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IMPORT SUBSTITUTION AND EXPORT PROMOTION

By

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The views expressed in this document are those of the author They do not therefore necessarily represent those of the Department of Planning and Economic Affairs or the Government of Liberia.

Import Substitution and Export Promotion

C O R R I G E N D A

Locus	Wrong	Correct
Page 12. line 9.	"absolute	"relative
Page 33. footnote 22.	1963 and 1964.	1964 and 1965.
Page 36. para 3. line 2.	individually and	individually than
Table 3. third equation under the table	- a - .5b	a - 0.5b
Table 4. Rubber, unit value, top line) Column: 1966		..
1967		..
1968		..
Table 4. Iron ore, unit value	unit value	Unit value, U.S. dollars per metric ton
Table 4. Source: (c)	Statistics p. 475.	statistics 1966.
Table 4. Source: (c)	New York, 1966	New York, 1968.
Table 12. page 2. line of Code No. 73	13,143	13,143*
Table 16. page 2., last column, line of Code No. 663/333 Pottery.		+

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Import Substitution and Export Promotion

I. INTRODUCTION

Originally I had thought that I would have to present a paper to this Conference on "Investment in relation to import substitution". This in itself is a very interesting and very difficult subject. However, while I was in the process of writing a paper on this subject, it transpired that I was asked to speak on "Import substitution and export promotion". What is more, a brief glance at the programme of this Conference makes it obvious that this session is the only one that deals with industrial development. By implication, a discussion on import substitution and export promotion should be extended to cover the main issues of industrial development as part of the economic development as a whole. No need to say, this is an enormous task for a speaker and obviously any useful result of a discussion can be expected only from the teamwork of all participants. This paper cannot serve more than to start this useful discussion.

Import substitution and export promotion are but two of the several economic development strategies students of development economics may find in the literature. These two economic development strategies came up in various academic writings and international conferences as early as the 1930's and were given much airing and attention from immediately after the Second World War. Curiously enough, the theory of economic development treated import substitution separately as a possible development strategy without any reference to export promotion. At the same time, some authors propagated export promotion and remained silent on import substitution. Their merits were analysed in an isolated fashion without regard to the other possible strategy. Until quite recently it was not discovered that these two possible development strategies were, although very loosely, interlinked. As it were, the various other strategies besides these two have not been linked up with import substitution or export promotion either.

Every student of the economic development in the Third World has witnessed how extremely controversial the discussion became on whether import substitution or export promotion was the right choice for newcomers. Keen observers of the academic debate and of actual economic life gather the impression that the academic conflict is but a reflection of a very material conflict of vested interests - both business and socio-political - behind the scenes. This last observation does not necessarily mean that all scholars would have been spokesmen of these interest groups.

In these circumstances, I found it extremely difficult to write a paper on import substitution and export promotion as a possible industrial development strategy in Liberia. My handicaps were numerous. Just to name two: firstly, I know very little of the Liberian scene; secondly, I am convinced that an industrial development strategy based on something else than import substitution and export promotion would be, in the long run, better for the developing countries of tropical Africa. Therefore when I present this paper now, I run the risk of being accused of working like what Lord Balogh called "Airport Adviser". And I myself dispise airport advisers. I still had to take the risk because both the subject of this paper and the venue of this Conference were so dear to my heart that I could not resist the temptation to accept the invitation.

This paper would have remained even poorer than it is now but for the excellent contributions by Messrs. S. Tezak and J. Bright who have actually written the IV chapter entirely and have contributed to the discussion of foreign exchange problems in Chapter III and to the discussion of the scope of import substitution in Chapter V. The author gratefully acknowledges the assistance by Professor E. Vielrose of the Nigerian Institute of Social and Economic Research who kindly calculated the past and projected trend-line of imports and exports of Liberia (See Table 3). I must extend my heartiest thanks to the staff of the Department of Planning and Economic Affairs of the Liberian Government and of the Nigerian Institute of Social and Economic Research for the untiring and valuable assistance in both hunting up the necessary data and in typing facilities.

My paper is organized in a fairly haphazard manner. Chapter II. discusses the merits and demerits of import substitution and export promotion in a Liberian context. Out of the issues discussed in Chapter II., I selected the foreign exchange motif for further discussion in Chapter III. Chapter IV. contains a pragmatic discussion of the net national benefit of import substitution and export promotion industries.

Having dealt in Chapters II. - IV. with the question of advantages of import substitution and export promotion, I assume that this line of development will be decided on and next I turn to the question of what development of this kind would be possible and what would be its consequences. Therefore in Chapter V. the paper gives an analysis of what scope seems to exist for import substitution industries in Liberia. From there, in Chapter VI., I go on to calculate the estimated effects of such industries on employment and capital investment.

The last chapter, of course, gives a brief summary and some tentative conclusions (in the course of which I cannot hide some of my alternative suggestions and I even try to peep into the far future).

II. IMPORT SUBSTITUTION AND EXPORT PROMOTION

Although the subject of this paper is both import substitution and export promotion, for obvious reasons, ... the better part of it would have to be yet on import substitution.

What indeed is import substitution? "A single definition of 'import substitution strategy' for development is not available".[1] As a matter of fact, scholars are in disagreement about what import substitution really is. Some have actually been engaged in extensive discussion of the concept itself[2] but I do not want to drag this Conference into semantics.: "In the broadest terms the expression /import substitution/ is used to refer to all arguements to the effect that modern developing countries cannot rely on exports as an engine of growth. Consequently, development strategy must consist of 'inward-looking industrialisation' rather than following the dictates of comparative advantage in each given time period. In this broad sense the term encompasses, the views on deteriorating terms of trade, import reducing technical advancement, monopoly power, commercial politics, etc. that have been put forward as explanation of the decline in the capacity of traditional exports to generate and sustain growth. In the narrowest terms, import substitution refers simply to the take-over of an existing domestic market from the foreign producer by prohibiting his imports in one way or another. One may then say that the general argument that exports can no longer lead to sustained growth leads to the specific policy of restricting imports to encourage their domestic production".[3]

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1. Bruton, H.J.: "Import substitution and productivity growth". The Journal of Development Studies, April 1968, p. 306.

2. See e.g. Lacroix, J.L. "Le concept d'Import Substitution dans la theorie du developpement economique. Cahiers Economiques et Sociaux, June 1965, pp. 141-175.

3. Bruton, op.cit., p. 306.

I had to quote Bruton's definition in full in order to underline my point in the previous chapter about the tendency to counterpoise import substitution against export promotion. It should also be noted from Bruton that he thinks a simple import restriction policy would generate domestic production. Needless to say, it is not as simple as that. While, on the other hand, the growth of domestic production does not necessarily substitute imports.

We have not yet asked the question of what types of commodities should be produced locally to substitute for their imports. In other words, what is the actual sectoral coverage of import substitution. "Import substitution concerns not only industrial production. Imports of agricultural products can be replaced too".[4]

In fact, not only industrial and agricultural products but also other kinds of products such as electric current as well as various kinds of services can be and are generally imported, and can be therefore substituted. With a slight extension of the term, we may even think of import substitution of technical know-how and skills.

Historical evidence, however, shows that import substitution is in most cases restricted to consumer goods. "Import-substituting industrialization has diverse origins, but is distinguished from previous industrialisation experiences by its high sequential or tightly staged character, with final demand goods being produced first almost exclusively on the basis of imported inputs and equipment".[5] Hirschman's observation that import substitution of consumer goods is almost exclusively based on the importation of inputs and equipment leeds us to the investigation of how import substitution really reduces import. "Import substitution does not necessarily mean reduction in imports. The demand for goods has in general, an increasing trend (caused i.e., by the growth of the population). Thus import substitution does not exclude a rise in the quantity of imports. Nor is a change in the composition of imports a necessary consequence of import substitution. We can imagine import substitution being effected by increasing domestic production only without any change occuring in volume or composition of imports. The concept of import substitution has several meanings. We may say that there is absolute import substitution when domestic production is increasing in size, irrespective of possible changes in total demand. In this sense every increase in domestic production

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4. Vielrose, E. "Import and export substitution in Nigeria". Nigerian Journal of Economic & Social Studies, July 1968, p. 183.

5. Hirschman, A.A. The political economy of import substituting industrialisation in Latin America. Quarterly Journal of Economics, Feb. 1968.

means that demand is met by domestic production to a greater extent than before. Relative import substitution would mean that a larger share of the total demand is met by domestic production. With expanding demand this is possible only if domestic production is growing more than proportionately as compared with demand".[6]

In his analysis, Vielrose has pointed to the theoretical possibility that "import substitution" may go hand in hand with an increasing burden of import in the balance of payment.

Having briefly looked at the limitations of import-substituting industrialisation and its relative nature one is really interested to know how import-substituting industrialisation succeeded where it was historically first employed on a massive scale and almost exclusively, i.e. in Latin America. "Available evidence for a number of countries suggests that such a strategy has, in fact, produced rather hopeful rates of growth for a decade or so".[7]

I am sure that most of the Latin American economists do not regret - even in retrospect - that import substitution industrialisation was launched in the early 1930's. In fact with the great economic crisis of 1929-32 in the developed world and with the inavailability of foreign exchange, the countries in question had really no other option. The problem really is not that import substitution was started and effectively promoted by import restriction and customs protection but that it was exclusively done. As a result "the simple and relatively easy phase of import substitution has reached or is reaching its limit in the countries where industrialization has made more progress".[8]

The process of import substitution not only soon exhausted itself but also led to internal difficulties. "A rapidly expanding industrial sector necessarily results in an expanded demand for fuels, raw materials, basic metals, energy, transportation, communication, financial and commercial services. It also requires skilled workers, trained administrators and entrepreneurs. Moreover, in view of the strong stimulus to urban concentration derived partly from industrialization, the need for urban services increased very fast; housing, schooling, water supply, electric energy and drainage systems, as well as the channels for food distribution were

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6. Vielrose, E. op.cit.

7. Bruton, op.cit., p. 307.

8. Prebisch, R.: Towards a New Trade Policy for Development. Report by the Secretary-General of the United Nations Conference on Trade and Development, United Nations, New York, 1964, p. 21.

under pressure. The rapid advance of the industrial sector and urbanization revealed the insufficiencies and the inflexibility of supply of these sectors and originated stresses and tensions throughout the economy".[9]

Sunkel's description of the situation that has developed in the course of import substitution is exactly what was meant by Prebisch when he said that the "easy phase" was over. To continue the import substitution process after the end of the easy phase "means moving into activities with opposite characteristics: more complex technology, large initial investments, and large (relative to domestic market) minimum efficient size".[10] The bottlenecks and tensions only appeared in Latin America when import substitution was done <u>for too long</u>. The trouble was the insistence on a development policy which had already lost its capacity to serve the initial purpose. Therefore, it is sometimes thought that another development policy introduced in time could have averted the stresses and tensions. For instance, Prebisch believes that a "more rational policy would have given priority to import substitution in respect of goods which could be produced under more favourable conditions than others, not only consumer goods, as has generally been the case, but also raw materials and intermediate and capital goods".[11]

Similar to his analysis is that of Sheahan who found from Colombian experience that "the country pushed import substitution too fast, but the form the process took was biased in such a way as to increase dependence on import supplies and equipment and then use up so much foreign exchange for <u>current</u> production that adequate (enough to maintain growth) imports of capital goods became impossible".[12] It seems as though economists had been late to discover that import substitution (just as any other policy) has a lifespan more or less limited in time. What is more, we have failed to discover and therefore to call attention to the fact that even <u>within</u> the useful lifespan import substitution policy has <u>various stages</u> that have been first spelt out distinctly by Lacroix.[13]

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9. Sunkel, O. Structural change, development strategies and planning in Chile (1938-69). Institute of Development Studies, Conference on Crisis in Planning, 1969. Univ. of Sussex.
10. Bruton, <u>op.cit.</u>, p. 307.
11. Prebisch, <u>op.cit.</u>, p. 22.
12. Sheahan, J.B. Imports, Investment and Growth: Colombian Experience Since 1950. In the collection of papers presented at the Bellagio conference of the Harvard Development Advisory Service. (My italics. L.E.L.)
13. See his quoted study.

When the import substitution process reached what Lacroix called second stage, i.e. the substitution of consumer goods in the first stage were followed now by the substitution of raw materials and other imports for what was now local production of final demand goods; this dramatic change was not discovered and the policy line was not correspondingly adjusted. As you would see from my argument later on, I basically agree with the analysis by Prebisch and Lacroix of what was wrong in Latin American import substitution. I do not see any reason why the failure of the later stages of import substitution in Latin America should be attributed to institutional or psychological reasons. I was greatly surprised that such an outstanding scholar and pathbreaker in development economics as Hirschman should have taken this blind alley of reasoning by psychic motivation.[14]

I believe that it was perfectly all right to deal with Latin American experience of import substitution development policy at such length because for us it is not just economic history of a completely different part of the world. Far from it. It is a useful study of what we here may have to face in the near future. It is useful so that we can avoid the pitfalls which have trapped others, so that in a few years ahead it should not be said of Liberia what was briefly stated in the report on industrial development by a study group of a major conference recently. In the course of its analysis of what went wrong with industrial development in the developing countries this study group said, among others, that "the attempt to economise on foreign exchange through import substitution has led more to an alteration in the composition of foreign exchange expenditures than to foreign exchange savings, with an additional legacy of very high cost plants".[15]

Before turning to the discussion of import substitution policy in a Liberian context, I want to make a brief remark on another type of reasoning which - in certain parts of the world -

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14. E.g. in his quoted article: "it becomes important to understand ... the resistance of the industrialists to backward linkages investments". I much more agree with Hirschman when he turns from psychology to economic reasoning pointing to the combination of complex currency over-valuation and import control that made exporting impossible. I also agree with him when he searches for the reasons of failure in the lack of adjustments in policies.

15. Report of the Study Group on Industrial Development. Conference on the Crisis in Planning, June - July 1969 organised by the Institute of Development Studies at the University of Sussex, Britain.

resulted in something that was a combination of import substitution and export promotion strategies of industrialisation. At the base of this reasoning was a general desire to achieve autarky as far as possible. After a few years of experimentation even this group of countries has given up the autarkic-minded development policy. Fortunately, they did so before the resulting inefficiency, the slowness of technical progress and the increasing foreign indebtedness became disastrous. In the present structure of world industry, the theory of autarky is dead and - I hope - buried. An autarkic development policy may have some time ago suited big, very big, countries like U.S. or Soviet Union which were endowed with practically all natural resources they needed for their economic development and which had enough markets inside and around them. Even these countries have abandoned autarkism since long.

Autarky is even more nonsensical in a small country. Even more so if this small country has a specific situation as far as climatic conditions and natural resources are concerned. In cases like this, the only solution is just the opposite of autarky, i.e. to adjust the development policy to the facts of life, to the fact that the economy is an open one which means that development policy makers have to think in terms of international division of labour. I must say immediately that when speaking about international division of labour, I do not mean what certain other scholars (like Professor Myint, for instance) mean by this term, that is to say, they want primary commodity producers to continue selling their primary products and to continue buying manufactures from the "traditional" suppliers. In this sense, international division of labour is reactionary inasmuch as it helps the rich against the poor. We must use this term properly. The proper meaning of international division of labour is that participants in this division of labour must have equal chances. Practically all nations of the world do already have or can in the future develop some special line of production of their own in which they are becoming the best in the market and the products of which industries they can sell at mutual advantage to partners with other specialisations.

Take the case of Japan which a century ago was a primary producing country, selling - among others - rice to the rest of the world (and I guess the sales price of their rice was not so beneficial to the Japanese rice farmers as the purchase price of the rice now imported into Liberia is generous to those who sell it to us). I attach Table 1. just to make this point clear. Table 1. shows a few selected items of Japanese imports in four recent years.

Maybe there will be people who will be surprised to know that as much as 9 per cent (1) of the value of the total import of Japan was spent on cereals, out of which about 1½ per cent was spent on rice. The quantity of rice imported into Japan was increasing from 1963 to 1966 so that now about 20 pounds (weight) of rice is imported for each head of the nearly 100 millions of Japanese population. I am sure the Japanese economic politicians are not unhappy about this situation as long as they can feed their population with imported food selling high-quality and specialised manufactures in exchange.

I do not think that this stage will be reached very soon by Liberia, still I want to call attention to another reason why foreign trade should be regarded as necessary part of economic development. I know of some countries which have to buy several kinds of commodities from their trading partners simply because otherwise they could not sell their own export articles to such partners. India, U.A.R. and the countries of the Eastern Blok, generally - the countries without convertible currencies often insist on this type of trade relations. For the time being Liberia does not trade too much with these countries but who knows when it will have to, and who knows when such big trading nations as France or Great Britain may be compelled to do something similar in their trade relations to what is now happening in the above named countries. To end now my remarks on autarky as a deplorable economic policy I would only say, I hope, there is nobody here who would ask for more arguments. This country is satisfied with its Open Door Policy.

As we have said earlier, import substitution may mean both the substitution of food imports and the substitution of import of manufactures. Let us now consider the results expected from import substitution and let us do this according to the various reasons why we may wish to substitute imports.

If the main purpose of import substitution is <u>foreign exchange saving</u> it should be remembered that import substitution is not always a net foreign exchange saver, it may even result - at least in the investment stage - in extra foreign exchange expenditure. Normally, it only alters the composition of the foreign exchange spending. Even in the best case, the amount of foreign exchange saved cannot be very significant. All these apply mainly to the substitution of import of manufactures. It has to be studied yet what happens with foreign exchange savings if food presently imported would be produced by local farms. I guess that even in substitution of agricultural products, not <u>all</u> the previous import

exchange spending can be saved because some equipments, fertilisers, insecticides, etc. as well as expertise will have to be imported to bring about an essential increase in local food production.

If import substitution has employment as its purpose, it would apparently be much easier to achieve this purpose than the aim of foreign exchange saving. Increased employment will obviously help social and political development and it will, no doubt, give rise to new demands, that is, open up new markets for both food and industrial goods. On the other hand it should be remembered that the import substitution industry (if we establish such just for the sake of employment, without regard to other points of view) might have a comparatively low productivity, thus requiring a comparatively very high wall of customs protection, and selling its products at a very high retail price. Therefore, what we really wanted, i.e. an increase in the real purchasing power of the population would remain imaginary and nothing more would be achieved but keeping people busy.

If the purpose of import substitution is to retain the profit on processing in the country then, again, this will not happen automatically. Let us assume that import substitution does really retain the manufacturers profit in the country, which is being the same as assuming that equipment and raw material can be imported at reasonable price and that the new local industries will work at a reasonable profit rate. Even if this can be achieved, it still remains a question where and on what the additional domestic profit will be spent. If government does not want to be engaged in any measures of income redistribution, it may easily happen that the incremental domestic profit will go into conspicuous spending which is likely to mean spending on imports, as luxury goods are not produced in the country. Obviously, if this is going to happen to the new profits, this particular purpose of import substitution will defeat itself.

If the purpose of import substitution is to create new markets by creating new incomes, that is to say, wages and salaries for the employed, profits for the entrepreneur, and tax revenue for the government, then we have to analyse what kind of market this additional demand will have a propensity to go into. The new market may just be abroad, that is to say, the demand will be for more imports. The new market may just as well be such that opens up new possibilities for import substitution but these imports will not be substituted automatically. It will call for very carefully designed, foresighted development policy and institutions to guarantee that the market newly created by import substitution will

remain within the country. Even in this case, this market will probably remain too small to reach the minimum economic size in most of the new industries. An international agreement of several neighbouring countries could drastically change this situation.

If the purpose of the import substitution is to change the structure of the Liberian economy (which is really the crucial issue in economic development), then the answer will definitely be positive as far as manufacturing import substitution is concerned. We have to watch only that the present lopsided structure of the economy does not swing over to another imbalanced structure. What concerns the substitution of agricultural imports this question cannot be answered as simply as in the case of manufactures. Much more research has to be done to find out what structural changes would happen if all or almost all imported food were to be produced locally. (It might be really interesting to see what happened in the agriculture of some of the countries of the European Economic Community.) Without prejudicing the research, my guess is that large scale substitution of food imports by local agriculture would rather delay than promote that structural change which is the main mover of economic and social adevelopment.

The above list of the possible reasons for a government to embark on import substitution development policy is far from exhausted. But assuming that we have our main purposes clear in our minds and we carefully weigh the pro's and the con's with regard to each of our purposes, it is then fairly easy to make a judgment with regard to one individual sector or another of agriculture or of manufacturing industry whether or not it would be beneficial to start import substitution in it. Needless to say, however, that we have to have fairly distinct national development objectives, and possibly quantified criteria in respect of such objectives, so that an economic planner can really tell the pro's from the con's and can really measure one against the other or one sector against another.

I have said that given the above mentioned conditions it is easy to judge agricultural or industrial sectors individually. However, we should not forget about one of the commonest errors of economic planners (especially in the early stages of development planning), namely the superficial belief that a collection or a handful of "best" projects is the best possible national economic plan. This is far from true. In this gathering, there is no need for me to emphasize the utmost importance of linkages. All I want to call attention to is that a loose collection of, let us say, 10

individual import substitution industries may in toto be worse from the point of view of satisfying the development goals, than an alternative group of investments where, suppose, only 8 of the 10 "best" are retained and two or three individually rejected ones are added provided that this new collection of projects is not just a random heap of investment items but it is carefully selected so that they are tied together in a system of forward and backward linkages. In this case something "less" than the "best" can do more in substituting import in Vielrose's sense of "absolute import substitution" than the first unrelated random group.

Therefore, there is the need to link up projects into a system and the need to test the system as a whole from the point of view of development objectives. But even this is not enough. An individual project just as a system of projects, can have dramatically different economic and social effects in the short run and in the long run. For example, a high labour-intensity technology selected in order to ease an immediate pressure of unemployment may, in the long run, turn out to be immensely uneconomic, requiring subsidies and, thus, directly and indirectly reducing the purchasing power of our people. Consequently, when planning import substitution industries, it is necessary to look at both the short term and long term effects.

Lastly, I would just mention that the economic consequences, that is costs and benefits of import substitution investments may differ from the point of view of the company and of the nation as a whole. But this will be dealt with in Chapter IV.

We can conclude then that in a Liberian context, that is to say, in the early stages of industrial and therefore of economic development, import substitution is and will, for some time more, continue to be a positive, acceptable potential economic development policy. However, it has to be added immediately that the lessons of import substitution development elsewhere should be carefully studied so that the failures are avoided. This practically means that (a) this policy is not pursued longer than it is useful; (b) it is not applied exclusively; (c) as soon as possible, it is extended to include substitution of raw material import in addition to substitution of consumer goods import, to be followed later by that of machines; (d) such sectors are selected that fit well together in the best system of linkages; (e) the long term benefits are not lost from sight; (f) the whole set of our import substitution industrial structure is so designed that it fits into the envisaged future structure of the economy, that is to say, into the envisaged future structure of domestic production and foreign trade.

To summarise the general approach to import substitution and export promotion, I wish to quote a few remarks here from an old paper of mine.[16]

"There is a discussion on whether the industrialization of African countries should be based on import substitution or export promotion. This discussion seems to have floated even higher in the atmosphere away from realistic possibilities and needs than the previous ones on labourintensive technologies and on small-scale industries.

The industrialization which is fully import substituting is:

(a) either producing at very high cost because it is small scale and needs exaggerated customs protection;

(b) or it is limited to sectors producing simple consumer goods which can hardly be said to serve the achievement of a true economic independence; whereas if it is extended to include heavy industries and also mechanical engineering within it, then it might be easily the case that import was not absolutely substituted, only raw material import and capital equipment import was "substituted" for import of finished products.

Industrialization based on export promotion is not really industrialization if we insist that the term industrialization should not be used in such a broad sense as it would make it meaningless. Namely, what has been exported so far is either agricultural produce or raw ores or other minerals. Increasing export of this kind will not necessarily be followed by overall industrial development. But even if some ancillary industries grow up to service plantations and mines, an increase in the conventional exports will never sustain an accumulation of such an extent which would suffice the needs of real industrialization. With some authors, the development strategy based on export promotion is interpreted so that industries producing for local and export market should be established. This argument is much closer to my own, still I would not consider it as entirely correct because establishing such industry is excessively hazardous: new industries not yet established in the market may find it extremely difficult to break their way through into international market even if the quality, the up-

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16. Lukacs, L. E. "A strategy of industrialisation in the developing countries of tropical Africa". Economic Review, June 1968, pp. 721-738.

to-dateness of the product and the reliability of their shipments comes up to the standard of competitors, and there is no doubt about it that to satisfy such requirements would involve new industries in expenditure that cannot be imagined to be covered without vast government subsidies. (A probable exception to this might be several industries, based on processing of such local raw materials, in the world supply of which Africa has a monopolistic position or at least a leading share. For example, 85 per cent of world cobalt production - excluding Soviet Union - comes from Africa. 85 per cent of palm oil, 60 per cent of cocoa, 35 per cent of mineral phosphate - (Soviet Union excluded), 35 per cent of chromium, 22 per cent of copper of world production is from African sources).

Both the import substitution and export promotion strategies of industrialization are built up on a seemingly correct fundamental idea, but both are ineffective if applied exclusively. Neither of these would solve even at least keeping the balance of payments at equilibrium.

Fundamentally, an improvement of the foreign exchange position is aimed at by the strategy of import substitution and that of export promotion but it is found that these strategies very seldom achieve this aim. The correct nucleus of these suggestions has to be retained while they should be freed from lopsided exaggerations and should be applied in a forward looking fashion. In plain terms, this means that when deciding on the direction of industrialisation it is not from the present, production structure apparently patchy, with empty boxes, it is not the list of commodity imports and exports at present that have to be considered as starting point because - as it has been pointed out by many authors - the substitution of such import by local production and the increase of such export would more often than not deteriorate instead of improve the whole of the national balance of foreign exchange earnings and expenditure. It is only after a thorough and simultaneous investigation of the internal resources and the external supply and purchase markets as well as the growth of trends of both the ccuntry in question and its neighbours and trading partners that it can be correctly determined what sectors, what groups of commodities would most rapidly and effectively contribute to the growth of national income, would provide largest funds for further domestic accumulation and would secure maximum net foreign exchange earning.

Various sectors of industry would satisfy these last three requirements at varying degrees. It frequently happens that one of the requirements can only be satisfied at the expense of non-satisfying the other. Generally, those industries have to be selected where this conflict is the smallest. Particularly, such sectors of industries would be chosen which are expected to satisfy to the most extent that one of the above three criteria which is deemed to be the most important in the given situation of a country. It should not worry us that by so doing we have not all at once substituted all importation as long as we can thereby improve the balance of trade so much that it will be possible to continue importing the temporarily neglected segment of the consumption spectrum. It should not worry us that we have not increased the volume of all the export by leaps and bounds as long as we have thereby improved the balance of trade (namely by having started the exportation of products the terms of trade is not worsening) to such an extent as makes it possible to maintain even certain unfavourable exports necessary to earn the indispensable foreign exchange. This seems to be the moral of the international experience for tropical Africa with regard to finding its place in the international division of labour in the framework of an ever increasing specialisation on international scale".

III. THE MEANING OF FOREIGN EXCHANGE SAVING.

Liberia is a very special case from the point of view of foreign exchange saving. Special in the sense that specific Liberian conditions make it necessary for us to rethink the actual day-to-day value of foreign exchange saving. Generally, the saving of foreign exchange and if possible the accumulation of foreign exchange reserve (or for that matter, gold reserve) are regarded as undisputable good and unnecessary spending of foreign exchange or the decreasing of reserves is normally regarded as evil. Assuming that we in Liberia would follow the generally accepted reasoning and would try to gear our economic policy towards maximising foreign exchange saving and reserve; would it follow then that we can expect the same success from such a policy as could be expected in other places? There are special conditions that make me say the results would be different.

Firstly, it is an essential feature of the Open Door Policy that inflow and outflow of capital, inclusive of repatriation of profit and capital invested by foreign entrepreneur, as well as the transfer of savings by citizens, is not restricted at all.

Secondly, Liberian currency is hard currency and at the same time convertible. So convertible, indeed, that it need not be converted at all. It is "converted" into U.S. dollars as it stands. Consequently, it is very difficult to encourage inflow unless investment in Liberia will be safer and more profitable than in the United States. And even if restrictions were imposed by law, it would be practically impossible to control the outflow.

Thirdly, another special feature is the credit-worthiness of Liberia (from the creditor's point of view the image of the Great Brother in the background is very re-assuring). This high degree of creditability makes it comparatively easier to get loans from various parts of the world. Which means from our point of view that it is not so absolutely necessary for this country as it is for others to have liquid reserves all the time. It has to be remembered, however, that borrowed money has to be repaid sooner or later and credits have to be serviced in the meantime.

A brief look at the above listed foreign exchange situation in Liberia will convince that the urge to save foreign exchange is less pressing in Liberia than elsewhere. On the other hand, if for one reason or another it would be decided to save foreign exchange; e.g. an import substitution development policy would be selected in order to save foreign exchange, it would be very difficult to really achieve this aim because there is very little to stop spending the very foreign exchange which was just saved. Let us look again at the three special conditions mentioned above: Open Door Policy, convertibility and credit position; and it will be clear that at the present time, if there is any encouragement of money flow at all, this is rather outward bound than inward bound.

We have described the situation why attempts to save foreign exchange would not really succeed in doing that. This is why, although we may find lines of production where import substitution can, in principle, save foreign exchange; in the conditions described above, investing foreign exchange into such industries will be similar to trying to fill up a bottomless can. Therefore the free convertibility of the currency and the restriction-free monetary system are embarrassingly affecting the development of manufacturing industries. From a purely industrial standpoint, it would be possible to promote import substitution and export

promotion industry by adjusting the custom duties and the monetary stipulations of the Open Door Policy. Unless restrictions on money flows and importations are imposed, it is very difficult (but not impossible) to make import substitution save foreign exchange. Let me add right away that I do not think it is possible or desirable right now to make drastic adjustments in the currency and trade policy. I think that in the very near future (that is, as long as the Liberian market does not grow into an attractive one to foreign capital) it is better to lure in the foreign investment than to scare it out. (The treatment of the transfer abroad by citizens might be a different story but I am not so sure that this is significant enough to make it an issue).

Moreover, an imposition of restrictions on capital movements and on importations cannot do all the job alone. If only this is going to happen something similar to the Latin American experience may follow. In order to make currency and import restriction serve their purpose these have to be coupled with a more active participation of government in industrial development, that is to say, at least a short step towards "mixed economy". And I have doubts in my mind that Liberia may wish to do this right now.

From the point of view of import substitution or export promotion development policy (or, in fact, of any kind of development policy) the importance of the foreign exchange position of any country is so great that I must make a short diversion to discuss the possible future foreign exchange situation of Liberia before I return (in the next chapter) to the discussion of my subject proper, that is, import substitution.

Above I have made reference to a "bottomless can". At closer look, it would be found that the "can" which contains the foreign exchange of this country is not really bottomless or at least it can be hoped that its bottom can be kept in its place for some time more to come without dramatic government interference. I want to make two points to verify this statement. First, I want to show you a tentative forecast of the foreign trade; second, I will make a few remarks on Liberia's likely position in the future on the world market of iron ore.

Table 2. is an historical series of Liberia's import and export of merchandise (i.e. it excludes the so called invisibles). It is seen from the table that in the 14-year period between 1953-66 the imports of Liberia have grown from 19 million dollars to 114 million dollars, that is to say, slightly more than six-fold. The growth was not at even pace: between 1953 and 1959

there was a slow but steady increase; between 1959 and 1962 there was an extremely sharp upward-shooting of the import figures; followed by a 4-year period of fluctuation at about the amount of 110 million dollars per annum. In the same period Liberia's merchandise exports have grown from 31 million dollars to 150 million dollars, that is to say, almost 5 fold. The growth of export made it sure that - with the exception of three years: 1961-63, that is, exactly when imports were rising very rapidly - the trade balance was almost always positive. In 1966, for example, the trading surplus was 37 million dollars. This is exactly the point I want to make; namely, as long as a trading surplus to the tune of nearly 40 million dollars, that is, about ⅓ of total imports can be kept up, there should be no threat to the can losing its bottom.

A question that interests me more than the present trading surplus is whether this situation can or cannot be expected to continue in the future. Therefore I had to undertake an excercise in forecasting trade figures into the not very distant future. I am presenting you two different forecasts and those who know this country better may be able to tell which of the two forecasts is nearer to reality.

In the first forecast my approach was the following: I assumed that both import and export will continue to grow in the future at the same annual growth rate as was their average annual growth rate over the period under investigation, i.e. 1953-66. This actual past annual average growth rate was 15 per cent on the import side and 13 per cent on the export side. Assuming that import continues to grow at the rate of 15 per cent every year from 1966 onward, then in 1975 the value of import will be 396 million dollars, that is, roughly 400 million. Similarly if export continues to grow at 13 per cent rate per annum, the value of export will reach 450 million dollars by 1975. This means that a trading surplus of slightly more than 50 million dollars will remain with us to support my hope that the can still has a bottom.

I have, however, the instinctive feeling that neither import nor export may continue to grow at the rate applied in the above described first forecast. Therefore, I had another forecast made with a different assumption. In the second forecast the assumption is that both imports and exports will continue to grow with the same amount of money year after year as was the average amount of growth between 1953 and 1966. In a more sophisticated mathematical language this is the same as to say that to the diagram showing the imports of every year between 1953-1966 we

have fitted - with the method of the least squares - a linear trend-line and obtained the forecast of import for the year of 1975 by a simple extra-polation of this linear trend-line at the same tangential angle. A similar straightening out of the past trend-line and forecasting it into the future was done in respect of export, too. The details of this forecasting are shown in Table 3. Here are the main results. Both imports and exports just slightly exceed 200 million dollars. It will be noted that the trade surplus disappeared. We have a trade deficit, however small. (Not that it is very important but for those who are more interested in the details of this forecasting excercise; I would just mention that it is in the year of 1973 when the linear trend-line for import is supposed to cross the linear trend-line for export.)

Obviously, all forecastings of this sort have to be used with caution. If I were to be asked which of the two forecasts I think will prove true, I would be inclined to say: neither. I guess that - unless something unexpected happens - the trade in 1975 is very likely to be between the higher and the lower of the two forecasts.

The point is not the exactitude of these forecastings; they can never claim to be exact. The usefulness of such forecasting is in that it may spotlight undesirable consequences of economic development policies.

In Table 4. a fairly long series of statistics is presented on the physical volume and the value of Liberia's exports of rubber and iron ore. I just want to call your attention to the need of investigating the possibility of increasing these exports in the future. By exports I mean export earnings and not volume. Export earnings can be increasad by increasing the volume exported at constant prices or try to fetch higher prices for constant volumes, or any combination of these two. From this point of view it is remarkable how wildly the prices of both rubber and iron ore fluctuated (though the fluctuation was more marked with rubber). Equally important is the fact that both prices had a definitely decreasing tendency. This was the first of the two remarks I wanted to make on Liberia's future foreign exchange position. The second remark I have to make on the foreseable foreign exchange situation concerns the future position of Liberia on the world market of iron ore.

The Steel Commission of the U.N. Economic Commission for Europe made a forecast of iron ore production in 1975, an abridged version of which is reproduced in our Table 5. A study of this table will reveal several salient facts of importance from the

point of view of Liberia's predictable share of the iron ore market in 1975. Firstly, Liberia is going to be Africa's largest producer of iron ore, in fact, producing three times as much as the second largest, and producing more than one third of Africa's total. Secondly, the iron content of the ore (that can be calculated by relating the iron content - second column in our table - to the actual weight - first column in the table - of the ore) ranks Liberia very high, actually sharing the second place, (Australia being the first) in this quality ranking with Brazil and Venezuela. Thirdly, even in the world total of the production of iron ore (when measured in iron content) Liberia is number 8., which is very high, indeed, for as small a country as this. A bit more analysis is necessary before we can say anything of the implications of this situation.

Table 6. gives the iron ore production (measured in iron content) of the top ten producers of the world in 1966 (actual) and 1975 (forecasted). Over this period world production will go up from about 320 million tons (of iron content) to 460 million tons (of iron content), i.e. about one and a half times. At the same time, the top ten producers reinforce their leading, if not monopolistic, hold of the production sphere. The share of the ten top producers was 81 per cent of world total in 1966 and is going to be 83 per cent in 1975.

Alongside with this increasing production and with the strengthening of the top producers' position some of the leading producers are pushing up their production very fast. Soviet Union, for instance, that produced 85 million tons in 1966, appears in the ECE forecast with 150 million tons which brings up the share of USSR from 27 per cent of world production to 33 per cent. Besides, there are newcomers in the iron ore production: the discovery of high grade iron ore in Australia must have impressed the Steel Commission of ECE so much that they estimate Australia's production at 22 million tons in 1975 which is five per cent of the world production and which ranks Australia as the 6th largest producer. All these make it even more remarkable that Liberia retains her 8th place in the iron ore production of the world in 1975.

Let us go one step further in the analysis of the situation. It is common knowledge that the production of high grade iron ore is much cheaper than the mining of low grade ore when the production costs are related to the iron content. This means that the producers of high grade ores may reckon on a sort of premium price on the world market while those who want to sell low grade ore are penalised in the prices their ores can fetch. We have no means of

telling with how much "premium" it would be reasonable to calculate for every percentage of iron ore content above the world average just as much as we cannot tell how much "penalty" should be deducted from the value of ores inferior in quality to the world average. But one thing is definite. That the high quality of the Liberian ore makes its easier to get good price for it just because its iron content is higher than the world average. In 1975 the world produces iron ores with an average of 56 per cent of Fe in it. The total of the top 10 producers will have a higher content of 59 per cent and at the same time the Fe content of the Liberian ore will be 64 per cent. Only as much as 17 per cent of the world production is of the same or higher quality than the Liberian ore.

Another factor to be seen when trying to predict Liberia's position in the iron ore market is the trade in iron ore as between producers and consumers. Table 7. contains the iron ore imports and exports in 1966 of those 10 countries that are going to produce 5/6 of the world's ore in 1975. USSR is exporting ore mainly to the countries of the Eastern Blok. United States is importing much more iron ore than she is exporting. France is both importing and exporting ore, her exports are exceeding her imports but the quality of the ores France exports is very poor. One can conclude, therefore, that these countries are not going to be competitors of Liberia in the iron ore market. As far as the other countries are concerned: Canada, Brazil, India and Venezuela have in the past exported significant quantities of iron ore and there is no reason why they should not be expected to do so in the future. Although Canada might be a special case because most of her exports go into the United States and mainly because she may soon start to use more and more of her own iron ore in the growing domestic steel industry. Australia has not exported too much ore in the past but, if the estimates of her future production will come true, it will still to be seen whether Australia joins the competitors on the world market or will use much of her ore in future domestic steel industries. I believe that this last analysis shows that it is only with a few countries, having not much more ore to offer than Liberia has herself, are going to be on the supply side of the world market in 1975. This means that if economic developmentpolicy is geared to accommodate these facts, Liberia can take benefit of this favourable situation.

IV. INDUSTRIAL INVESTMENT INCENTIVES, IMPORT SUBSTITUTION AND EXPORT PROMOTION

To attract the investors investing in the field of manufacturing in Liberia it was necessary to find incentives. Those incentives i.e. tax benefits, exemption from Custom duties and Income taxes are enacted within the Investment Incentive Code of the Republic of Liberia, adopted April 15 1966, a copy of which will be found in the Appendix.

The Code by itself offers very wide possibilities in acquiring benefits and privileges to "an approved new project". But it is not clearly defined what an "approved project" is and it is not required by the law to investigate if it is really contributing to the economic growth and development of the country, and to what extent. Therefore decisions of the Authorities granting benefits of the Code to a Sponsor, might not completely comply with the growth and development.

The purpose of this chapter is an attempt to define and quantify when an approved new project is really contributing to the growth and development of Liberia.

A project that is showing a positive sum of National economic benefits over costs, and a positive National value added, is to be considered as a project contributing to growth and development.

To the contrary, a project aggregating a negative result should be considered unfavourable, because of draining national benefits out of the country, if applying the existing taxation and fiscal system.

The projects to which incentives should be granted should fulfill another criterion, too, and that is that the National Productivity of the capital should be working for the country. A tentative minimum rate of national productivity of capital could be in an order of magnitude of 0.1, (10 per cent). In that case, a project would assure a reasonable attainment of development trends. If, this rate is lower than that is going to be specified, development trends would be too slowly promoted.

The extent of benefits, going to be granted by the code, should be commensurate with the positive new total National benefits. While, of course, certain priority projects with a long-term influence on development might be treated more flexibly.

National Value Added (National Income) is the part of the value added allocated to Liberia, Liberian citizens or to the Government, through wages, salaries, supplements, taxes, royalties, profit sharing, capitalization of Liberian capital invested, etc. (Return to Labour and Capital).

Productivity of capital is a quotient of the value added divided by total capital invested[17], indicating the rate of capitalization. National productivity of capital is taking into account the national value added. That is the rate indicating the return of labour and capital to Liberia.

National economic benefits are all the benefits deriving from national value added (Government Revenues, savings of foreign exchange, investment in welfare, education and infrastructure, uses of local resources; as well as services, utilities, transportation etc. as not direct measurable benefits).

Investment in welfare and infrastructure should be considered as benefits to the Nation, spread and divided through the period of depreciation and amortization life of a project. Those benefits should be added to the national income and excluding from the capital invested, for the purpose of reckoning of the national productivity of capital.

Calculations and determination of the criteria proposed and other data should be recokoned and taken as the average outcome from the project during its depreciation and amortization lifespan.

The first criterion, the positive sum of National value added and Naticnal economic benefits speak for itself, i.e. only in positive, a project can contribute to the growth and development of the country.

The second one, the National productivity of capital is considered as an interest rate, at which the invested capital is working for the country. Regarding the same principles of capital investing, the interest rate of capital return or recuperation should be reasonable and heedfull. If, it is very low, there is no interest to invest in such a venture, indeed. To be reasonable one depends on the economic plight in the country and the projects concerned. Usually, foreign investors are willing to invest in developing countries in the projects, which assure an interest rate of capitalization higher than or, at least, the same as they can achieve in developed countries. Capitalization rates do direct the capital flow, and average as high as 10 to 12 per cent of the value of capital invested. Therefore was taken for this criterion, as a tentative rate of the National productivity of capital 0.10 or 10 per cent, as a rough approach how to quantify the criterion. The approach from the standpoint of capital invested enables to estimate how much of the national benefits is really drained from the country.

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17. Including both equity and loan capital.

An instance of the criterion in the iron ore concession business is shown in Table 8.

Comparing the National productivity of capital from Table 8 it is obvious that Mining D is mostly contributing to the country in a relative sense. In the same term Mining A should create a National Value Added at least 3 times bigger than it does at the present. It is not always possible to get in a proposed venture immediately the whole benefits, but the way is shown how to approach realization of better benefits. If, the structure of the venture does not allow to gain whole benefits through labour and taxation and profit sharing, then some participation in equity capital should be considered, to fulfill or to reach the criteria, i.e. to assure a better trend of development. At least, a reasonable positive trend of GNP and lessening the gap between the GDP and GNP should be assured. In such a case, also the contribution to the country will be reasonable, too.

Few other examples are shown in Tables 9 and 10.

In the case of Manufacturing C the "National" productivity of capital is very low and the contribution to the country is very low, and slow, too.

Manufacturing A is enjoying full exemption from raw material import duties and income tax, and therefore its "material" productivity of capital so low.

In the starting period, in practice, all new industrial activities are encouraged by some or whole benefits of the Investment Code, diminishing the contribution, without prospects in some projects to better it, also, after the granted incentives expire.

V. SCOPE FOR IMPORT SUBSTITUTION MANUFACTURING

In Chapters II., III. and IV, I have discussed the advantages and limitations of import substitution and export promotion policies of economic development. Historical evidence, theoretical considerations, arguments about the rights and wrongs of such policies were followed by reviewing how necessary it was and how efficient it would be for Liberia to adopt such policies.

I am sure all this, and many more views besides my own, will be carefully considered in designing a development strategy for Liberia. I am not suggesting that import substitution would form part of the development strategy of Liberia but simply because it is one of the many possibilities, I think it is expected from this paper to say something about what scope exists for import substitution manufacturing.

In assessing the scope for manufacturing goods that are now being imported, my method was very simple. Firstly, I have looked at what commodities were imported; secondly, I tried to survey existing manufacturing industries and thirdly, by counterposing imports and production I tried to point to the scope for import substitution. Highbrow economic theory would, of course, require much more complicated methods than this. Theoretically, it would be necessary: to predict any changes in imports (as influenced by market situation, i.e. availability of supply and rise or fall of prices); to examine in meticulous details the technical feasibility of local production; to forecast future demand by income elasticity coefficients; to calculate the minimum economic size of plants; and so on, and so forth. All these paraphernalia of modern economic science would be nice, but we simply do not have them. (Actually, at this stage, all this would cost more to do than it is really worth.)

What troubles me more, is that even my "lowbrow" method, although very simple when told, is becoming difficult when one has to apply it. The last statistical information I could find on imports is for 1963 and even that is not very detailed. At the time of writing this I had no information whatsoever of the production of manufacturing industries in Liberia. All I knew about manufacturing was the number of establishments and number of people employed. In the circumstances, the easy way out would be to say I cannot say anything. No, I am sure something can still be said as long as it is said in the proper fashion. What I mean is that if we cannot quantify a statement to a decent degree of exactitude we should not pretend. The way of our presentation should clearly show the limits of accuracy of what we say.

In the spirit of this definition of frankness in economic analysis, I dare not specify the scope for import substitution with any specific amounts of money, not even with sums rounded up to one or two significant digits. Instead, I choose to present my statements by classifying industrial sectors into three categories. The first category, called "maximum" is likely to have a chance of having one or more, fairly large-scale units, fairly soon. The third, the "minimum" category contains sectors which may, sooner or later, have a smallish plant coming up in them for import substitution. The second category is called "medium" and is defined by what it is called.

Let us now look at what data we have to proceed with this classification of industrial sectors. To start with, in Table 11. I present the imports of Liberia during the years of 1963 to 1966 broken down to the main commodity groups of the International Trade Classification (SITC). (This breakdown is not available for the last of the said four years.) The total of imports were - as it was said earlier - in the region 110 million dollars every year. Manufactured goods and machinery represented each one third of total imports. Food and beverages and the like took up about 1/6. It should be noted that the commodity breakdown of the total was almost constant over those three years for which we have data.

For our examinations greater detail in commodity breakdown was necessary. Import figures for groups smaller than the one-digit SITC commodity groups quoted in Table 11. were available only for the year 1963. I have - in Table 12. - copied from the statistics all the items of commodity imports that individually exceeded 1 per cent of the value of total imports, and have marked those exceeding 5 per cent. This is all we know of what could be substituted.

Next I had to see what the existing Liberian manufacturing industry can produce. The last import figures I had were of 1963. I guess the better part of the manufacturing industries that existed in 1968 started production after 1963, or at least the better part of the modern production capacity was added after 1963. Therefore, I have to assume that what is the output of manufacturing industries in 1968, is already substituting some of the previous imports. (Repairing jobs, of course, excepted.) On the other hand, we have to count with the imports having grown somewhat in the meantime.

Table 13. is an analysis of the manufacturing establishments of Liberia in 1968 (plus the explosives factory, the only major industry that had to be added to the 1968 list, at least as far

as I know), by industrial sectors, by location and by size. A brief glance at the table shows that - with the exception of a few but remarkable units - most of the industrial establishments are in sectors which characterize the "easy phase" of import substitution. Altogether there were 90 manufacturing establishments in 1969. The greatest single sector (if measured by number of units) was motor vehicle repair - not really manufacturing - with 22 establishments.

39 per cent of all establishments were in the food and light industries and 61 per cent in the heavy industries. But this should not be taken too seriously. Some of these heavy industries are not really so "heavy" and if we deduct the 22 automobile repair shops, the majority of the heavy industries will disappear.

It is striking to note that 81 (i.e. 90 per cent) of the 90 establishments were in Monrovia City, another 6 (i.e. 7 per cent) in Montserrado County outside Monrovia - and only 3 units in two other counties. Cape Mount and Loffa counties have no industries indicated in the list we had. Other counties are not mentioned at all.

In our table we have included industrial units that had at least ten people employed. 75 per cent of the total number of establishments had less than 50, out of their number 39 per cent had less than 20 people employed. Only 2 factories in Liberia employ more than 200 people.

As far as employment in manufacturing is concerned, an analysis of a similar kind is brought in Table 14.

Altogether there were 3981 manufacturing employees (workers, clerks, technical staff, working owners, managers taken all) in Liberia in 1969, i.e. some 0.4 per cent of the population. As with the number of establishments, the single biggest employer sector is the motor vehicle repairing industry, it has 1004 employed. The single biggest individual employer establishment is the refinery employing 295.

The location of industrial workers, etc. is even more concentrated than that of establishments: Monrovia 94 per cent, Montserrado ex Monrovia 5 per cent and Grand Dedeh and Nimba counties share the remaining 1 per cent between them.

Two thirds of industrial employees worked in units employing less than 50 and 14 per cent in units employing more than 200.

Looking at the size breakdown of Liberian manufacturing industries one is intrigued to ask the question: are there large-scale industries in Liberia? "Obviously, there exists no magic number of employment that would determine which industry is small-scale, which is large. That is why we have analysed the employment distribution of manufacturing establishments in a detailed brakdown of industrial sectors. For instance, in the group of Food Industries, the meat industries, the dairy industries, the bakeries, etc. have been examined separately. In respect of each of these sectors an estimate has been made of the minimum employment that might qualify an industry in its particular sector as large-scale.[18] (This "qualifying minimum employment" is shown in our Table 14. by a vertical line in the "Liberia total" column. As the nature of each sector is different in this respect, the line has to be zig-zag.) This qualification is very arbitrary as it is hardly based on anything else but my own industrial experience and instinct - it still might give some useful background information. Well, according to this qualification, Liberia has four "large-scale" manufacturing units (in order of employment size): the refinery (295 people); a furniture factory (247) (however, there seems to be a slight snag about this particular one, namely in the list it appears as furniture and construction industry and I do not know if this number is employed in their furniture workshop alone or lumped together with the construction business, which is not manufacturing); a footwear factory (134) and machinery industry (125) (I wonder if it is not the repair shop of one of the mines). The four large-scale industries taken together employ 801 people, which is 20 per cent of the total industrial employment.

On Tables 13. and 14. we should note not only what is in the tables but also what is not there. The empty boxes, the missing links, the sectors of industries which are not represented. I will come back to this subject later. At this juncture, I only want to call the attention to the fact that what is missing most is the strategic, "growth point" industries. These are not entirely missing. For instance, there is the refinery, the explosives factory, several units producing metal structures and other metal

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18. Lukacs, L. E.: Manufacturing and building industries. (A subchapter in the Chapter: Economic and Social Survey) In: Proceedings of the Conference on National Reconstruction and Development in Nigeria, Ibadan, 1969. (In print).

products, etc.[19]

Now that I have shaken the pride of my Liberian friends in their industries by having shown with my tables and other analytic witchcraft how embryonic this industry was, I have to put things right a little bit by comparing this industry with those of some of Liberia's neighbours. Table 15. shows the number of manufacturing establishments in 9 West African countries, also giving the number of those which employed more than 200 people. Out of the countries listed Senegal and Ivory Coast have about 200 units each, then comes Liberia with her 90, followed by the rest with 60 and downwards. (I have left out Ghana and Nigeria of the table lest this prideshaking thing comes up again. Seriously speaking, their population is too large to be comparable.)

Now I have put before you all the picture I have of commodity imports and of the manufacturing industries. The next step in my simple method (described at the beginning of this chapter) is to see what remains to be substituted of these imports after what is being produced by these industries. As I said, instead of pretending precision I will use only three categories of magnitude: maximum, medium, minimum. The exercise is simple and logical. Where there is lots of import and no production, the scope for import substitution is maximum. No or little import and lots or at least some production means minimum. Some or much import and some local production is medium. In order to do this exercise, first I had to translate the classification of SITC (Standard International Trade Classification) into the classification of ISIC (International Standard Industrial Classification) because from the point of view of establishing industries we are interested in industrial sectors and not in commodity groups. Secondly, I had to say whether an import item was large or small. I arbitrarily decided to call large an import item which was individually more than 5 per cent of total imports, medium imports are those between 1 and 5 per cent of total imports, and small imports are the items which are less than 1 per cent individually. Thirdly, I had to say whether an industry was producing much or little. I took the capacity of sectors employing more than 200 to be large, between 50 and 200 employees as medium and below 50 employees as small.

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19. By the way, the establishment with 17 employees in Monrovia which appears in Tables 13. and 14 under the heading of iron and steel basic industries - which would be the real thing as far as strategic industries are concerned - is apparently an error. I guess somebody - by mistake - must have reported the staff of the head office of one of the ore mines under the wrong category. I will be glad to know that my guess is wrong, as it may just as well be a small foundry.

In certain special cases, considerations like minimum economic scale, technological complexity, etc. made me divert from this basic logic when putting my crosses against maximum or medium or minimum. It is very arbitrary, but further investigation will make it easy to put the crosses in the right boxes. The whole of the described exercise is presented to you in Table 16.

The contraposition of imports and production gives the following broad results. "Maximum" scope for import substitution definitely exists in rice, both in growing and in processing (husking, glazing or polishing and packaging). One or several of what now appear in the table as "medium" may be found to qualify one box up. For the time being, I have in the table 9 "medium"-scope import-substituting industries and 13 "minimum" ones.

The staff of the Department of Planning and Economic Affairs also compiled a list of desirable import-substituting industries. In his excellent and pioneering book on industrialization strategy for Africa,[20] Ewing presents a list of industries he thinks desirable and - given certain conditions - possible in Africa by 1980. I thought it might be interesting to have a look at my list of prospective industries side by side with the lists of the Department and of Ewing. It should be noted, however, that there were differences in our approaches. I restricted myself to import substitution, as this was the subject of this chapter and did not look ahead into more than five years. The Department had some export possibilities in mind, too. Ewing based his views on a future international co-operation in industrial development and his timing is five years ahead of mine (1980). That is why he has a smaller number of sectors and more strategic (steel, machines) in mind than myself. In the essence I agree with him but let me return to this subject later. (For the sake of uniform presentation a slight readjustment is necessary in the classification: I used 3 categories, DPEA used 2, Ewing used only 1. Two crosses will denote my maximum and medium categories, the top priority category of the Department and all of Ewing's suggestions. One cross will appear against my minimum category and the second priority list of the Department.)

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20. Ewing, A.F.: Industry in Africa. Oxford University Press, London, 1968. (The quoted list of industries is easiest to find in a comprehensive chart facing page 92. in his book.)

A list of prospective import-substituting industries

ISIC Code	Industrial sector	Table 16.	DPEA	Ewing
201	Meat	+	++	-
202	Dairy	+	-	-
203	Preserved fruit	++	++	-
204	Preserved fish	++	++	++
205	Grain mill	++	++	-
207	Sugar	+	++	-
211	Distillery	-	++	-
220	Tobacco	++	-	-
231	Textile	++	-	-
232	Knitting	+	++	-
239	Other textiles[a/]	+	-	-
241	Footwear	+	+	-
243	Wearing apparel	++	-	-
251	Sawmill[b/]	-	+	-
252	Wood products	+	+	-
260	Furniture	-	+	-
271	Pulp and paper	-	+	-
272	Paper goods	++	++	-
300	Rubber goods	++	++	++
312	Oils and fats	-	++	-
313	Paints	+	-	-
319	Misc. chemicals	+	-	-
333	Pottery	+	-	-
341	Iron and steel	-	-	++
350	Metal products	++	-	++
360	Machinery[c/]	+	-	++
370	Electical machinery	+	-	-
381	Ship[d/]	+	-	-

Notes:

a/ Mainly fishing net

b/ Plywood and veneer for exportation and local use.

c/ Ewing thinks of Liberia specialising in excavating machines.

d/ Mechanized fishing boats.

I am sure all this is very little to help designing development objectives and strategy (anyhow, this is why this conference was convened). However, designing itself is a long process. One does not begin with final and distinct lines. First come the sketches and contours. Quite frankly, I would be immensely happy if the above exercise contributed a little to at least the sketch-and-contours stage of strategy-making. After all, the above list of three independent authors does appear to coincide fairly well. The focal points are fairly unanimously highlighted. And the list itself is very impressive, indeed. Of course, much more work, both research and organizational work, will have to go into it before at least part of the envisaged modern, high-productivity manufacturing sector will see the light of the sun. I wish it were soon.

VI. THE EFFECTS OF IMPORT SUBSTITUTION MANUFACTURING ON EMPLOYMENT AND CAPITAL INVESTMENT

In view of how little I know of Liberia, in view of how little information was available from printed statistical sources, I am sure every serious economist would have stopped at the end of the last chapter and called it a day. But I still felt sort of tickled to go on to a new question that started intriguing me. Assuming that Liberia decides to embark on an import-substituting policy of development, assuming that $a \sum^{number}$ of new industries are promoted along this line; what additional employment could be expected and what additional capital investment would be needed. And I asked these two questions both in respect of each industrial sector separately and in respect of the total of all potential import substitution. The first approach helps to choose from alternative projects. The second helps long-term planning and policy-making inasmuch as it indicates the life-span, the useful run of import substitution policy. (Remember the Latin-American lesson.)

The questions were so intriguing that I decided not to remain a serious economist. I continued my calculations on slippery ground. My assumptions became a bit too bold and artificial. Time was too short and I could not quite finish all I planned to do on this one. Even what I managed to finish is so unsafe and unchecked that I decided not to include it all in the body proper of this paper. I shuffled the whole calculation stuff into the

Appendix. (See Appendix C.)[21]

Here is, however, a brief description of what I did.

1. In want of Liberian data I selected two sources of data which were more or less comparable with Liberia and which provided all the information I needed. One was the statistics on Nigerian manufacturing industries[22] and the other a very exhaustive and useful collection of data of selected manufacturing companies from various parts of the world compiled by UNIDO. I will in short refer to it as the "Profiles".[23]
2. From the ISIC[24] I wrote down all manufacturing industrial sectors.
3. For each sector I took the number of establishments, the total of their fixed assets and calculated the average value of fixed assets per establishment (in Nigeria); took a number of factories commensurate in size with Liberian conditions from the "Profiles", took their fixed assets, calculated the average fixed assets per unit of my sample.

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21. Time was against me also on the technical side: there was no time left to have those huge tables typed and duplicated which contain all the numerous and complex calculations I had to make to obtain some answers to those questions. The 8 tables of Appendix C are here with me in manuscript form. I will be happy to show them to anybody who is interested in the details.

22. Nigeria. Federal Office of Statistics: Industrial Survey of Nigeria 1963 and 1964. Lagos, 1968.

23. United Nations Industrial Development Organization: Profiles of manufacturing establishments. Vols. I. and II. United Nations, New York, 1967 and 1968. Industrial Planning and Programming Series, Nos. 4 and 5.

24. ISIC is short for International Standard Industrial Classification which is now used by all national and international industrial statistics when classifying establishments into sectors. ISIC was recently revised, and the up-to-date version can be found in: United Nations Department of Economic and Social Affairs, Statistical Office of the United Nations: International Standard Industrial Classification of all Economic Activities. United Nations, New York, 1968. Statistical Papers Series M No. 4., Rev. 2. Since, however, all my statistics were still classified according to the last but one version of ISIC, it was convenient to use the old ISIC in this paper. The old ISIC can be found in many publications. As I had to translate SITC into ISIC and vice versa, I used: United Nations Department of Economic and Social Affairs, Statistical Office of the United Nations: Classification of Commodities by Industrial Origin. Relationship of the Standard International Trade Classification to the International Standard Industrial Classification. United Nations, New York, 1966. Statistical Papers Series M No. 43.

4. From the value of stocks, with guess and statistical witchcraft I estimated the value of current assets in Nigerian manufacturing sectors. Now I had fixed and current assets. I called it "adjusted" capital. I had in the Nigerian statistics figures of "paid-up capital". From a little knowledge of the field I estimated how much might be the borrowed capital. Surprisingly enough the sum total of the fixed and current assets on the one hand and the sum total of paid-up and borrowed capital on the other was almost the same; the average Nigerian manufacturing establishment in 1965 had in thousand U.S. dollars:

fixed assets	391	paid-up capital	243
assumed current assets	258	borrowed capital	365
	649		608

The nice coincidence did not convince me. From then on I worked only with the value fixed assets before depreciation and called it capital. The average unit had 1 million $ capital in Profiles.

5. Then I took the employment in Nigeria and in the Profiles. The average employment is 123 in Nigerian manufacturing, 474 in profiles per establishment.

6. Then I took the average output of establishments sector by sector and the total both in Nigeria and in the Profiles. An average Nigerian manufacturing industry had 791 thousand U.S. dollars output value in 1965. It was 2.2 million $ in Profiles.

7. Once I had capital, employment and output for each sector, it was easy to calculate the following ratios which were, incidentally, as follows:

	in Nigeria	in Profiles
capital/employment	3.170	2.100
capital/output	490	450
output/employment	6.420	4.650

Which means it took - on the average - 2-3 million $ investment (in fixed assets) to create one workplace; half a million dollar had to be invested (in fixed assets) to produce 1 million gross value in one year (!); and the productivity of labour was 5-6 thousand dollars per head.

8. Then I put Nigeria and the Profiles to one side for a while and came back to Liberia. I took, again, the 1963 (the last) import statistics, with all sorts of manoeuvres regrouped the value of imports into the industrial sectors (something similar to what is in Table 16. but much more detailed). Then I used the two kinds of forecasts of total imports (which was described in Chapter III.) to forecast the 1963 actual imports of each sector onto 1975. I have made both forecasts: the exponential one that

brings this list to 374 million dollars (it is less than the 396 million forecast because some items are not commodities, e.g. transfers, and some could not be identified) and the linear one that brings the list to 197 million dollars.

9. Apparently, not all imports can be substituted. There are technological problems, product mix, economic size, etc. Therefore, with a view to the detailed commodity breakdown of imports, I had to assign a "substitution coefficient" to each industrial sector. In my manuscript - which is not presented here - there is some justification for every "substitution coefficient". Some industries have two coefficients, simply because I could not tell what is likely to happen. If the sugar market is big enough for a plantation and factory and there will be one, the substitution coefficient is 1.0; if there will be no sugar factory, it is 0.0. If there will be a tyre factory the substitution coefficient of the rubber products industries will be approximately 0.6 (apparently some tyres and other rubber products will still have to be imported); whereas it will be something like 0.2 if there will be no tyre factory(flooring sheets, rubber soles, etc. could still be produced). If there will be an iron and steel works, the substitution coefficient may be around 0.5 (specific profiles, tubes, alloy steels, etc. will continue to be imported), and it will be 0.0 in lack of such an industry. On the average of all manufacturing sectors my substitution coefficient turned out to be 0.4. I suspect it may be a bit too high.

10. From the 1975 forecasts of import values, with the substitution coefficients, I calculated the "substitutable imports" in 1975, again in both variants: the higher (exponential growth of imports) and the lower (linear growth of imports). Depending on how we answer the to-be-or-not-to-be question of the above three sectors, the total of the substitutable imports in 1975 will be 148 or 159 million dollars according to the high forecast, and 78 or 84 million dollars in the low forecasts. This may mean the opening up of industries in 13 sectors that never existed in Liberia and expanding a number of others.

11. Then I took the value of substitutable imports (the lower ones and without sugar, rubber tyre and iron and steel) in each sector and through the (Nigerian) productivity (output/employment) I determined how many people would have to be employed to produce all the substitutable imports. It is 17.550 if I add up the sector by sector numbers. If I had calculated it through the total substitutable imports and average productivity of industry as a whole, it would have been 12.150 men. This means the substitution is apparently heavier in the lower productivity sectors. In those 13 sectors which had both ratios, the Nigerian ratio shows 8700, the Profiles ratio 6300 employment.

12. Now I had the gross employment needed. I have deducted the 1968 actual employment in Liberia from the gross need and I obtained the additional employment needed, which is 14.800 people (by Nigerian ratio), about 12.000 (by Profiles ratio).

13. Last was the capital requirement. Again I started from the value of substitutable imports (lower forecast, the three difficult industries not yet starting) and through the (Nigerian) capital/output ratio I have found that the gross capital (fixed assets) investment required would be in the region of 50 million dollars.

14. Then I had to make a somersault to know how much could be the value of the present fixed assets in Liberian industries. I have done this by calculating with the means of the (Nigerian) capital/employment ratio; I estimated the total value of fixed assets in Liberian industry to be 12.2 million dollars (I would really like to know how much it is actually). Some industries are included in this 12.2 million dollars total asset value which are not really needed specifically for import substitution, so not all of it can be deducted from the gross need of 50 million. Finally I have calculated that 41 million dollars would have to be invested in fixed assets to establish all the industries to produce all the "substitutable" imports.[25]

Perhaps, we should rather study these figures for each sector individually and for manufacturing as a whole.

Let me summarize. If all my assumptions are correct, if all substitutable imports are substituted by local production by 1975, then in 1975 Liberia will have an industrial production in the value of approximately 200 million dollars, with an additional employment of 12 to 15 thousand people and with the additional investment of 25 to 40 million dollars. On the average the creation of every new workplace will require an investment of 1.700 - 2.700 dollars (into fixed assets only).

Let me add, that if the actual profit rate in the 1960's of Nigerian industries can be reached in Liberia, too, then these new industries will satisfy the requirements of national productivity of capital (as set in Chapter IV.).

This is the estimated scope for import substitution manufacturing industries. That is, if all substitutable imports are going to be substituted. And this is the more modest of the various possible forecasts.

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25. In those 13 sectors for which we have both ratios, the additional capital would be 22 millions by the Nigerian ratio and 12 by the Profiles ratio.

VII. CONCLUSIONS

It is quite a job to summarise or draw conclusions from a paper as loosely organized and as erratically hopping from one topic to another as this present paper. If there is any moral of this paper it can be said in a few words. (If few words are not enough, the moral is suspect.)

The policies of import substitution and of export promotion as potential parts of a national economic development strategy for Liberia seem to be practicable and useful. This applies to both food and manufactures on the import side; primary produce, minerals and manufactures on the export side. This is definitely true for a certain period in time, up to a certain stage of economic development. In the meantime, the conditions of the successful application of these policies (combination with other policies; following the consumer goods substitution stage by raw material, then by machine substitution; linkages; long-term view; structural change; specialisation in trade) should not be lost from sight.

It appeared from the analysis that neither import substitution nor export promotion is so exclusively the only option as it was in some other places. In Liberia it is not imperative to choose these policies as against other possibilities. At the same time, in Liberia it would be more difficult to squeeze out as much benefits from import substitution as elsewhere. This mainly applies to foreign exchange savings. It might be easier to maintain a favourable foreign exchange position by taking more advantage of the trade and ore market situation.

In principle, it would be possible to introduce more or less significant changes in the overall policy (e.g. import restrictions, foreign exchange control, etc.) in order to make import substitution and export promotion bring more benefits to the nation. If the Liberian government is not much inclined to introduce such measures, as for one I do not feel how I could firmly argue in favour of them, as slight changes may not suffice, major changes may not be worth the while (since import substitution and export promotion are, by their very nature, limited in what they can do to help economic development). And it may be difficult to make all this work effectively as long as Liberia does not have a good, co-ordinated machinery to make economic (and especially industrial) development plans and to devise institutions and measures to implement these plans.

You may rightly ask now: what do I suggest then? As long as import substitution and export promotion continues to bring benefits to the nation and as long as these benefits do not have to be matched with costs considered (economically and politically) too high for the nation to pay: go ahead with as much import substitution and export promotion as is possible. However, it is not before time right now to start thinking of where do we go from there.

I would say, from the stage of import substitution and export promotion we should slowly and gradually try to move forward to more comprehensive and bolder economic development strategies.

If I am asked what "bold" strategy I have in mind,[26] I again find myself in a position most members of my trade would try to avoid. But I will speak out. On the occasion of the 1967 World Exhibition in Montreal Professor Myrdal delivered a lecture that he called "An economist's vision of a sane world".[27] Paraphrasing the title of Gunnar Myrdal's lecture I think what you are going to hear from me now should be called "An insane economist's vision of a Liberian world".

We are in a developing country. And there are the developed countries. The gap is widening. In the contemporary production system international co-operation and specialisation is ever growing. International specialisation leads to the growth of international trade. Trade is actually growing faster than production. However, trading is done on the market and the laws of the market are the laws of the jungle. Dogs eat the hindmost! Cash and carry. Which was later softened into lend and lease. But if you look at what aid really means, you are tempted to call it rather lend and squeeze.

It seems to be a vicious circle. It must be broken somewhere. Two thousand millions of people (and how many more every minute!) cannot be kept away from plenty of food, knowledge and health. Many and excellent minds proposed ideas how to break the vicious circle. Firstly, there are those who think nothing should be done, everything is all right as it is: go on selling primary produce and buying

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26. Earlier this year I gave a Seminar on "An industrial development strategy" (that is, in Tropical Africa). An outline is available for those interested in more details than can be given in the short space of this paper.

27. See: Cahiers Economiques et Sociaux, Dec. 1967, pp. 503-515.

manufactures (free-tradism, comparative advantages, "traditional trade links", U Hla Myint & Co.). The same idea, but better cloaked, returns in theories on small-scale industries, "intermediate technologies" and the like. Secondly, there are the passionate believers of the basic kindness of human beings who try to convince the rich to give away more to the poor (UNCTAD, Development Decade, 1 per cent of national income, etc.). Thirdly, there are those who do not believe the situation can be changed at all as long as there is free trade, capitalism, etc. If you want to change your position "blast the lot" (Guevaraism, etc.). Freetradism, altruism, anarchism lead nowhere. (If they lead anywhere at all, it is deeper in the jungle.)

Developing nations cannot expect the solution from outside. It must be initiated from inside. We have to use our own will and skill. We must know, and know how to use, our natural and human resources. Some of these resources make our situation monopolistic or near-monopolistic. The world market of certain commodities is characterized by cut-throat competitition of the manufacturers (e.g. petrochemical products, motor cars, etc.). These manufacturers want to be so sure to have a slice of future markets that they are willing to establish subsidiaries even at temporary loss. They can be made to agree to terms more favourable to us. The transport cost differential could make prices of many commodities essentially lower if there were more intra-African trade.

All these, and many more things, mean chances - as yet mostly unutilised chances - for us to break through the vicious circle. We must specialise in one or few production lines what our chances make most hopeful. We must concentrate most of our resources to support these sectors, make them grow fast and large and let them dump their ware on to the market; first the local market, then the African market, then the world market. It is not impossible if the specialisation is well chosen.

What for Liberia, then? If I want to be faithful to my "insane vision", if I consider what riches Liberia has, if I remember that it is easier to crack trade walls where there is such a crowd inside that one of those already inside may help us in just in order to beat the others; that is to say, if I look round what may be the horizon in ten-fifteen years time from now; I would venture to say the following:

Try to follow Ewing's proposal, that is to say, build up an industry to manufacture high-powered excavators, bulldozers, generally speaking, earth-moving machines. There are many opencast mines in Africa. There is much road building and civil engineering

to come in the next decades. And an excavator has lots of steel and lots of rubber in it.

I might put forward another suggestion (instead of heavy earth-moving machines or parallel with them). I have lived seven years in Africa, I have stayed in 19 countries of Africa, I have travelled several thousands of miles by road in Africa. I have left the beaten track now and then. And I got stuck with my car, now and then. There is no single motor car I know which is suited to African conditions. Do not forget, in ten-fifteen years time many people not living right along the tarred road may be in a position to buy a car. The process of the transition of subsistance farming into market economy is gaining momentum all over the continent. Access to market is unthinkable without millions of cars.

Millions of cheap, small, but solidly built cars. They need not look posh. They need not be as heavy and as complicated as a Landrover. What I have in mind is a crossbred of the jeep, the French 2-cheveaux and the AustrianHaflinger. But they must give more than all these in at least three respects: they should have plenty of room for load; they should resist humidity (no present car of the world does); and parts should be easy to change (the operators of the bush garages are not all that bad mechanics as would appear from the number of vehicles abandoned at the roadside; the construction of the available cars is too complex, the housing of essential parts is too tight). Well, here is an "insane vision". Why not make Liberia the home of the African Volkswagen (people's car)? Cars have lots of steel and lots of rubber in them. I understand that one way of anti-corrosion protection is a rubber-sealing, a spraying with some rubber-solution. You have everything you need to do it.

This way or some other way, I am sure Liberia will soon stride forward rapidly with industrial development, the main motor of economic development.

Table 1

General imports (c.i.f.) of Japan

SITC Code	Commodity	1963			1964			1965			1966		
		Thousand metric tons	Million U.S. Dollars	Share %	Thousand metric tons	Million U.S. Dollars	Share %	Thousand metric tons	Million U.S. Dollars	Share %	Thousand metric tons	Million U.S. Dollars	Share %
	Total imports	...	6737	100	...	7938	100	...	8170	100	...	9523	100
	of which:												
0	Food	...	1048	16	...	1327	17	...	1416	17	...	1602	17
	of which:												
04	Cereals and preparations	...	472	7	...	636	8	...	767	9	...	834	9
	of which:												
042	Rice	222	29	0.4	415	58	0.7	967	145	1.8	812	131	1.4
		Millions			Millions			Millions			Millions		
	Population	95.9			96.9*			98.3			99.3*		
	Per capita imports	kilo	U.S. dollar		kilo	U.S. dollar		kilo	U.S. dollar		kilo	U.S. dollar	
0	Food		11.-			14.-			14.-			16.-	
	of which:												
04	Cereals and preparations		4.90			6.60			7.80			8.40	
	of which:												
042	Rice	2.3	0.30		4.3	0.60		9.8	1.50		8.2	1.30	

* Calculated from the population figure of the previous year by the annual rate of increase 1963-1967 given in the statistical table quoted (see: Source below)

Source for Total imports: United Nations Department of Economic and Social Affairs, Statistical Office of the United Nations: Yearbook of international trade statistics 1966. United Nations, New York, 1968. p. 429, for Population: United Nations Department of Economic and Social Affairs, Statistical Office of the United Nations: Statistical Yearbook 1968. United Nations, New York, 1969. p. 82.
for Per capita imports: author's calculation.

Table 2.

Historical Series of Special Trade in Merchandise

imports c.if., exports f.o.b.: 1953-1966

YEAR	Value in million U.S. dollars		Index Numbers	
	Imports	Exports	Imports	Exports
1953	18.73	31.00*	100.0	100.0
1954	22.72	26.38*	121.3	85.1
1955	25.96	42.84*	138.6	138.2
1956	26.69	57.85	142.5	186.6
1957	38.24	55.02	204.2	177.5
1958	38.48	53.77	205.4	173.5
1959	42.91	66.89	229.1	215.8
1960	69.19	82.61	369.4	266.5
1961	90.67	61.91	484.1	199.7
1962	131.61	67.64	702.7	218.2
1963	107.98	81.11	576.5	261.6
1964	111.15	125.67	593.4	405.4
1965	104.54	135.42	558.1	436.8
1966	113.66	150.46	606.8	485.4

* Prior to 1956 export data are not adjusted for undervaluation of iron ore; in 1956 this amounted to 13.310 thousand U.S. dollars.

Source: United Nations. Department of Social and Economic Affairs. Statistical Office of the United Nations. Yearbook of international trade statistics 1966. United Nations, New York, 1968. p. 471.

Table 3.

Forecast of imports and exports
to 1975 by linear trend line

	Time t	Import I	Export E	tI	tE	t^2
1953	- 7	18.73	31.00	- 131.11	- 217.00	49
4	- 6	22.72	26.38	- 136.32	- 158.28	36
5	- 5	25.96	42.84	- 129.80	- 214.20	25
6	- 4	26.69	57.85	- 106.76	- 231.40	16
7	- 3	38.24	55.02	- 114.72	- 165.06	9
8	- 2	38.48	53.77	- 76.96	- 107.54	4
9	- 1	42.91	66.89	- 42.91	- 66.89	1
1960	0	69.19	82.61	..	-	-
1	1	90.67	61.91	90.67	61.91	1
2	2	131.61	67.64	263.22	135.28	4
3	3	107.98	81.11	323.94	243.33	9
4	4	111.15	125.67	444.60	502.68	16
5	5	104.54	135.42	522.70	677.10	25
6	6	113.66	150.46	681.96	902.76	36
Total	- 7	942.53	1038.57	1588.61	1362.69	231

		Import	Export
14a - 7b	=	942.53	1038.57
- 7a + 231b	=	1588.61	1362.69
- a - .5b	=	67.32	74.18
- a + 33b	=	226.94	194.67
32.5b	=	294.26	268.85
b	=	9.05	8.27
Import a	=	67.32 +	4.53 = 71.85
Export a	=	74.18 +	4.13 = 78.31

I = 71.85 + 9.05t E = 78.31 + 8.27t

We substitute t = 15

I = 71.85 + 135.75 = 207.60 E = 78.31 + 124.05 = 202.36

Table 4

Exports of rubber and iron ore, 1950-1968

	1950	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
	Rubber																		
Weight,*										44.4	48.4	..	45.4	41.3	43.3	52.7	52.9	62.2	74.4***
thousand metric tons	30.2	36.0	35.4	35.7	37.6	39.7	40.1	37.3	43.0	43.6	43.4	36.9							
Value										30.7	39.1	25.5	25.6	23.9	29.7	29.0	..	..	..
million U.S. dollars	18.8	48.5	30.2	21.3	19.2	31.7	31.4	26.7	26.3	31.7	37.6	26.0							
Unit value										691	808	..	564	579	686	550			
U.S. dollars per metricton	623	1350	853	597	511	798	783	716	612	727	866	705							
	Iron Ore																		
Weight**																		****	
thousand metric tons										2708	2963	..	3801	6458	12222	15329	16548	15228	..
Value																			
million U.S. dollars										28.2	34.6	29.4	32.4	45.0	80.6	96.0	..	..	..
unit value										10.40	11.70	..	8.52	6.97	6.59	6.26	..	..	..

* 1950 - 61 Dry rubber content

** Weight is gross weight of ore, iron content is approximately 68%

*** Available in statistics was the weight exported in the first quarter of the year; the figure in the table is four times that.

**** Available in statistics was the weight exported in the first half of the year, the figure in the table is its double.

Source: (a) rubber lower line: Clower, R.W. et al.: Growth without development, Northwestern University Press, Evanston, 1966. p. 146.
(b) rubber top line and iron ore 1959 - 1962: United Nations: Department of Economic and Social Affairs. Statistical Office of the United Nations: Yearbook of international trade Statistics 1964 United Nations, New York, 1966 p.442.
(c) rubber top line and iron ore 1963-1965: United Nations: Department of Economic and Social Affairs. Statistical Office of the United Nations: Yearbook of international trade Statistics p.475. United Nations, New York, 1966 p. 475.
(d) 1966-68: United Nation Economic Commission for Affrica: Quarterly Statistical Bulletin for Africa No. 2. Sept. 1968. pp. 188-189, 295.

Table 5.

Forecasts of iron-ore production in 1975

(million tons)

	Actual weight			Iron content		
	medium	low	high	medium	low	high
France	46.0	43.0	49.0	14.0	13.1	14.9
Sweden	33.5	32.5	35.0	20.5	20.0	21.5
U.S.S.R.	265.0	240.0	285.0	150.0	135.0	160.0
Rest of Europe	62.6	57.4	67.3	23.0	21.2	24.8
Total Europe	407.1	372.9	436.3	207.5	189.3	221.2
Brazil	39.0	25.0	70.0	25.0	16.0	45.0
Canada	55.0	53.0	55.0	34.7	33.5	34.7
U.S.	93.0	90.0	93.0	56.0	54.0	56.0
Venezuela	23.5	22.0	25.0	15.0	14.0	16.0
Rest of America	32.8	30.5	43.5	20.6	19.2	27.2
Total America	243.3	220.5	286.5	151.3	136.7	178.9
Liberia	23.7	22.9	25.5	15.1	14.6	16.2
Mauritania	8.5	8.0	10.0	5.3	5.0	6.2
South Africa	9.1	8.3	9.6	5.5	5.0	5.8
Rest of Africa	26.5	24.7	27.8	15.6	14.4	16.4
Total Africa	67.8	63.9	72.9	41.5	39.0	44.6
India	41.5	38.0	47.0	25.0	23.0	28.0
Rest of Asia*	18.9	17.1	20.6	9.9	8.9	10.8
Total Asia*	60.4	55.1	67.6	34.9	31.9	38.8
Australia	34.0	31.0	37.0	22.0	20.0	24.0
Rest of Australia and Oceania	1.0	1.0	1.0	0.5	0.5	0.5
Total Australia and Oceania	35.0	32.0	38.0	22.5	20.5	24.5
World Total*	813.6	744.4	901.3	457.7	417.4	508.0

* Excluding China (Mainland)

Source: Table 88. UN Economic Commission for Europe: The World Market for iron ore

United Nations, New York, 1968, pp. 151 - 152.

Table 6

Top ten iron ore producers in 1966 and in 1975

(measured in iron content)

1966				1975			
Rank	Country	Million tons	Share in world production %	Country	Million tons	Share in world production %	Iron content %
1.	U.S.S.R.	85.4	27	U.S.S.R.	150.0	33	57
2.	U. S.	52.2	16	U. S.	56.0	12	60
3.	Canada	22.5	7	Canada	34.7	8	63
4.	France	17.9	6	Brazil	25.0	6	64
5.	Sweden	17.5	5	India	25.0	6	60
6.	India	16.5	5	Australia	22.0	5	65
7.	Brazil	15.8	5	Sweden	20.5	4	61
8.	Liberia	11.5	4	Liberia	15.1	3	64
9.	Venezuela	11.4	4	Venezuela	15.0	3	64
10.	Chile	7.8	2	France	14.0	3	30
Total Top Ten		258.5	81	Total Top Ten	377.3	83	59
Rest of the World		59.8	19	Rest of the World	80.4	17	50
World Total*		318.3	100	World Total*	457.7	100	56

* Excluding China (Mainland), that produced 22.0 million tons in 1966.

Source: for 1966: United Nations Department of Economic and Social Affairs. Statistical Office of the United Nations: Statistical Yearbook 1968. United Nations, New York, 1969. pp. 188-189, for 1975: Table 5.

Table 7

Trade in iron ore in 1966 of the top ten iron ore producers in 1975

Million metrictons (gross weight)

Country	Imports	Exports
U.S.S.R.	*[1]	26.1[2]
U.S.	47.0[3]	7.9[4]
Canada	4.4[3]	31.2[5]
Brazil	-	12.9[6]
India	-	13.4[7]
Australia	-	2.0
Sweden	-	22.5[8]
Venosuela	-	17.0[9]
France	4.3[3]	18.2[10]

1. * All Metal ore combined, iron ore unknown
2. Iron content 58%
3. Iron content not available
4. Iron content approximately 50%
5. Iron content approximately 55%
6. Iron content approximately 70%
7. Iron content approximately 61%
8. Iron content approximately 60%
9. Iron content approximately 64%
10. Iron content approximately 32%

Source: United Nations Department of Economic and Social Affairs. Statistical office of the United Nations: Yearbook of international trade statistics 1966. United Nations, New York, 1968.
various pages for the various countries.

Table 8.

Total and national benefits from hypothetical cases of Mining Companies

(in million dollars)

COMPANY	Mining A	Mining B	Mining C	Mining D
Total Value Added	50.8	18.0	14.9	14.4
National Value Added	12.7	2.7	2.5	6.2
Total Productivity of capital	0.167	0.203	0.322	0.335
National Productivity of capital	0.042	0.031	0.054	0.144
Value of Production	64.3	27.2	20.7	19.5
Total investment, at cost	304.0	88.3	46.4	43.0
Depreciation and interest	29.3	11.3	3.7	2.3

Table 9.

Hypothetical cases of Total and National Benefits of Manufacturing Establishments

(in thousand dollars)

	Manufac-turing A	Manufac-turing B	Manufac-turing C	Manufac-turing D
Total Value Added	64,9	189.0	353.1	942.0
"National" Value Added	14.9	61.8	57.9	436.0
Total Productivity of capital	0.276	0.472	0.160	0.362
National Productivity of capital	0.064	0.154	0.026	0.168
Value of Production	133.8	287.7	1,489.3	1,433.0
Total investment, at cost	233.8	400.0	2,210.0	2,600.0
Depareciation and Interest	50.0	73.6	201.0	273.0

Table 10

Total and National Benefits of Several Proposed Manufacturing Projects

(in thousand dollars)

	Paper Conversion	BATA Shoes	Cement Blocs
Total Value Added	96.0	142.0	9
"National" Value Added	35.0	112.0	9
Total Productivity of Capital	0.520	0.370	2.2
"National" Productivity of Capital	0.190	0.290	2.2
Value of Production	378.0	635.0	55.0
Total Investment, at cost	184.0	385.0	4.0
Depreciation and Interest	30.0	43.0	1.0

Source: 3rd periodic report (SIS) by S. Tezak, filed with DPEA, 1969.

Table 11

Special Imports c.i.f. prices

SITC Code	Commodity group	1963		1964		1965		1966	
		Thousand U.S. dollars	Distribution	Thousand U.S. dollars	Distribution	Thousand U.S. dollars	Distribution	Thousand U.S. dollars	Distribution
0	Food and live animals	15090	14.0	15517	14.0	15191	14.5	..	..
1	Beverages and tobacco	4470	4.1	4328	3.9	3460	3.3	..	..
2	Crude materials, inedible, except fuels	1147	1.1	579	0.5	884	0.9	..	..
3	Mineral fuels, lubricants, related materials	7540	7.0	10031	9.0	8302	7.9	..	..
4	Animal and vegetable oils and fats	266	0.2	442	0.4	468	0.5	..	..
5	Chemicals	4947	4.6	5256	4.7	6100	5.8	..	..
6	Manufactured goods classified by material	24841	23.0	37645	* 33.9	35179	* 33.7	..	..
7	Machinery and transport equipment	34966	32.3	37355	33.6	34960	33.4	..	..
8	Miscellaneous manufactured articles	12793	11.8	-	-	-	-	..	..
9	Commodities and transactions n.e.s.	2041	1.9	-	-	-	-	..	..
	Total imports	108102	100.0	111153	100.0	104543	100.0	113660	100.0

* Includes commodity groups 8 and 9 as well.

Source: for 1963-1965: United Nations. Department of Economic and Social Affairs. Statistical Office of the United Nations: Yearbook of international trade statistics 1966. United Nations, New York, 1968, pp. 472 - 474.

for 1966: ibid. p. 471.

Table 12

List of major imports of Liberia (items which individually exceeded 1% of total imports) in 1963

(Value in thousand U.S. dollars)

SITC Code	Commodity	Value
01	Meat and preparations	1,910
02	Dairy products and eggs	1,107
03	Fish and preparations	1,144
04	Cereals and preparations	7,154*
042	Rice	6,043*
05	Fruit and vegetables	1,368
11	Beverages	2,535
112	Alchoholic beverages	2,279
112.3	Beer	1,393
122	Tobacco Manufactures	1,319
122.2	Cigarettes	1,252
332	Petroleum products	7,381*
332.1	Motor Spirit etc	2,073
332.3	Distillate fuels	3,550
332.5	Lubricating oils and greases	1,186
55	Essential oils, perfume materials etc	1,296
62	Rubber manufactures n.e.s	1,426
629	Articles of rubber n.e.s.	1,288
629.1	Rubber tyres and tubes	1,198
65	Textile yarn, fabrics etc	5,066
652.2	Cotton fabrics not grey	3,217
66	Non-metallic mineral manufactures	4,608
661	Lime Cement etc	3,342
661.2	Cement	1,946
67	Iron and Steel	3,738
678	Tubes, pipes and fittings of iron and steel	1,139
68	Non ferrous metals	1,144
69	Manufactures of metal n.e.s	7,097*
691	Finished structural parts and Structures	3,185
691.2	Finished Structural parts etc of iron and Steel	1,182
691.3	Finished Structural parts etc of aluminium	1,256
71	Machinery other than electric	14,982*
711	Power generating machinery not electric	1,446

Table 12 (Cont'd.)

SITC Code	Commodity	Value
718.4	Construction and mining Machinary n.e.s	5,748*
719.1	Heating and Cooling equipment	1,121
72	Electrical Machinery, apparatus, appliances	6,841*
722.1	Electrical power machinary	1,184
724	Telecommunications Apparatus	2,357
73	Transport equipment	13,143
731	Railway vehicles	2,446
731.6	Freight Cars, etc without power	2,008
732	Road Motor Vehicles	9,540*
732.1	Passenger Cars (exl. buses)	3,461
732.3	Lorries and trucks	2,282
732.8	Parts of Cars, buses	2,907
812	Building fixtures and fitting	1,211
821	Furniture	2,179
841	Clothing (except fur clothing)	3,529
841.1	Clothing of textile fabric, not knitted	2,864
851	Footwear	1,474
89	Miscellaneous manufactured articles	3,162

* Items which individually exceeded 5%

Sources: United Nation Department of Economic and Social Affairs. Statistical office of the United Nations: Yearbook of international trade statistics 1966. United Nations, New York, 1968, pp. 472 - 474.

Table 13. Number of manufacturing establishments in Liberia by industrial sectors, by location and by size, 1969

ISIC Code	Industrial Sectors	Monrovia						Montserrado C. ex Monrovia						Grand Dedeh County						Nimba County						Liberia total					
		10 - 20	21 - 50	51 - 100	101- 200	201- 300	Total	10 - 20	21 - 50	51 - 100	101- 200	201- 300	Total	10 - 20	21 - 50	51 - 100	101- 200	201- 300	Total	10 - 20	21 - 50	51 - 100	101- 200	201- 300	Total	10 - 20	21 - 50	51 - 100	101- 200	201- 300	Total
201	Meat		1				1																				1				1
202	Dairy			1			1																					1			1
206	Bakery	3	2				5	1					1													4	2				6
211	Distillery		3				3																				3				3
213	Beer				1		1																						1		1
214	Soft drinks		2				2																				2				2
241	Footwear				1		1																						1		1
243	Wearing Apparel	3					3	1					1													4					4
251	Sawmill	2	2		1		5							1					1		1				1	3	3		1		7
260	Furniture	2	3	1		1	7																			2	3	1		1	7
280	Printing		1		1		2																				1		1		2
300	Rubber									1			1													1	2	1			4
311	Basic Chemicals	1	2				3			1*			1													1					1
313	Paints	1					1																					1			1
319	Misc. Chemical	2					2																			2					2
321	Petr. refinery					1	1																							1	1
331	Structural clay	5	1				6	1	1				2													6	2				8
334	Cement			1			1																					1			1
339	Non-metallic Minerals	1					1																			1					1
341	Iron-Steel	1					1																			1					1
350	Metal products	2		1			3																			2		1			3
360	Machinery/repair		1		1		2							1					1							1	1		1		3
370	Electrical Mach./ repair	1	2	1			4																			1	2	1			4
381	Ship build/rep.		1				1																				1				1
384	Vehicle repair	6	9	4	3		22																			6	9	4	3		22
399	Toys			2			2																					2			2
2-3	Total	30	30	11	8	2	81	3	1	2			6	2					2		1				1	35	32	13	8	2	90
	Summary																														
20-22	Food industries	3	8	1	1		13	1					1													4	8	1	1		14
23-29	Light industries	7	6	1	3	1	18	1					1	1					1		1				1	9	7	1	3	1	21
3	Heavy industries	20	16	9	4	1	50	1	1	2			4	1					1							22	17	11	4	1	55
2-3	Total	30	30	11	8	2	81	3	1	2			6	2					2		1				1	35	32	13	8	2	90
	Distribution by location						90						7						2						1						100
	" by size	37	37	14	10	2	100	50	17	33			100	100					100		100				100	39	36	14	9	2	100

Table 13. Number of manufacturing establishments in Liberia by industrial sectors, by [illegible]

ISIC Code	Industrial Sectors	Monrovia 10–20	Monrovia 21–50	Monrovia 51–100	Monrovia 101–200	Monrovia 201–300	Monrovia Total	Montserrado C. ex Monrovia 10–20	Montserrado C. ex Monrovia 21–50	Montserrado C. ex Monrovia 51–100	Montserrado C. ex Monrovia 101–200	Montserrado C. ex Monrovia 201–300	Montserrado C. ex Monrovia Total
201	Meat		1				1						
202	Dairy			1			1						
206	Bakery	3	2				5	1					1
211	Distillery		3				3						
213	Beer				1		1						
214	Soft drinks		2				2						
241	Footwear				1		1						
243	Wearing Apparel	3					3	1					1
251	Sawmill	2	2		1		5						
260	Furniture	2	3	1		1	7						
280	Printing		1		1		2						
300	Rubber									1			1
311	Basic Chemicals	1	2				3			1*			1
313	Paints	1					1						
319	Misc. Chemical	2					2						
321	Petr. refinery					1	1						
331	Structural clay	5	1				6	1	1				2
334	Cement			1			1						
339	Non-metallic Minerals	1					1						
341	Iron-Steel	1					1						
350	Metal products	2		1			3						
360	Machinery/repair		1		1		2						
370	Electrical Mach./repair	1	2	1			4						
381	Ship build/rep.		1				1						
384	Vehicle repair	6	9	4	3		22						
399	Toys			2			2						
2-3	Total	30	30	11	8	2	81	3	1	2			6
	Summary												
20-22	Food industries	3	8	1	1		13	1					1
23-29	Light industries	7	6	1	3	1	18	1					1
3	Heavy industries	20	16	9	4	1	50	1	1	2			4
2-3	Total	30	30	11	8	2	81	3	1	2			6
	Distribution by location						90						7
	" by size	37	37	14	10	2	100	50	17	33			100

ISIC Code	Industrial Sectors	Grand Dedeh County 10–20	Grand Dedeh County 21–50	Grand Dedeh County 51–100	Grand Dedeh County 101–200	Grand Dedeh County 201–300	Grand Dedeh County Total	Nimba County 10–20	Nimba County 21–50	Nimba County 51–100	Nimba County 101–200
201	Meat										
202	Dairy										
206	Bakery										
211	Distillery										
213	Beer										
214	Soft drinks										
241	Footwear										
243	Wearing Apparel										
251	Sawmill	1					1		1		
260	Furniture										
280	Printing										
300	Rubber										
311	Basic Chemicals										
313	Paints										
319	Misc. Chemical										
321	Petr. refinery										
331	Structural clay										
334	Cement										
339	Non-metallic Minerals										
341	Iron-Steel										
350	Metal products										
360	Machinery/repair	1					1				
370	Electrical Mach./repair										
381	Ship build/rep.										
384	Vehicle repair										
399	Toys										
2-3	Total	2					2		1		
	Summary										
20-22	Food industries										
23-29	Light industries	1					1		1		
3	Heavy industries	1					1				
2-3	Total	2					2		1		
	Distribution by location						2				
	" by size	100					100		100		

* This establishment is an addition after the publication of our source.

Source: Directory of Business Establishments in Republic of Liberia, 1968. (stencilled).

...ber of manufacturing establishments in Liberia by industrial sectors, by location and by size, 1969

...ovia			Montserrado C. ex Monrovia						Grand Dedeh County						Nimba County						Liberia total					
101-200	201-300	Total	10 - 20	21 - 50	51 - 100	101-200	201-300	Total	10 - 20	21 - 50	51 - 100	101-200	201-300	Total	10 - 20	21 - 50	51 - 100	101-200	201-300	Total	10 - 20	21 - 50	51 - 100	101-200	201-300	Total
		1																				1				1
		1																					1			1
		5	1					1													4	2				6
		3																				3				3
1		1																						1		1
		2																				2				2
1		1																						1		1
		3	1					1													4					4
1		5							1			1		1						1	3	3		1		7
	1	7																			2	3	1		1	7
1		2																				1		1		2
					1			1													1	2	1			4
		3			1*			1													1					1
		1																					1			1
		2																			2					2
	1	1																							1	1
		6	1	1				2													6	2				8
		1																					1			1
		1																			1					1
		1																			1					1
		3																			2		1			3
1		2							1							1					1	1		1		3
		2							1												1	2	1			4
		4																				1				1
		1																			6	9	4	3		22
3		22																					2			2
		2																								
8	2	81	3	1	2			6	2					2		1				1	35	32	13	8	2	90
1		13	1					1													4	8	1	1		14
3	1	18	1					1	1			1		1						1	9	7	1	3	1	21
4	1	50	1	1	2			4	1			1									22	17	11	4	1	55
8	2	81	3	1	2			6	2			2		1						1	35	32	13	8	2	90
		90						7				2								1						100
10	2	100	50	17	33			100	100			100		100						100	39	36	14	9	2	100

...cer the publication of our source.
...ments in Republic of Liberia, 1968.

Table 14: Number employed in manufacturing in Liberia by industrial sectors, by location and by size, 1969.

ISIC Code	Industrial Sectors	Monrovia						Montserrado C. ex Monrovia						
		10 - 20	21 - 50	51 - 100	101- 200	201- 300	Total	10 - 20	21 - 50	51 - 100	101- 200	201- 300	Total	10- 20
201	Meat		32				32							
202	Dairy			66			66							
206	Bakery	40	60				100	11					11	
211	Distillery		94				94							
213	Beer				191		191							
214	Soft drinks		74				74							
241	Footwear				134		134							
243	Wearing Apparel	35					35	11					11	
251	Sawmill	23	54		167		244							10
260	Furniture	25	70	75		247	417							
280	Printing		43		106		149							
300	Rubber									77			77	
311	Basic Chemicals	17	71				88			69*			69	
313	Paints	19					19							
319	Misc. Chemical	31					31							
321	Petr. refinery					**295	295							
331	Structural Clay	57	22				79	10	25				35	
334	Cement			58			58							
339	Non-metallic Minerals	11					11							
341	Iron-Steel	17					17							
350	Metal products	20		100			120							
360	Machinery/repair		22		125		147							15
370	Electrical, Mach./ repair	11	44	78			133							
381	Ship build/rep.		44				44							
384	Vehicle repair	91	247	288	378		1004							
399	Toys			149			149							
2-3	Total	397	877	814	1101	542	3731	32	25	146			203	25
	Summary													
20-22	Food industries	40	260	66	191		557	11					11	
23-29	Light industries	83	167	75	407	247	979	11					11	10
3	Heavy industries	274	450	673	503	295	2195	10	25	146			181	15
2-3	Total	397	877	814	1101	542	3731	32	25	146			203	25
Distribution by location							94						5	
	" by size	11	23	22	29	15	100	16	12	72			100	100

ISIC Code	Grand Dedeh County						Ninba County						Liberia total					
	10 - 20	21 - 50	51 - 100	101- 200	201- 300	Total	10 - 20	21 - 50	51 - 100	101- 200	201- 300	Total	10 - 20	21 - 50	51 - 100	101 - 200	201- 300	Total
201														32				32
202															66			66
206													51	60				111
211														94				94
213																191		191
214														74				74
241																134		134
243													46					46
251													33	76		167		276
260													25	70	75		247	417
280														43		106		149
300															77			77
311													17	71	69			157
313													19					19
319													31					31
321																	295	295
331													67	47				114
334															58			58
339													11					11
341													17					17
350													20		100			120
360													15	22		125		162
370													11	44	78			133
381														44				44
384													91	247	288	378		1004
399															149			149
2-3	25					25		22				22	454	924	960	1101	542	3981
20-22													51	260	66	191		568
23-29	10					10		22				22	104	189	75	407	247	1022
3	15					15							299	475	819	503	295	2391
2-3	25					25		22				22	454	924	960	1101	542	3981
																		100
	100					100		100				100	11	23	24	28	14	100

* This establishment is an addition after the publication of our source

** Estimate

Table 14: Number employed in manufacturing in Liberia by [illegible] industrial sectors, by location and by si

ISIC Code	Industrial Sectors	Monrovia						Montserrado C. ex Monrovia							Grand Dedeh County						Nin		
		10 - 20	21 - 50	51 - 100	101- 200	201- 300	Total	10 - 20	21 - 50	51 - 100	101- 200	201- 300	Total	10- 20	10 - 20	21 - 50	51 - 100	101- 200	201- 300	Total	10 - 20	21 - 50	51 - 10
201	Meat		32				32																
202	Dairy			66			66																
206	Bakery	40	60				100	11					11										
211	Distillery		94				94																
213	Beer				191		191																
214	Soft drinks		74				74																
241	Footwear				134		134																
243	Wearing Apparel	35					35	11					11										
251	Sawmill	23	54		167		244							10	10					10		22	
260	Furniture	25	70	75		247	417																
280	Printing		43		106		149																
300	Rubber									77			77										
311	Basic Chemicals	17	71				88			69*			69										
313	Paints	19					19																
319	Misc. Chemical	31					31																
321	Petr. refinery					295**	295																
331	Structural Clay	57	22				79	10	25				35										
334	Cement			58			58																
339	Non-metallic Minerals	11					11																
341	Iron-Steel	17					17																
350	Metal products	20		100			120																
360	Machinery/repair		22		125		147							15	15					15			
370	Electrical, Mach./ repair	11	44	78			133																
381	Ship build/rep.		44				44																
384	Vehicle repair	91	247	288	373		1004																
399	Toys			149			149																
2-3	Total	397	877	814	1101	542	3731	32	25	146			203	25	25					25		22	
	Summary																						
20-22	Food industries	40	260	66	191		557	11					11										
23-29	Light industries	83	167	75	407	247	979	11					11	10	10					10		22	
3	Heavy industries	274	450	673	503	295	2195	10	25	146			181	15	15					15			
2-3	Total	397	877	814	1101	542	3731	32	25	146			203	25	25					25		22	
Distribution by location							94						5							½			
" by size		11	23	22	29	15	100	16	12	72			100	100	100					100		100	

* This establishment is an addition after the publication of our source.

** In our source the petroleum refinery appears with 35 people employed. The figure above [illegible] above is the number of people employed by

Source: Directory of Business Establishments in the Republic of Liberia, 1968, (stencilled).

employed in manufacturing in Liberia by indu

1- 0	Total	Montserrado C. ex Monrovia 10 - 20	21 - 50	51 - 100	101- 200	201- 300	Total	10- 20
	32							
	66							
	100	11					11	
	94							
	191							
	74							
	134							
	35	11					11	
	244							10
7	417							
	149							
				77			77	
	88			69*			69	
	19							
	31							
	295							
	79	10	25				35	
	58							
	11							
	17							
	120							
	147							15
	133							
	44							
	1004							
	149							
:	3731	32	25	146			203	25
	557	11					11	
	979	11					11	10
	2195	10	25	146			181	15
	3731	32	25	146			203	25
	94						5	
	100	16	12	72			100	100

ublication of our source.
with 35 people employed. The figure above
n the Republic of Liberia. 1968. (stencilled)

industrial sectors, by location and by size, 1969.

Grand Dedeh County 10 - 20	21 - 50	51 - 100	101- 200	201- 300	Total	Ninba County 10 - 20	21 - 50	51 - 100	101- 200	201- 300	Total	Liberia total 10 - 20	21 - 50	51 - 100	101 - 200	201- 300	Total
													32				32
														66			66
												51	60				111
													94				94
															191		191
													74				74
															134		134
												46					46
		10				10		22			22	33	76		167		276
												25	70	75		247	417
													43		106		149
														77			77
												17	71	69			157
												19					19
												31					31
																295	295
												67	47				114
														58			58
												11					11
												17					17
												20		100			120
		15				15						15	22		125		162
												11	44	78			133
													44				44
												91	247	288	378		1004
														149			149
		25				25		22			22	454	924	960	1101	542	3981
												51	260	66	191		568
		10				10		22			22	104	189	75	407	247	1022
		15				15						299	475	819	503	295	2391
		25				25		22			22	454	924	960	1101	542	3981
						$\frac{1}{2}$					$\frac{1}{2}$						100
		100				100		100			100	11	23	24	28	14	100

bove is the number of people employed by the refinery in June, 1969.

Table 15

Number of manufacturing establishments in selected West African countries: End 1966

	Total	of which: employing more than 200
Senegal	211	38
Ivory Coast	185	36
Liberia*	90	2
Dahomey	60	2
Upper Volta	52	1
Mali	47	9
Togo	45	0
Niger	42	0
Mauritania	14	1

* 1968.

Source: For Liberia: Table 13.

For the rest:

European Economic Community - Commission. Direction generale du developpement de l'outre-mer, Direction des etudes de developpement.

Possibilites d'industrialisation des etats africains et malgache associes. Cote-d'Ivoire, Dahomey, Haute-Volta, Mali, Mauritanie, Niger, Senegal, Togo. Vol. 3: Inventoire. industriel.

Table 16

Contraposition of imports of manufactures (1963) and employment in manufacturing (1968): scope for import substitution

SITC Code	ISIC Code	Commodity	Imports of manufactures 1963			Number employed in manufacturing 1968			Scope for import substitution		
			More than 5%	1-5 %	less than 1%	More than 200	50 - 200	10 - 50	Maxi-mum	Medi-um	Mini-mum
			of total imports								
01	201	Meat		X				*			+
02	202	Dairy		X			*				+
052-055	203	Canned fruit		X						+	
031	204	Canned fish		X						+	
04	205	Grain Mill	X								
042		Rice	X						+		
048	206	Bakery					*				
06	207	Sugar			X						+
073	208	Chocolate									
09	209	Miscellaneous food			X						
112.4	211 212	Distillation) and Wine)			X		*				
112.3	213	Beer		X			*				
111	214	Soft drinks					*				
122	220	Tobacco		X						+	
651) -657)	231	Textiles		X						+	
841	232	Knitting									+
265	233	Cordage and twine									
265	239	Other textiles									+
851	241	Footwear		X			*				+
841	243	Wearing App.		X				*		+	
656	244	Textile goods except wearing			X						
631	251	Sawmills			X	*					
632	252	Wooden Manufactures			X						+
632	259	Other wood products									
821	260	Furniture		X		*					

Table 16 (Cont'd.)

SITC Code	ISIC Code	Commodity	Imports of manufactures 1963			Number employed in manufacturing 1968			Scope for import substitution		
			More than 5%	1-5 %	less than 1%	More than 200	50 - 200	10 - 50	Maximum	Medium	Minimum
			of total imports								
641	271	Pulp and Paper									
642	272	Paper goods			X					+	
892	280	Printing			X		*				
611	291	Tanneries									
613	292	Fur									
216	293	Leather goods									
62	300	Rubber Products		X			*			+	
51	311	Basic chemical			X		*				
571	311	Explosives			X		*				
4	312	Oils			X						
533	313	Paints			X			*			+
54) 55) 59)	319	Miscellaneous Chemicals		X				*			+
332	321	Petroleum refinery	X			*					
34	329	Miscellaneous Petroleum products			X						
662	331	Structural clay product					*				
664	332	Glass									
663	333	Pottery									
661	334	Cement		X			*				
66	339	Other unmetallic minerals		X				*			
67	341	Iron & Steel		X				*			
68	342	Non ferrous metal		X							
69	350	Metal products except machinery	X			*				+	
71	360	Machinery except electrical	X				*				
712	360	Agricultural machinery		X							+
7184	360	Construction and mining machinery	X								

Table 16 (Cont'd)

SITC Code	ISIC Code	Commodity	Imports of manufactures 1963			Number employed in manufacturing 1968			Scope for import substitution		
			More than 5%	1-5 %	less than 1%	More than 200	50-200	10 - 50	Maximum	Medium	Minimum
			of total imports								
72	370	Electrical Machinery	X				*				+
724	370	Telcommunication App.		X							
735	381	Ship building and repair						*			+
731	382	Railway Equip.		X							
732	383	Motor vehicles manufacture	X								
	384	Motor vehicles repair				*					
733	385	Motorcycle and bicycle			X						
	386	Aircraft									
	389	Other transport equipment									
86	391	Measuring and controlling instruments			X						
	392	Photo and optical goods									
	393	Watch and Clock									
89	394	Jewellery									
	395	Musical instruments									
	399	Other manufactures		X			*				

Source: For "Imports of Manufactures": Table 12
For "Number employed in manufacturing": Table 14.
For "Scope for Import substitution": My own assessment

APPENDIX A

AN ACT ADOPTING THE INVESTMENT INCENTIVE CODE OF THE REPUBLIC OF LIBERIA

THE SENATE AND HOUSE OF REPRESENTATIVES OF THE REPUBLIC OF LIBERIA IN LEGISLATURE ASSEMBLED:

Recognizing the great benefits which have come to the nation from Open Door Policy which has provided freedom of movement of capital, including the repatriation of dividends, profits and capital; and

Taking into account the great incentive to saving and investment which a reasonable tax structure provides in the absence of hampering restrictions; and

Convinced that a sound currency and monetary system free convertibility, and the absence of artificial regulatory pressures are necessary and conducive to the maintenance of confidence in the economic progress of Liberia; and

As further evidence of a desire on the part of the Government of Liberia to cooperate to the fullest extent with foreign and domestic investors in Liberia to the mutual advantage of Government, people and the participants;

And in further testimony of a deliberate desire to encourage the maintenance of an atmosphere of mutual confidence and common interest;

It is enacted by the Senate and House of Representatives of the Republic of Liberia, in Legislature Assembled;

Section 1. That from and immediately after the passage of this Act, the Code herein below recited word for word, is hereby adopted as the Investment Incentive Code of the Republic of Liberia.

INVESTMENT INCENTIVE CODE

Section 2. Definitions.-As used in this Act, unless the context otherwise requires, the following terms shall mean:

Incentives - Certain tax and other privileges which the Government is prepared to offer under this Act to new business ventures for the purpose of promoting the economic growth and development of Liberia.

Approved New Investment Project - A New Investment Project including a substantial expansion of existing business facilities through investment of additional capital in respect of which an Investment Incentives Contract is granted under this Act.

Investment Incentive contract - A contract between the Government of Liberia and the sponsor or sponsors of a New Investment Project in consideration of which certain tax and other privileges are granted by the Government of Liberia.

Sponsor - One or more persons, partnerships, corporations or other entities and any combination thereof, that undertake a New Investment Project in Liberia. The term sponsor shall include a sponsor's assignee if the assignment is made in accordance with Section 13 of this Act.

Approved Imports - Capital, equipment, machinery and spare parts imported for use in connection with facilities for an approved New Investment Project; furthermore raw materials, semi-processed materials, and other supplies required in the manufacture of the final product, but excluding items which are being produced in Liberia in sufficient quantity and which are approximately equal in price and quality to foreign goods, as determined by the Government.

Section 3. Application of this Act.

(1) Incentives may be granted to persons, partnerships, corportations or other entities undertaking new investment projects in Liberia.

(a) to process, fabricate or assemble raw material and/or semi-finished products into commercial products;

(b) to engage in other production activities such as agriculture, logging and fishing and investing money, credit, machinery, equipment or other assets toward establishing the facilities for the purposes mentioned in (a) and (b) above.

(2) An Investment Incentives Contract shall be granted only in respect of those projects or industries specified in sub-Section (1) of this Section, after taking into account priorities established by the National Planning Agency, which can be expected to contribute effectively to the economic development of Liberia.

(3) All persons or entities seeking tax or other privileges as incentives for new investment in Liberia shall do so under this Act, provided that all rights and privileges which have been granted to enterprises doing business in Liberia prior to the enactment of this Act shall remain unaffected by the operation of this Act.

(4) An Investment Incentives Contract shall be negotiated by the Government of Liberia with the sponsor or sponsors of a New Investment Project.

Section 4. Tax Benefits.

(I) Enterprises that are granted Investment Incentives Contracts shall be entitled to the following tax benefits with respect to the Approved New Investment Project.

(a) exemption from Customs duties:

(1) construction materials - exemption from customs duties, tax levies and other charges except consular fees on approved imports of machinery and equipment, construction materials and supplies necessary for the provision of facilities for the enterprises:

(II) raw materials - exemption from customs duties, tax levies and other charges except consular on raw, semi processed or processed materials required in the manufacture of articles in respect of which the New Investment Project has been approved, for a period of five years from the first importation.

(b) Exemption from income taxes:

(I) exemption from taxes on income derived from an Approved New Investment Project for a period of five years from the first year of marketable production, as determined by the Government.

(II) Approved New Investment Projects involving substantial new investments with prospects of large direct benefits to the Liberian economy may be granted exemption from taxes on income derived from the Approved New Investment Project for a period of five to ten years from the first year of marketable production as determined by the Government. In the case of agricultural projects special consideration shall be given to the length of the period required to reach production as well as the size of the investment.

(2) In no case shall net income exempted from tax exceed 150 per cent of the capital investment as at the beginning of production attributable to the Approved New Investment Project. For the purposes of this sub-section, capital investment shall include the cost of land, building and equipment as well as unamortized intangible exploration and development cost attributable to the Approved New Investment Project.

Section 5. Additional benefits.-The following additional benefits may be made available at the discretion of the Government, upon application by the sponsor or sponsors of the Approved New Investment Project:

(a) the lease of available land for plant space in any government - owned industrial park at a preferential rate established for the rental of such land during the term of the lease;

(b) the securing of loans, contribution of equity capital guarantees, under-writing services or other technical assistance made available by any agency of the Government of Liberia;

(c) tariff protection subject to approval of the Legislature and the enactment of reasonable excise on all commodities that are subject to such tariff protection. The amount of such excises shall be enacted by the Legislature in the determination of tariff protection, for a period deemed necessary to establish normal production and markets.

The Government shall use its best efforts to expedite the insurance of entry and exit permits, working permits and permits of residence to all foreign personnel, including foreign managerial, technical and skilled personnel in such numbers and for such periods as may be necessary. Personal effects may be brought into Liberia by such personnel free of duty for a period of six months following entry to take up residence or repatriated free of duty upon termination of employment.

Section 6.-Obligations under Investment Incentives Contracts.

(1) The sponsor or sponsors of Approved New Investment Projects shall undertake the following obligations under an Investment Incentives Contract:

(a) to promote employment of Liberian workers and to select and train Liberian workers on a systematic basis in skills required in the operation of the Approved New Investment Projects;

(b) to submit to the Secretary of Treasury, at the time of filing an annual income tax return, a report containing such information as the Secretary may require relevant to the Liberian operations of the enterprise. The report shall include, as a minimum, all information required for a Liberian Government income tax return pursuant to the regulations of the Bureau of Internal Revenues of the Republic of Liberia.

(2) All reports submitted in accordance with sub-section (1) of this Section shall be considered confidential and inviolate. The reports shall comply with accounting procedures as defined by current revenue codes of the Republic of Liberia, and shall be subject to verification by on-site audits conducted by the Government agencies charged with such audit responsibility.

Section 7. - Application Procedures. - Applications for Incentives shall be addressed to the Secretary of Commerce and Industry in a prescribed form, with copies for the National Planning Agency and the Treasury Department. The application shall include the following information:

(a) Name, address and biographical data of the sponsor or sponsors.
(b) Banking references.
(c) Organization and domicile of the sponsor's business.

(d) Detailed description of the investment project, including the nature of the business; proposed general location; date proposed for the commencement of operations; volume and types of products or services to be supplied; land, buildings and machinery required; materials and labor required and their proposed source of supply; total investment projected for the first five years of operation; and initial amount of capitalization, classified by class of stock and other obligations.

(e) Additional benefits requested of the Liberian Government under Section 5 of this Act.

(f) Tariff protection, if any, deemed necessary, indicating estimated costs of production, relationship to current import prices and other relevent information in accordance with guidelines established by the National Planning Agency.

(g) A technical and economic feasibility report in accordance with guidelines established by the National Planning Agency.

Section 8. Procedure for granting Investment Incentives contracts.

(1) There shall be established an Investment Committee consisting of a representative of the Department of Commerce and Industry as Chairman and a representative each of the Treasury Department, the National Planning Agency and the Department of Agriculture. The Committee shall examine all applications for incentives and report on its findings to the Secretary of Commerce and Industry in respect of manufacturing projects, or the Secretary of Agriculture in respect of agricultural, logging and fishing projects. On the basis of the evaluation of the Investment Committee, the Secretary of Commerce and Industry in respect of manufacturing projects or the Secretary of Agriculture in respect of agricultural, logging and fishing projects, shall prepare a report containing his recommendations. Copies of such reports

shall be submitted to the National Planning Agency and to the Secretary of the Treasury. If the Secretary of Commerce and Industry or the Secretary of Agriculture, as the case may be, recommends approval of the Project, he shall have a draft Investment Incentives Contract prepared for the consideration of the Secretary of the Treasury, and for the purposes of Sub-Section (2) of this Section, for the consideration also of the National Planning Agency.

(2) If the Application for an investment Incentives Contract indicates that the total fixed capital required for the new Investment Project exceeds $150,000, the Secretary of Commerce and Industry or the Secretary of Agriculture, as the case may be, shall submit the Application to the National Planning Council with his own recommendations and the recommendations of the National Agency and the Secretary of the Treasury. The National Planning Council shall vote to approve or disapprove the granting of incentives under this Act. If approved, the President, as Chairman of the National Planning Council, shall authorise the Secretary of the Treasury to sign the Contract on behalf of the Government.

(3) If the Application for an Investment Incentives Contract indicates that the total fixed capital required for the New Investment Project is less than $150,000, the Secretary of Commerce and Industry or the Secretary of Agriculture, as the case may be, having reached agreement with the Secretary of the Treasury shall recommend that the Secretary of the Treasury sign the Contract on behalf of the Government. Copies of the Contract shall then be submitted to the Office of National Planning, and other agencies concerned.

Section 9. Penalties.

(1) No improper use, such as sales or transfers to persons or entities or use for activities not directly related to an Approved New Investment Project, shall be made of any articles imported without duty pursuant to a customs exemption under this Act. Upon evidence of such improper use, the laws of Liberia pertaining to such violations shall apply.

(2) Not withstanding the provisions of Sub-Section (1) of this Section, and articles imported without duty pursuant to a customs exemptions under this Act may be sold, transferred or used for activities not directly related to an Approved New Investment Project, upon payment of the customs duties and other charges required to be paid on such articles if not exempted.

Section 10. Cancellation of Investment Incentives Contracts. The Secretary of Commerce and Industry shall cancel an Investment Incentives Contract only upon a decision of the National Council for any of the following reasons.

(a) mis-representation, fraud cr other illegal acts committed by the sponsor or sponsors of the Approved New Investment Project in obtaining the Contract;

(b) intentional misuse of th import duty exemption privileges;

(c) liquidation of the investment;

(d) failure to submit a report pursuant to Paragraph (b) of Sub-Section (1) of Section 6, provided, however, that if the sponsor or sponsors submit the required report within ninety (90) days after receiving notice of default the requirement shall be deemed to have been fulfilled.

(e) failure to commence operations within the time stipulated in the Contract, allowing for a resonable period of grace.

Section 11. Appeals

(1) The sponsor or sponsors shall have the right to appeal on questions of fact or law to the Circuit Court from an administrative decision under Sections 9 or 10, and for reinstatement of a Contract cancelled under cancelled under Section 10.

(2) In lieu of an appeal to the Circuit Court, the Government and the sponsor or sponsors may agree and so state in the Investment Incentives Contract that the appeal from an administrative decision shall be submitted to arbitration according to procedures agreed between the parties, and the decision of the abitrators shall be final.

(3) An appeal or submission to arbitration under this Section shall stay a cancellation order only with respect to those aspects of an Investment Incentives Contract, the cancellation which would cause irreparable damage to the sponsor.

Section 12. Liabilities of Sponsors. Where there are several sponsors of a New Investment Project their liabilities to the Government under the Investment Incentives Contract shall be joint and several.

Section 13. Assignment. An Investment Incentives Contract may be assigned only with the prior written consent of the Secretary of Commerce and Industry after agreement with the Secretary of the Treasury and in matters affecting agriculture, logging and fishing with the Secretary of Agriculture; provided that the Contract may be assigned, without such written consent, to any persons, partnerships corporations or other entities that have been specified in the Contract.

Section 14. Execution of the Act. The Secretary of Commerce and Industry shall be primarily responsible for the execution of this Act. The Secretary of the Treasury shall administer those provisions of this Act which directly affect Government revenue.

Section 15. This Act shall take effect immediately upon publication in hand-bills.

Any law to the contrary notwithstanding.

Approved March 21, 1966

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Appendix B

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APPENDIX D.

AN INDUSTRIAL DEVELOPMENT STRATEGY[1]

1. Countries of tropical Africa need a minimum of 5 to 7% annnual growth rate of GDP. This cannot be achieved without industrialization. This is not much discussed any more. Sectorial priorities and various strategies of industrialization are being discussed widely. I will attempt to show the insufficiency of most of the strategies suggested in the current literature.

2. The outlines of a new strategy for industrial development will be sketched up. Focal points:

   (a) industrialization need not wait until agriculture and infrastructure will have developed first;

   (b) industrialization must be based on modern, large-scale industries, including strategic industries;

   (c) new industries have to fit in the international division of labour, i.e. concentrate on what special conditions make more advantageous in Africa.

   These requirements are closely interrelated.

3. A lot depends on the correct choice of what sectors of industry should be given priority. Sectors differ in how far they satify various national development criteria. They differ in their effect on foreign exchange position. There are the "growth point" industries. There are differences in the sensitivity to transportation costs, in the sensitivity to scale, i.e. how much concentration would yield optimum benefits. Various sectors vary in their effect on economic equilibrium. Differences between the latest and the latest-but-one technology. Differences in the homogeneity of the product-mix of various sectors. Differences in the nature of competition in the particular commodity. All these differences have to be carefully weighed to choose the right sectors of industry for priority development.

4. There is a sufficient choice of industries that satisfy the requirments of the strategy. In fact, all major industries established in tropical Africa in the 1960's (with fully or partly external finance) are modern, large-scale and fitting into international division of labour.

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1. This is not a report on completed research. This is a collection of hypotheses based on the study of the whole of tropical Africa. In the course of my research I want to find out how much of them will hold and how much fail when applied to the Nigerian case. I expect this Seminar to assist a lot in this test.

5. At present an industrialization strategy concentrating on a limited number of large plants cannot be expected to be very popular. Its long-term superiority has to be emphasized. The strategy should not be conceived as excluding simultaneous development of other sectors and small-scale industries.

6. There are three main conditions to the success of this strategy:

a. utilization of local resources;
b. more active participation of government;
c. international coordination.

7. The literature on the subject tends to neglect or belittle the role of local resources. It will be shown that resources for various factors needed for industrialization, viz;

a. natural resources,
b. manpower of various levels,
c. capital,
d. entrepreneurial skill and propensity

are more abundant than it was thought. We are facing the novel task of exploring, appropriately assessing and mobilising, organising available latent local resources to become active factors of industrial development. This process has, actually, started.

8. Some specific features of African market for industrial goods and specific income elasticity of consumer demand have to be fully considered to have a proper approach to estimating future markets.

9. Governments are already engaged in making and implementing economic development policy. A more active role has to be played if industrialization is to succeed.

10. Due to the smallness of the markets of almost all African countries it is a condition to industrialization of the described type to get groups of neighbouring countries to agree on the sharing out of basic industries and unifying their markets for the agreed commodities.

11. The three conditions may, at first glance, look terribly difficult to meet. A study of recent past shows that a remarkable progress can be registered in respect of all the three conditions. There is no spectacular breakthrough but the first steps were taken. This holds true even in respect of the most crucial condition, i.e. the international harmonization of industrial development.

12. The three conditions are closely interlinked.

All three conditions are, at the same time, also conditions to other objectives of African governments, thus these are being promoted even by those governments that are not pursuing and industrialization policy similar to our strategy.

The three conditions are not only necessary but at the same time sufficient to the success of the strategy.

13. An implementation of the strategy would lead neither to socialist nor capitalist economy. This remains the choice of governments and people.

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