon is reportedly more than 7 cts. per KWH unit overall, and with an utilisation factor of 75%, the 1 million KW potential power in Ceylon is worth Rs. 500 millions **per annum**. Even taking the electricity at the lowest cost anywhere in the whole world, under even the most favourable conditions, the **annual value** of this potential hydro-electric power is at least Rs. 150 millions, and it is this floor value which will be considered further. If, in fact, the actual value is greater (as is, of course, the case) the difference will strengthen the arguments still further.

Electricity is not an end in itself, but is always a means. The products of the processes using electric power may cost many times the value of the electricity used. It is relevant here to consider only those products whose economic value depends almost entirely on the cost of electricity, such as steel, fertilisers, soda, carbide, aluminium, magnesium, graphite, etc. In actual fact, if cheap electricity is available there would be many other industries, at present uneconomic, which would at once become profitable, but these are disregarded.

It can be taken that with electricity available at about 2 cts. per KWH, the value of these products will be at least 3-4 times as much. Consequently, if Rs. 150 millions worth of electricity is consumed, the value of the products would be at least Rs. 500 millions. This is only for the use of electricity of lowest values

and the actual products would probably be worth very much more, but it quite suffices for argument to take the basic floor value of the finished products at Rs. 500 millions. As in the previous instance, any increase in the value of the actual products would go towards strengthening the argument.

It can be seen, therefore, that we are allowing to run to waste **every year at least Rs. 500 millions** of an asset which is completely lost to us if not used at the time. This is as much as our entire rubber industry is worth, and more than double the entire coconut industry or paddy industry of Ceylon. Nothing in Ceylon except tea is worth anything like it. The amount is also more than the entire income of the whole lower-bracket income earners of Ceylon. If this additional income is applied to this income bracket, their standard of living will be doubled, without dependence on any foreign source or using up wasting assets.

The utilisation of hydro-electricity in Ceylon has hitherto been confined to a few small estate generators and one medium-sized Hydro-electric Scheme of Government, which hopes eventually to produce 100,000 KW of installed capacity. The full programme for this Scheme extends over the next 15 years, and even at the end of this period 90% of the potential of Ceylon will still continue to run to waste, producing no useful result, but on the other hand causing widespread destruction, damage, and distress, all of which have to be relieved to a greater or lesser extent, either by Government or by the private sector.

It appears to be therefore one of the most urgent, important and profitable things to capture this 1 million KW. of power and turn it to profitable use. The benefit will accrue not to Ceylon alone, but to the entire world, as it would use an asset which appears and disappears within a short time, and which is completely lost if not put to use during this period. The scale of capital equipment needed, however, stands in the way. Even on the most economical basis, the plant needed to produce hydro-electric current cannot cost much below Rs. 1000 per installed KW, and on this account alone a capital outlay of Rs. 1000 millions will be required. To utilise the electricity in manufacture about 4 times as much cost will be required, and the total capital cost of putting the entire 1 million KW to full commercial use cannot cost much under Rs. 5000 millions. Even if spread over a 20-year programme, each year would call for the expenditure of Rs. 250 millions—Rs. 50 on the hydro-electric plant and Rs. 200 millions on the industrial plant using the electricity.

Is this amount of capital available in Ceylon? The answer is definitely, yes. Of the total national income of about Rs. 4,500 millions per annum, under the present system of controls some

Rs. 300-400 millions becomes surplus every year in private hands. There is no proper outlet for this capital, with the result that this amount necessarily has an inflationary effect. In Ceylon the inflationary force spends itself on increasing the value of real property, which year by year is increasing in paper value at this rate. So far, inflated values of real property have absorbed most of the idle capital, as this is the safest and most profitable form of investment, although the effect is definitely anti-social, and seriously damages our productive economy. However, this outlet for surplus capital may not last much longer, for with the Indian exodus which is just starting there will be many more properties coming on the market than the market can absorb. Besides a point will soon be reached (and if a depression turns up, the point will be reached instantaneously) when it will no longer be profitable to invest on real property. At that stage, the surplus capital (if it is permitted to accumulate in the private sector at all) will be looking for equally safe and profitable investment elsewhere, and it is suggested that there would be nothing safer or more profitable than the generation and use of electricity.

Let us assume, however, that the private investor in Ceylon would be too shy to put his money into a long-range venture of this type. There would still be no cause at all for despair. In the world, most industrial activities are handled by only a few gigantic combines, whose ramifications are world-wide and who possess unimaginably large capital and credit resources. To any of these combines the production year by year of 50 thousand kilowatts of new hydro-electric capacity per year would be child's play, and a matter of perfectly normal routine. There are such intimate tie-ups between them that the use of the generated electricity would be also a matter of routine. It cannot be a very difficult task to organise a strong and powerful combine with the sole object of capturing our hydro-electric potential and putting it to use.

But these international industrialists are cold-blooded businessmen, whose sole aim is private profit. Neither patriotism nor philanthropy would interest them to any marked extent, unless money was involved, and they would be as willing to invest in a war as in a private hospital. Life and death is of concern to them only to the extent of their 10 per cent return on the investment. It would be quite unrealistic to expect them to conform to political, social, or commercial conditions which in any way prevents them earning their 10%. On the other hand, there is the advantage that so long as they are allowed to organise things their own way to earn their reasonable profit, and are permitted to ensure the safety of their investment, they will not trouble anybody else in any other matter—unless, of course, they have got the taste and want to invest in something else.

On the other hand, Ceylon cannot allow to any private corporation the extent of power which, for instance, the United Fruit Co. wields in Central America, and would want to ensure that when the occasion is propitious the intruders can be expelled without fuss, leaving the entire undertaking to Ceylon to do as it pleases. There is no difficulty at all in making suitable arrangements. So long as the foreign investor has the majority holding of share capital, he can do what he likes, but there would have to be a condition that whenever a national of Ceylon wants to invest on it the foreign investor must sell. Simultaneously, a corresponding amount will be invested in a separate sinking fund, so that when the actual Ceylonese investment reaches 50%, there would be another 50% available to buy out the balance in one lump amount. It is almost certain that if the undertaking is really sound, and yields a regular 6 to 10%, there would be sufficient Ceylonese investment to buy out the original owners very quickly. The experiences of the Ceylonese investor in Ceylon undertakings have not been very happy so far, but he has never shown any reluctance to invest in a really sound concern.

If the Government of Ceylon wants outsiders to come in with their money to invest in what is really to them a strange land and economic climate, in turn the Government must clearly demonstrate its helpfulness, sympathy and active interest. A hydro-electric installation involves submergence of land, full control of some land above high water level, disposal of the water at a profit, sale of electric current at a profit, use of minerals to produce saleable goods, employment of skilled foreigners, payment of salaries in proportion to services, ample transport and communication facilities, freedom of purchase from any source, etc., etc. Any hindrance in any of these (and many other) matters would be simply disastrous, and would tell heavily against Ceylon itself in the end. So long as the Corporation is in existence idle questions of race, nationality, private ownership and rights, social obligations, labour laws, etc. should be purely secondary. The Corporation must have the right to do exactly what it pleases in Ceylon, and it will generally be found that on grounds of efficiency alone they will pay good wages, house their employees well, and work them under internationally acceptable conditions. Legal compulsions to do so would not only be entirely gratuitous but would create conflicts where none exist at present, and where none need exist at all. The sole object should be to get the whole undertaking into fullest working order in the quickest possible time. If it is considered desirable or necessary to introduce considerations other than those of plain efficiency, it is nothing but fair and reasonable that the foreign investor should first be paid off whatever he has brought in. Undoubtedly this is a hard decision to make, and one unpalatable to the purely

professional politician, but none who has the long-term interests of the country at heart can take serious exception to the principle. Many adjustments will no doubt be possible by mutual agreement, especially as the continuing goodwill of the Government would be essential for the success of the undertaking itself, but there should be no hampering legislation which will allow petty underlings of other Government Departments to interfere with the administration of the undertaking. Indeed, it would be wisest to regard this undertaking as what it really is in fact,—an arm of the Government itself.

It should be pointed out that in these hydro-electric plants the bulk of the investment would benefit Ceylon, even during the constructional stage. All the dams and other structures can be made of mass concrete whenever possible, and all the cement can be produced locally—by the Corporation itself, if need be. Probably 90% of the salaries and wages would accrue to Ceylonese. Thousands of houses will come up without any trouble to Government. Electricity will be spread far and wide throughout Ceylon, and it is well-known that standards of living follow the transmission line. Floods will come under control. The incidence of droughts will be a thing of the past. The Dry Zone will rapidly become populated. Thousands of acres will come under dry-season cultivation. Subsidiary industries will spring up of their own accord by hundreds and thousands. Industrial Estates can be created, and slumland factories in towns induced to shift into the countryside. There will be no possibility of a sharp *coup d'état* or act of war destroying an entire economy. The products of the industrial units will be bargaining counters of immense value in times of war. These and a host of other benefits will accrue so surely that the investment would be one of the most attractive in the whole of Ceylon. It is only because Ceylon is at the moment short of liquid capital that the aid of foreigners is required at all.

BOOK REVIEW

Report of the Commission on Government Commercial Undertakings—Sessional Paper XIX of 1953

The appointment of Royal Commissions to investigate and report on national problems is a practice which has been well developed in the United Kingdom. Often enough such reports have been the result of painstaking collection of material, intelligent study and able presentation of conclusions. Students working on similar subjects have found it possible to use such reports as fairly authoritative.

In Ceylon too, we have had a large number of able reports. The Pochkahanawala Banking Commission Report of early days, the Social Services and Police Reports of more recent times are certainly of a high standard. The contents of these reports were no less than an exhaustive study of most written material and a thorough investigation of memoranda followed by the examination of oral evidence.

This is not to say that all reports of Commissions appointed by the Government—British or Ceylon—have been of the same degree of impartiality as research conducted by academic men. Even so, political bias has often enough been avoided by appointing representatives of all political views if the subject matter was of national political importance or by appointing academic men to bring in that element of trained investigating ability to Government Commissions. It is for this reason that some Reports of Royal Commissions like the Report on the Machinery of Government or the Beveridge Report on Social Services in Britain can be used as authoritative documents.

The recent Report of the Commission on Government Commercial Undertakings, however, falls short of these high standard quite noticeably. The Commission was appointed on 16th April, 1951, to investigate and report on the operation of Government Commercial Undertakings other than the Railway, the Electrical Undertakings and Food Supplies, the causes of the losses incurred, the advisability of ceasing to operate some undertakings and the advisability of transferring the control over some to Co-operatives or Corporations, and finally to investigate and report on the nature of financial control exercised by the Treasury.

The Commission found that the Treasury control over Commercial Undertakings covered:—

- (a) numbers of employees in an undertaking;
- (b) rates of pay;
- (c) money provision for capital expenditure;
- (d) money provision for current expenditure;
- (e) system of purchase of goods;
- (f) contracts;
- (g) leave and holiday facilities;
- (h) accounting arrangements.

A control of this degree is quite clearly an enormous one. If the Treasury had been up to the mark not only in terms of speed but also in a fair devolution of authority, the commercial undertakings might not have suffered the consequences of red tape as has been experienced in Ceylon.

The evidence of the Controller of Finance which the Commission quotes with approval does not seem however to be an adequate exonerating clause. The Controller of Finance argued thus:—"The Treasury can make a decision very quickly. The real difficulty lies not in the making of a decision but in the provision of material for the making of that decision. Now in a commercial undertaking the Managing Director is aware of what is happening. He has complete knowledge of everything and you do not need to explain to him in detail about a certain matter. Therefore, you know that it is only an immediate problem that has to be placed before the Managing Director. But in the case of the Treasury, though Treasury Officers have a sound knowledge of things, still they may not know the intimate history of a particular thing, with the result that in order to get a decision from them you have to write a long report giving the whole history of it all and you cannot get a Treasury Official to agree on any matter without giving him the full facts."

Such an argument is untenable on two grounds. Except in the case of very small firms, it is wrong to assume that a Managing Director knows everything. The larger the firm, the less he knows of the details. In such a situation the really successful Managing Director is one who knows how to devolve authority leaving in his hands the decisions of policy. Perhaps the Controller of Finance was thinking of the fairly small firms in Ceylon. Could it be said that he was thinking of Kodak Ltd., or Unilevers or I.C.I.?

The real weakness of the Treasury is that it does not devolve responsibility partly because the Financial Regulations do not permit it. Partly also, it is a waste of time if a Treasury Official requires a full history of a case every time a decision is required. Since the Treasury does not maintain ready short histories of cases, items, etc., available on the spot, the delay involved is considerable.

It is true that the Treasury cannot take the total blame for the losses incurred in the Government's commercial undertakings. As the Commission points out they were due to:—

- (a) lack of preliminary planning;
- (b) bad budgeting through lack of an efficient organization for collection and study of market information; and
- (c) bottlenecks in production, breakdowns in machinery, inadequacy of raw material supplies, defective salesmanship and inferior quality.

That there was little preliminary planning is true in spite of Mr. Balfour's rider. This was because the war shortages hid some of the problems which normally would have been taken into consideration. In fact no one could have predicted with certainty the consequences of war's aftermath. Yet it was not the only reason. The lack of collective responsibility in the Board of Ministers when most of these schemes were put into operation placed a premium on the popularity of individuals. Ministers succumbed to their temptation.

Bad budgeting is not merely the result of poor accounting. It was also the consequence of political window dressing. There is nothing a Minister or Department would like to do less than paint a gloomy picture of its own work.

The other charges are largely concerned with the technical side of production. A merely technical statement of technical shortcomings, however, is an inadequate analysis. There is much that the political and administrative heads have to answer for. The wrong choice of men, the intension of corruption and political interference played no inconsiderable part.

What then are the remedies which the Commission proposes? It suggests that there should be no state management of an industrial undertaking. Where the State decides that it should be the "sole owner" there should be a public corporation; and for the rest Joint-Stock Companies with varying degrees of Government control. Co-operative Societies are suggested for small-scale and cottage industries.

Taking the sum total of the Commission's work into consideration, one finds that it has made the discovery that since almost all of the commercial undertakings are losses, a good number of them should be closed down. This obviously is the business-man's instinct to cut down losses. No one can quarrel with such a decision if all other avenues to keep them economically alive have been explored and found wanting. Yet one feels that the whole exhaustive analysis of the causes of the losses is meaningless unless it is shown that the removal of these causes is not possible. That is where the Commission Report is wanting. We agree that the undertakings listed in Chapter Five are uneconomical. The Commission has told us the reasons why. Can they not be removed to make them economical? What suggestions could the Commission make as an alternative to closing them down? Has the Commission found that they can never be run at a profit? Has the Commission found that these are not in the public interest? We do not know the answer to these questions. Yet it is the function of the Commission to supply them to the public. No Commission is necessary to give a prior judgement. Its place is to find the facts which the Government wants.

Even its other recommendations savour of this inadequate analysis and study. It is generally granted that Radio Ceylon should be a Public Corporation. Obviously the Government is not satisfied with this recommendation which is why a separate Radio Commission has been found necessary. Although our view is that Radio Ceylon should be a Public Corporation we are glad that the Government decided to investigate the question more adequately than the Commission has done.

Why should trawler fishing be under a Public Corporation? Is it because it is in the public interest? Is it because the industry's sole owner should be the State? The same questions can be raised for the other recommendations in page 80.

Nor has the Commission performed its task well enough in recommending a "Classic" type of Public Corporation? In fact the Commission seems to have missed the point of the last sentence of its own quotation at page 69. "In every case" it quotes, "an attempt has been made to create the kind of organization best suited to the enterprise in question" This is what we expected of the Commission to tell us. What is the organization best suited for Radio Ceylon? Is it the same type as is good for trawler fishing and cement? One is compelled to assume that the Commission has not given this subject the attention that is due to it. The literature on Public Corporations is a wide one. One seeks vainly in the Report to find out how much of this has been read and digested.

The Commission has done a fairly good job in finding the causes of the losses of Government's Commercial Undertakings but has omitted to take cognizance of the impact of politics on their subject of investigations. Its recommendations regarding the form of State control has not been the result of as careful study as one should legitimately expect because the main current of opinion in the Commission seems to be that the Government should not interfere in business management. It is wrong to think that a Government's intention in running certain undertakings is purely of a commercial nature, or in any case, ought to be so. Nor is it correct economics to argue that every loss to the State incurred through commercial undertakings is a loss to the nation. One has to investigate the total volume of incomes generated by State industries before one can come to a definite conclusion. The writer of this review has not done so. The answer to the problem, therefore, is as far as he is concerned still unknown. Even so, before a Commission comes to a particular conclusion, the facts should have been collected and analysed. Then only would its conclusions become judgements and not mere opinions. It is a pity that a considerable part of this Report is of the latter category.

S. W.

