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AN IDEAL-TYPE ACCOUNTING FRAMEWORK FOR PLANTATION ECONOMY FURTHER MODIFIED

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Here we present an Accounting Framework designed to capture the significant economic flows in post-war Caribbean economies. The framework is an ideal-type representing Plantation Economy Further Modified. It employs categories and codes corresponding to the Accounting Framework we have designed for Pure Plantation Economy [1] and is meant to be regarded as a genealogical development of that framework. This is in keeping with our postulate that the large majority of contemporary Caribbean economies can most profitably be studied in terms of the degree to which they conform to Pure Plantation Economy.

"Relevance" of the Framework

We have judged that the Framework is readily adapted to the needs of the following Caribbean countries: Antigua, Barbados, Cuba (pre-revolutionary), The Dominican Republic, Guyana, Jamaica, The Netherlands Antilles, Puerto Rico, St. Kitts, Suriname, Trinidad & Tobago, Venezuela, and the Virgin Islands. It is highly applicable also to Mauritius. Production in both the traditional and the new sectors of these territories is typically organised by corporations showing great self-sufficiency in relation to the

rest of the economy in that intermediate purchases have a high import content and factors incomes locally paid out have only limited secondary effects on national income and employment; and bearing close resemblance to the "total institutions" of Pure Plantation Economy.

In spite of a marked political fragmentation of the region, the territories have had a common economic and, to some extent, a similar cultural history. Besides, the legacy of the past is being re-inforced by the pursuit of similar contemporary policies of economic development.

All of the economies mentioned above show a high degree of passive incorporation into the international economy. They are export-propelled in the sense that they serve as a locus of production for corporate institutions which are the agencies of international resource combination and whose entrepreneurial decisions are made with respect to considerations which transcend any particular locus of supply. A large proportion of their trade is not autonomous in the sense that decisions concerning the products to be sold cannot be made in a manner which exploits to the full the earning potential of national resources.

Instead, exports are induced by metropolitan investment and ownership of productive assets; importation is undertaken as a necessary complement to that; and a high proportion of incomes and expenditures appear in the balance of payments. It is therefore characteristic of these economies

that the major adjustments are to be analysed in terms of external flows; and that there is a significant difference between the domestic and the national economy. The first refers to a statistical aggregation of activity involving the combination of resources in a geographical area; the second to a social aggregation of people who engage in production. Only the latter is an entity to which considerations of economic welfare can meaningfully be related.

The Caribbean economies which may be less readily investigated with the help of this Accounting Framework are: Haiti, Guadeloupe, Martinique, Dominica, Grenada, St. Lucia, St. Vincent, Montserrat. With the exception of Haiti, these economies are equally export-led. However, export production appears to be less dominated by external investment and corporate organisation.[2] At the same time, what we have elsewhere described as the general institutional framework is much the same in these countries as in other parts of the region. Conditions of external marketing, the character of public policy and the nature of the monetary system are, if anything, more representative of Pure Plantation Economy than in other territories. Moreover, the growing importance of the tourist sector as a typical traditional exporter is serving to bring some of these territories closer to the ideal-type than they have been since sugar plantation monoculture was displaced by more flexible patterns of agriculture.

Even among the group for which the table is thought to be well-adapted, we acknowledge that there exist significant differences in size, in degree of diversification, in patterns of investment and ownership, and in metropolitan affiliation. Nevertheless, the available data do permit us, as a first approximation, to assume that the institutional-fix of the economies is sufficiently alike to justify a common approach and a common quantitative scheme[3]. We shall see to what extent our own studies confirm this hypothesis.

Nature of the Accounting Framework

The Accounting Framework is in some respects similar to the schemes suggested by Richard Stone and the United Nations, by Ragnar Frisch, and in particular by Dudley Seers.[4] Unlike the United Nations and the Frish accounts, however, ours does not attempt to trace transactions in financial claims. The extension of the work into this dimension remains for the future.

As our point of departure we have taken the Seers' model which was developed to facilitate projections for specialised exporters of primary products (with special reference to Jamaica and Trinidad). Seers sought to take account of the fact that such economies are propelled by export demand. In accounting terms this means that the focus of attention is

shifted away from the traditional input-output preoccupation with the matrix of domestic interdependence towards a more elaborate treatment of income "leakages" by way of taxation and transfers to the external world. The Seers' framework concentrates on the channels by which earnings of the export sector filter through the private and public sectors to create income and employment elsewhere. To this end, it is necessary to include more information than usual on the pattern of public finance, the structure of domestic final demand and the make-up of the external payments.

In pursuit of these objectives, Seers' model separates intermediate purchases of domestic origin from intermediate purchases of imports. Competitive imports are added to domestic supply and are jointly disposed to final using sectors. The categories of factor income which constitute "value added" are elaborated to permit an easy transposition to a revenue and expenditure account for government households, and other income-disposal accounts.

The modifications which we have made to the model lie in our classification of the producing sectors and above all, in the high degree of disaggregation that we have proposed in regard to productive activities, imports, factor payments, consumption-expenditures, public sector accounts, and income disposal.

The differences reflect our primary interest in comparative research into the functioning of the Caribbean economies. Our approach however, also has relevance for techniques of short-term planning and projection extending beyond the conventional input-output variables of industry outputs, commodity imports, and contribution to value added to GDP. These extensions relate to projections of savings and investment flows. However, the price of the disaggregation we have proposed consist in the fact that many available statistical series cannot be used in their present form. In this regard, immediate convenience to planning offices has deliberately been sacrificied for statistical innovation, which promises to yield a fully flexible system of rational and sectoral accounting.

Moreover, we wished to have a schema which would not only bring out the characteristics which distinguish Plantation Economy among export-propelled economies but would also accomodate all the variants of the type.

Classification of Producing Sectors

Seers has suggested some criteria for selecting the sectors to be isolated. The obvious ones are those which play a strategic role in determining the level of total economic activity, which have exceptional cost structures, or are subject to peculiar demand influences. In

addition, it is also worth identifying sectors which are likely to run into bottlenecks, to which government expenditures are crucial, in which import substitution is conspicuously feasible and abnormal rates of productivity change likely, or where factors shares may behave in a peculiar manner.[5]

What these criteria reduce to is a classification of producing sectors according to differences in their structure of supply and demand. In this sense, he follows the traditional input-output approach. In this approach, the level of activity is unilaterally determined by the changes in demand.[6] The decisions of suppliers and by extension, possible controls of government are left out of account.[7] In other words, the schema as Seers recognizes, is adapted to the requirements of economic planning only in the very short-run.

Once the planning horizon is extended, however, we meet the well known problem of investment functions and it becomes necessary to identify units of decision-making. For this purpose we require a classification which focusses on the institutional as distinct from the technical aspect of economic organisation.

The agent which combines resources and makes decisions concerning the expansion of capacity is clearly not an "activity" but an enterprise or firm. The decisions of enterprises engaged in similar activities are

likely to differ markedly depending on whether a subsidiary of a multinational corporation, an independent local business, or a public corporation is involved. For one thing, each of these institutional types is likely to be guided by different objectives. For another, they are differently placed both in regard to their access to finance and in respect to the constraints on their use of it. It is for this reason that classification by institutional transactor provides the bridge between those accounts which deal in flows of product and income and those which register flows of funds in the form of transactions in financial claims.

In the present version of our Framework we have made a partial attempt to identify institutional transactors both in our grouping of production activities and in our disaggregation of the Savings-Investment Accounts. We frankly acknowledge that our treatment is incomplete since we have not devised a systematic scheme of cross-classification.

The producing sectors have been grouped so as to throw into relief the fracturing of the economies and the historical process by which this has occurred. We have assigned activities to three classes, each of which reflects behavioural characteristics associated with one of the three periods into which we have divided Caribbean history. Within these three broad categories we have grouped activities in accordance with

organisational characteristics. At the same time, it remains possible to identify single activities within these integrated units.

The first major class is the Traditional Export Sector. Activities included here exhibit patterns of supply and demand which are distinctly mercantilist and akin to those which characterised the Pure Plantation Economy. Typically these activities are based on the extraction of a resource, are oriented towards metropolitan trade, and respond almost exclusively to metropolitan investment and other initiatives. They include both agricultural exports with a long history and mineral exports of more recent vintage.

The second major class is the Traditional Residentiary Sector. This is comprised of activities akin to those introduced during the period following the breakdown of Plantation Economy when mercantilist ties loosened, labour was freed, and peasants and artisans established themselves. In the older plantation economies this period started in the middle of the nineteenth century and ended with the collapse of the international economy between the wars.

Included here are agricultural, processing, mining and service activities which developed in response to local and regional demand and are strongly oriented towards local supplies of factors and materials. Taken with the Traditional Export Sector, these activities describe Modified Plantation Economy.

New types of activity resulting from post-war policies of industrialisation and tourist promotion fall into the New Dynamic Sector. This third major class also exhibits markedly mercantilist patterns of behaviour but with some novel manifestations. The typical activity is manufacture and assembly rather than agriculture and extraction. Although some territories and some industries are engaged in exporting, the direction of commodity movements is usually from the metropolis to the hinterland rather than the reverse. Programs of import substitution predominate, the hinterland remains however, a locus of repercussion rather than a locus of economic initiative; it shares only slightly in that part of the product which is attributable to innovation and enterprise. Moreover, it is accorded a terminal role in the productive process and thus receives little opportunity to participate in the elaboration of the product. An economy characterised by this type of activity may be designated as Branch-Plant Economy which, placed alongside Modified Plantation Economy, yields Plantation Economy Further Modified.

This three part classification is intended to focus attention on the success or failure of economic policy in integrating the economy. Linkages in Caribbean economies have not, on the whole, been effected through the diversification of production for intermediate and final demand.

Instead, periodic political decisions have been taken to adjoin new sectors onto the legacy of the previous economic order.

It has been noted that the Traditional Export Sector and to a lesser extent the New Dynamic Sector are dominated by corporations which tend to be total institutions; that these corporations provision themselves with inputs imported from or through their organisational centres in the metropole; and that they dispose of their output within the framework of the financial entity to which they belong. However, they often organise the production of some of their input requirements in the hinterland. Aggregation on the basis of institutional transactors therefore shows a clustering of diverse activities (in much the same way as aggregation on the basis of activity may involve the joint production of diverse commodities). Assorted manufacturing, processing, refining and fabricating activities as well as a range of ancillary services must be placed along with the extractive activity on which they depend.

Where such institutional transactors predominate, it is necessary to identify particular firms. We have therefore suggested that the Traditional Export Sector be broken up so as to show the main firms. We acknowledge that there may be problems of access to the required data and that publication may not be permitted on grounds of statistical confidentiality. On the other hand, data for the firm as a

whole are not only more easily procured but are also in some ways more meaningful then the estimates which have to be made to allocate costs to single activities. In any event, our Framework is sufficiently disaggregated to permit re-aggregation at the level of both the productive activity and the decision-making category.

Disaggregation of Savings and Investment Accounts

A substantive innovation which we have made is the disaggregation of the Savings-Investment Account. The Account is divided into four parts so as to show the fragmentation of the capital market. Specifically, the capital transactions of the plantation-mineral enterprises are separated from those of the remainder of the economy. Within this remainder there is a further division between the operations of the foreign enterprises in manufacturing and tourism and those of the rest. Further, the government transactions which cover the deficit (or surplus) on overall account are to be shown separately.

The aim of this treatment of the Savings-Investment Account is to acknowledge that in Plantation Economy, there does not exist an aggregate "pool" of savings available to finance investments of all types.[8] This is an attempt to establish a correspondence between institutional influences on the pattern of savings and investment and

the corresponding influences on the structure of "provisioning" and disposal.

While the sources and uses of savings may not be as specific as this treatment implies, there is no doubt that the structure of borrowing and lending depicted in our accounts conforms more closely to reality than the conventional picture.

The significance of this correspondence emerges most clearly in the external payments account. Here the rest of the world has been sub-divided into areas which describe the "general institutional framework"[9] within which trade and payments are organised. The profile of transactions which emerges facilitates appraisal of the role of particular institutions in forming patterns of international specialisation and resource combination.

The trade account records the flow of goods of different types and different degrees of elaboration originating from, and consigned to different areas. The income and capital account registers flows of funds associated with the pattern of production and trade.

If in addition, accounts are drawn up for single firms or sectors, we will be in a position to judge the degree to which patterns of linkage between the subsidiaries of multi-national corporations explain the structure of trade and payments.

EVOLUTION OF NATIONAL ACCOUNTING

National Accounts have been prepared by the Puerto Rico Planning Board for the period reaching back to 1940.[10] The Central Banks in both Venezuela and the Dominican Republic have published series going back to 1950[11] while a number of estimates were devised for pre-revolutionary Cuba by the Banco National,[12] other official agencies and research scholars.

In the British islands, the earliest work was undertaken by the Colonial Office and this resulted in periodic estimates in the 1940's by some of the Development Secretariats, notably those in Jamaica and Guyana.[13] Sustained effort in the field came after the Institute of Social and Economic Research organised studies in the Windwards by Siffleet, in Jamaica by Thorne, and in Guyana and the Leewards by O'Loughlin.[14] Some of the Governments then took over the preparation of regular series as a normal task of their statistical agencies; while others collaborated with research scholars to have the work done.[15]

In the French islands, estimates have been prepared for the period since 1949 by the Societe d'Etudes Pour le Developpement Economique et Social and by the University of Bordeaux.[16] The Netherlands Antilles have also had accounts made.[17] Suriname is thus perhaps the only territory which has not published a series of

fully articulated accounts though the Planbureau has from time to time prepared rough and partial estimates in connection with the development plans as well as highly refined sector accounts in connection with the aluminium smelter complexes.[18]

The preparation of accounts on a regular basis led naturally to attempts at refinement and reform of methods, at first mostly within the framework of the conventional schema[19] and then beyond it into studies explicitly addressed to considerations of sectoral interdependence. We shall see that a smooth transition into the multi-sectoral dimension was possible not only because of the great volume of work accomplished by the statisticians of the region, but also in some cases, because of the methods which the pioneers were encouraged to use in the face of available data.

In the case of the English-speaking territories, the fact that metropolitan accounting procedures could not be adopted for lack of the necessary data turned out to be an advantage. The absence of data on personal income of the kind available from income-tax and social security records in countries such as the U.K., U.S., and Canada led to a reliance on the "value-added" method of estimating the national accounts.[20] Thus, from the beginning, this approach principally from the product rather than the income or expenditure side embraced multi-sectoral accounting and laid the basis for such

extensions as input-output. Suggestions made by Thorne for Jamaica and Seers for Barbados helped greatly to facilitate a meaningful classification of sectors.[21]

In the French territories,[22] the position has been much the same in regard to data. Social security records notwithstanding, income data were scarcely available. Moreover, there was the additional consideration that the statistical services are much more a metropolitan responsibility than in the British islands. But in some ways, this too, has turned out to be an advantage. French planning methods dictate or at least are biassed towards studies of interdependence.

The first comprehensive accounts were prepared for 1958 and subsequently used as a basis for constructing less detailed Tables (Comptes Economiques Legers) for the period since 1949 (partly by backward and forward extrapolition). The procedures followed and the methods employed in the previous work were later subjected to a test of internal consistency with the aid of a model[23] of "économies à moteur externe", which was quantified in summary accounts (Esquisses Comptables) for 1961 and 1962. Finally, in 1964, the model was employed to make projections covering the years up to 1970 not only for Martinique and Guadeloupe but for Guyane and Reunion (which are "plantation" economies bearing strong resemblances to Guyana and Mauritius respectively).

The basic Table has from the start been set up to integrate Gross Product and National Income Accounts along lines which are in some ways similar to those on which we have drawn up the Accounting Framework presented below. The significant differences lie in the high degree of aggregation, and in the absence of an input-output account in the table for the French Speaking Antilles. Moreover the classification by institutional transactor is conventional.

The Table is in three parts.[24] First, there is a Matrix of sources of supply of five major commodity groups and disposition to users. These supply-demand balances relate to agricultural products, fuels and raw materials, industrial goods, construction and services. Supply is either from imports or from domestic production. In both cases there is a breakdown of gross value of supply whereby distribution margins and stock exchanges are identified. The total supply of each of the five commodity groups is disposed of to exports, personal consumption, investment and intermediate users including government. With respect to the last three users there is a further breakdown into local and imported shares.

The second matrix breaks down the cost structure of seven industrial sectors including Agriculture, Construction, Distribution and

Transport, miscellaneouse commodity producing sectors, and public enterprises. For each of these the Table records intermediate purchases, final distribution margins, gross factor incomes and value of output.

In the third matrix receipts and expenditures associated with the transactions in the first two matrices are entered to four income-disposal accounts. Government, Business and Households, the rest of the world and Savings-Investment. The transactions which are not associated with the first two matrices are treated as transfers of the four accounts with the following seven additional accounts. Public Goods, Scial Transfers, Taxesm External Debt, Metropolitan Grant-in-Aid, Miscellaneous Transactions and Savings.

Input-Output Tables

Experimental input-output Tables of differing degrees of sophistication are now available at least for the Dominican Republic, Puerto Rico, Jamaica, and Trinidad and Tobago.[25]

The W. Indian Tables are cast within the mould of the Dudley Seers framework which has been discussed above. The table prepared for the Dominican Republic refers to the year 1962. It aims principally to estimate input-co-efficients for forty-five manufacturing sub-sectors. Since the country is well served with annual censuses of industrial production[26] and has a manufacturing sector which is more residentiary than in any other Caribbean country, the exercise has been well worth the effort. But the important need to investigate the functioning of the economy in relation to the dominant sugar industry remains a matter for exploration.

The first experimental Puerto Rican Table was prepared for 1959-60. It has 20 producing and 16 final using sectors, including accounts for the three levels of government. Imported inputs are treated as non-competitive and recorded as a single entry. Retained final imports are divided between consumer and investment goods. Again there is no commodity breakdown. Freight and insurance on external trade are recorded separately for each of the 20 sectors as well as for final imports. The sectoral contribution to GDP is given in aggregate only at market prices. It is therefore, impossible to identify factor income not to mention sub-categories such as wages and salaries.

In an economy where unilateral inflows constitute an important source both on personal and public account, the usefulness of input-output is limited unless these GDP based accounts are integrated with national accounts. Moreover, where government is especially vigorous in promoting economic development, it becomes important to breakdown the accounts of the public sector into functional as well as administrative categories. Further, where the propensity to import of both final and intermediate goods is high, it is necessary to disaggregate imports and to trace their disposition to different types of users. Finally, where a large proportion of domestic investment is undertaken by metropolitan branch-plants, the relevance of classification by institutional transactors is obvious.

Some of these considerations are well appreciated by the Planning Board and steps have been taken to construct a new Accounting Framework. A number of studies have been launched to make "a comprehensive computation and a full and detailed treatment of the various flows and stocks in the economy of Puerto Rico".[27]

The proposed new Table follows the closed Leontief model in which Households constitute a producing sector.[28] It is to contain 31 sectors on an "Aggregate Classification" and 76 on a Disaggregate Classification. Of these 40 refer to manufacturing which in comparison with other Caribbean countries, plays an unusually important role.[29]

However, the Table preserves a large degree of correspondence with the U.S. Industry Sales and Purchasing Sectors even after some "special breakdowns and groupings necessary to reflect the conditions of Puerto Rico were introduced". Classification of sectors is by activity alone and "an attempt has been made to maintain the homogeneity of input and use patterns of the various sectors".[30] Activities have however, been grouped into "international" and local sectors. The former relate to sectors whose output enters international trade, the latter to the residentiary sectors.

These proposals are now being evaluated in the light of some of the possibilities opened up by the Framework presented here.[31]

The Treatment of Final Demand

The Accounting Framework proposes a high degree of disaggregation of final demand. Attention has traditionally been focussed almost exclusively on the conditions governing export demand. The corporations in the plantation and mineral sectors make their own market projections and the literature offers volumes of generalities concerning the terms of trade of primary producers and the possibilities of exporting manufactures. However, specific studies of the possibilities of developing Caribbean exports by active participation of local entrepreneurship in the international economy have yet to be undertaken.

So far as government expenditures are concerned, the advent of development planning has resulted in a number of partial exercises to serve the requirements of annual budgets, investment projects and five-year development plans. However, more systematic work in this area remains a high priority.

In constrast, considerable and important work has been done on the relationship between income growth and patterns of personal consumption. The strategy of industrialisation on the basis of branch-plants has resulted in a strong bias towards import-replacement. Thus, it has been necessary to analyse trends in personal expenditures as a basis for projections which are consistent with expected private investment.

In the English speaking Caribbean, most of the empirical work relates to Jamaica where both household budgets and time series data have been analysed. Here the work was pioneered by George Cumper in his study of household expenditures of six income groups in Kingston. The data derived from a Survey conducted by the Department of Statistics in 1953-54. Cumper's work was undertaken "in the hope that the results would throw some light on the probable future shape of demand patterns and particularly on the probable changes in the allocation of consumption between local and imported goods".[32]

A subsequent and more elaborate survey of household expenditures made in 1958 provided extensive data for the calculation of elasticity co-efficients of consumption for a large number of expenditure categories. In this survey the population was divided into three strata representing Kingston, main towns, and rural areas. This admitted investigation into differences in consumption patterns between social, (regional) as well as income groups. The study by Harris[33] utilizes these data but focusses on questions of methodology. It addresses itself to the relative merits of single as against double-log regressions of consumption expenditure on income per head. Taylor's study covers some of the same ground although more comprehensively.[34]

The most recent, lucid and informative study, however, is that of Adams.[35] Covering the period 1953-54, it examines the manner in which growth in Jamaica has affected the commodity pattern of demand for food and the relative importance of imports and domestic agriculture in meeting growing food needs. Elasticities of consumption based on time series data are compared with the estimates derived by Harris from budget studies.

The income elasticity for total food expenditure was found to be .45 and the price elasticity -38. Income and price elasticities for imported foods were .86 and -1.17. This reflects the predominant role of imports in meeting growing food needs. Over the period 1950-61, the growth of GDP in real terms averaged 8.3% in real terms while the output of domestic agriculture grew by only 1.8%. The ratio of food supplied by imports rose from 16.1% in 1950 to 24.5% in 1963. While income elasticities for meat (1.41) and dairy products (1.17) were high, as is to be expected, fruits and vegetables (-.38) and root crops (-.50) have negative income elasticities reflecting a decline in total real consumption.

When we take into account the striking fact that the elasticity of demand for imported fruits and vegetables was very high and that the supply of root crops is entirely local, it remains an open question as to whether the cause of the declining consumption of these local foods lies in taste or in supply conditions. The fact that local food prices rose considerably more than prices of imported foods is suggestive of a

a supply shortage, and the question arises why the rise in relative price did not stimulate domestic production. The author notes that the ability of supply to respond would depend on competing demand for the factors of production concerned.

If the relevant factors were bid away to other uses, clearly supply would not respond. Since there are huge surpluses of labour both in the land and in the town, Adams offers the following explanation:

"It is apparent that a large variety of local fruits once abundant has now largely disappeared. As indigenous products many of these would not doubt be "inferior", or would in any event have rather low income elesticities. At the same time it seems clear that, quite independent of demand factors, supply has been sharply curtailed over the years, and that this was closely bound up with the pattern of economic development that took place. Thus, there seems no doubt that the absorption of land by mining, tourism, residential construction, etc. has had this effect".[36]

The rise in the share of food supplied from imported sources is reflected in high income elasticities: meat (2.21); dairy (2.85); fruit and vegetables (2.21). Further disaggregation of imported foods reveals extremely high income elasticities for specific products such as fresh meat (3.47) and fresh and frozen vegetables (3.82).

The difficulties of using time series data in studying consumption patterns in an open economy are obvious and recognised by the author: the results reflect both patterns of consumption (influenced by taste and income)

and patterns of supply. The difficulty is most severe in the interpretation of the elasticity of demand for the imported commodity. Some questions cannot be resolved without better and more frequent budget studies, stratified on the basis of categories such as those proposed in our Accounting Framework.

USES OF THE ACCOUNTING FRAMEWORK

Insofar as the framework has captured the essential features of the regional economy, it is easily appreciated that it provides a powerful aid in explaining how the contemporary Caribbean economy works. The disaggregation of the accounts provides an insight into the pattern of interdependence and a link between the macro-economic approach and the study of conditions of supply and demand for particular industry outputs.

The uniformity in the selection and compilation of data renders it a particularly useful means of co-ordinating regional research and comparative studies. Even where researchers are forced by the practical necessities of data collection to depart from the categories we have suggested, the existence of a common point of departure will facilitate the interpretation and use of the results.

The analytical uses of a well-constructed set of accounts admit all the familiar exercises of input-output analysis. This includes estimates of the impact of a unit of final demand on local

income, commodity imports, tax revenue (or loss), and on the requirements of foreign exchange including transfers of profits, interest and similar charges.

By matching expenditure patterns against categories of factor income we can estimate the consumption multiplier appropriate to each of these income-consumption groups. With the use of these multipliers we can add to the direct and indirect impact, the further rounds of income and all "leakages" generated. This amounts to including within a "closed" Leontief system several categories of "households". The rows are yielded by the relevant information in our "value added" columns and the columns are derived from our disaggregation of personal expenditure patterns. The revenue and expenditure of government can similarly be included in a "closed" Leontief system, if we ascribe to revenue generated a matching set of expenditures.

In this way we can quantify, at least approximately, the secondary effects of each of the major export activities through purchases of intermediate goods, disbursement of wage and other incomes paid out locally, and the expenditure of taxation revenue yielded. The same exercise can be performed with respect to any set of exogenous final demands such as "exports to the metropolis" or "manufactured exports", or "infra-structure investment".

By varying some of the policy parameters implicit in the accounts, such as rates of taxation and duty concessions, the availability and cost of imports, and the structure of personal consumption, we can test the sensitivity of the system to policy changes. By attaching a coefficient relating sector output to employment, the model can be used to calculate the indirect and induced employment-creating effects of any given final expenditure or set of expenditures. Indeed, each of these sectoral employment coefficients can be decomposed into a number of occupational requirements relating to any set of final expenditures. This use of the system is obviously helpful in manpower planning. The same information can also indicate the effects of a set of final expenidtures on income distribution.

Data Requirements of the Framework

To the extent permitted by our aim to devise an ideal-type, we have chosen our categories in such a way as to minimise the difficulties of using existing Caribbean statistics. At the same time we are fully aware that the framework is not statistically operational on the basis of available data.[37] Because of the degree of disaggregation for which it calls, it entails a considerable widening of the scope and coverage of statistical series and an extensive modification of the

procedures now employed in data collection and collation.

The statisticians of the Caribbean countries, however, enjoy a number of significant advantages. Unlike the large industrialized countries, or many of the non-industrialized ones, Caribbean economies are small, open, and highly commercialized. What is more, most of them are dominated by a small number of large corporations and have an active government sector. Small size facilitates detailed knowledge of economic transactors. Openness to trade admits fruitful exploitation of external trade statistics in the estimation of expenditure on consumption, investment, and intermediate pruchases.[38] The dominance of large corporations in production and distribution greatly facilitates the work of sectoral accounting. The relatively small amount os subsistence agriculture diminishes one of the more difficult aspects of national accounting in many countries. Indeed it may not be unrealisitc to suggest that Caribbean statistical offices have a unique opportunity of pioneering concepts and methods of multisectoral accounting required for development planning. The basis of national accounting in the metropolitan countries derived from the Keynesian revolution and the need to plan large deployment of resources during the Second World War. Most of the work of the

statistical agencies since that time has been elaboration of procedures established 20 to 30 years ago. Nor is it insignificant that notable advances in multi-sectoral accounting have been made in countries which are relatively small and open to trade and not excessively affluent. Norway and Israel are obvious examples.

The data requirements of our framework are nevertheless formidable. The following discussion of the problem is indicative rather than exhaustive.

Because any inter-dependent accounts require a multitude of internal arithmetic balances, standardisation of classification holds the key to data collection and processing. Thus, external trade statistics should be classified by industry of origin, as well as by commodity group. This should present few difficulties on the export side. On the import side, however, the precedure requires a distinction between competitive and non-competitive imports, according to whether or not the import in question is the principal product of an industry which exists within the economy.

Many import items have users which are easily identified. In these cases, coding of import data by using sector presents little difficulty. In the case of imports with multiple users, surveys might be conducted from time to time. The combination of commodity code, industry-of-origin code, and industry-of-use code on import data, when it is first recorded, would yield a very great deal of information from external trade returns.

One gap in existing data in most territories lies in the infrequency and incompleteness of censuses of industry which are the only reliable source of data on industry outputs and costs. Application of industry codes to external trade statistics would enable easy

identification of the value of industry output exported, and provide a reliable breakdown of supply into local and imported components. Given the comparatively small size of the economies and the large number of manufacturing enterprises enjoying developmental concessions, it is both feasible and reasonable to conduct annual censuses of industry. At worst, it should be possible to collect yearly data on output and main cost components.

The collection of annual information on employment and investment statistics by industry is a prime requirement. A breakdown of employment by occupational categories, income groups and the state of labour organisation, may be obtained from occasional surveys. Information on the book value of assets and on the location of ownership and control may be collected in a similar manner.

Public sector expenditures are typically recorded in great detail. By classifying purchased goods and services to standard codes it will be possible to obtain a breakdown of government expenditure by functional categories of the kind required by the Accounting Framework.

Electronic methods of data storage and processing make it entirely feasible to record, edit and classify annual data without undue delay. Frequency of censuses may be expected to result in progressive improvement in response, to yield built-in checks on accuracy and to develop experienced staff. The standardisation of classification and codes, and the continuing flow of data will place the statistical

offices in a position to establish a data bank of integrated economic statistics.[39] By these means it will eventually become possible to produce simultaneous input-output tables and national accounts at short intervals.

Although the setting up of such a system will involve a heavy initial investment, the cost of producing regular, comprehensive, internally consistent,and increasingly reliable statistics will most probably diminish over time.

MAKE-UP OF THE ACCOUNTING FRAMEWORK

The Accounting Framework is articulated in the chart which accompanies the text. To facilitate initial comprehension it may be pointed out that the Framework falls into eight parts. In the upper section of the matrix the accounts record the transactions of the producing sectors. In the lower section they record the receipts and disbursements of the income-disposal accounts. In both sections all rows sum to zero.

Upper Section

Part I is the Matrix Al x Bl, Part II the Matrix Al x B2. Rows represent the expenditures by producing sectors of domestic (Al) and imported (B2) intermediate inputs respectively. The Bl columns show sales of intermediate goods by the producing sectors. The B2 columns show the disposition of imports of intermediate goods and their associated margins and duties.

Part III is the Matrix Al x B3 and Part IV the Matrix Al & A2 x B4. B3 Rows represent payments to factors of production while B4 rows show purchases of final imports and their associated margins and duties.

Accordingly, the B3 columns record factor incomes by industry of origin. The B4 columns yield the composition of supply as between domestic and imported supply. Competitive final imports appear on rows A1, non-competitive final imports on rows A2.

Part V is the Matrix A1 x B5 & B6. Rows represent the disposition of aggregate supply to final (B5) and intermediate (B6) purchasers. The columns represent the commodity and service composition of demand. More strictly, they show the distribution of demand between different industry outputs.

Lower Section

Part VI is the Matrix A7 x B2, B3 & B4. The rows show the receipts of the income-disposal accounts arising from the process of production. The columns distribute the earnings between the accounts. In Part VII the expenditures by the income disposal accounts on the various components of final demand are recorded. The Matrix concerned is A7 x B5. Part VIII shows transfers of purchasing power between the income disposal accounts. This is Matrix A7 x B7.

The Signs

At this point it is useful to identify the meaning of the signs entered in the cells of each Part of the Table.

Part	Sign	Rows	Columns
I	Negative	Purchases	Sales
I I	Negative	Purchases	Sales
I I I	Negative	Purchases	Sales
I V	Negative	Purchases	Sales
V	Positive	Sales	Purchases
V I	Negative	Receipts	Payments
V I I	Positive	Payments	Receipts
V I I I		Transfers	Transfers
	Negative	Outflows	Inflows
	Positive	Inflows	Outflows

Non additive items are recorded in brackets ($\overset{+}{-}$).

UPPER SECTION OF THE ACCOUNTING FRAMEWORK

Domestic Intermediate Inputs of Producing Sectors (A1 x B1)

Sectors

The three groups of producing sectors comprise the rows and columns in this matrix. Not all sub-sectors are included. For a complete listing reference may be made to Appendix II.

In classifying activities so as to throw light on the structural facts and on the effectiveness of development policy, we have split certain sectors. Thus, manufacturing appears twice depending on whether the activities are traditional (122) in character or are intended to be dynamic (132). Agriculture is also in two parts: export staples are in 115 and domestic agriculture in 121. Sugar-cane production is treated along with the entire agro-industrial institution(111) within which it is undertaken. Tourism also is twice in evidence marking the distinction between those hotels which cater to the luxury external market and are usually located in geographically distinct areas (123), and those which cater to regional and local traffic (133).

The public sector is split into four producing sectors according to the different roles which government agencies are playing in the economy. First, we isolate Traditional Government as sector 127. This is defined to include the general "law and order" administration of the government inclusive of parish and municipal authorities. It also embraces the Traditional Public Corporations which existed before Governments accepted the role of promoting economic development.

Secondly, we isolate Traditional Public Utilities, (128). We have defined this to include some activities (e.g. medicine) which are not strictly in the public sector but tend to come under close scrutiny of development planners because of their "utility" character and because of large-scale government participation. On the other hand, we exclude some utilities (e.g. Railways and Buses) which are publicly owned and operated in some territories. Here it seemed convenient to treat them separately (125.1) because, in contrast to say, hospitals, public participation can be escaped. In this sector is included the Departments of Public Works.

Thirdly, there is Dynamic Government (137). This includes all organisations (public or private) engaged in education,[40] as well as the

corporations which have been established specially to promote agricultural, industrial and tourist development. Finally, there are the Dynamic Public Utilities (138). This sector includes utilities which have assumed a high importance since governments have accepted positive development functions. Typically, these utilities tend to run into bottlenecks as output expands and are accorded high priorities in development programmes.

Real Estate and Houseownership have been combined in sector 126. This is both a statistical convenience and a reflection of changing patterns of houseownership and building finance. Rapid urbanisation has resulted in the emergence of rental-mortgage as an important mode of house-acquisition.

Interdependence

In general the sectors may engage in transactions between themselves although, in the nature of Plantation Economy, the degree of interdependence is very small. In particular the corporations in the Traditional Export Sector and to a lesser extent, those in the New Dynamic Sector are likely to purchase only a limited quantity and range of intermediate inputs in the domestic market.

Where transactions may take place a minus sign is entered in the cell. Where, on definitional grounds, transactions may not take place, the cell is shaded in. This may be so for a number of reasons. For one example, Traditional Government is assumed to buy only the factor services of civil servants and the military.[41] For another, Tourism sells the bulk of its output to final demand. The only exceptions are purchases on expense-account made by parts of the public sector and large corporations.

Prices

It is to be noted that all domestic intermediate purchases are recorded at "producer value". They are net of distribution margins, transportation charges, and indirect taxes. Distribution and transport services are bought directly from the sectors which supply them.

II - Imported Intermediate Inputs (A1 x B2)

Goods

In this Matrix, the columns record the purchases of imported intermediate inputs. Under the column heads 21 we show imports of intermediate materials by sector of use. The three-digit extension (211, 212, etc.) permits a disaggregation of the "magazine" into its material components. We isolate Food, Fuels, Chemicals, Fibres, Building Materials and Metals.

For statistical convenience the entries are recorded at c.i.f. value, as they are presented in most of the Trade returns in the region. For analytical convenience, however, freight margins may have to be shown separately for some variants of Plantation Economy. For example, where "further modification" has taken the form of branch-plant manufacturing for export, inputs are typically imported from parent firms so that freight costs as well as wage costs are often important determinants of the competitive position of producers. The more wage rates rise with the metropolitanization of Unions which accompanies branch-plant industry, the more important it becomes to isolate freight costs. Ultimately, it also becomes important to explore possibilities of substituting domestic for imported inputs. To this end, it is necessary to distinguish between competitive

and non-competitive intermediate imports. We include summary columns for this purpose.

Duties, Producer Subsidies

Under column heads 22 we record duties associated with the procural of inputs. Duties on intermediate imports paid by purchasing sectors are entered under 221. Since some producers are awarded incentives in the form of duty concessions we enter the value of customs revenue foregone in Column 222. This provides a measure of one element of subsidy under the industrial development programme. Other elements of subsidy to producers are recorded in 223.

Distribution Margins

Under column head 23 we record the estimated distribution margins associated with the purchase of imports under column head 21. We return below to this item.

Imported Producer Services

The final item in this part of the Table refers to imports of certain producer services. We have noted that industrial activity in Plantation Economy is typically organized by metropolitan parent corporations which provide patents, licences, and other ancillary services. The charges on these accounts are to be entered in Column 24.

III - Payments to Factors of Production (A1 x B3)

The sum of each row in B3 yields the "value added" to GDP by a producing sector. The column formed by these sums (B30) represents the Gross Domestic Product by industrial origin.

Total factor costs of the producing sectors are divided into five components. First there are employment incomes (31). These are recorded net of tax but they include supplementals. They are sub-divided so as to isolate components which may exercise different influences on costs and prices, on the pattern of demand, or on the choice of techniques. Hence we isolate from Other Wage and Salary Incomes (312), the Incomes of "Organised" Labour (311). The latter are defined to include earnings of all Government employees, of employees in the private sector who are organised by Trade Unions and Staff Associations. It also includes "executive" grades since these groups too, are well-placed to bargain for their share of the product and may have distinctive expenditure patterns.

The second type of factor income shown is Mixed Property Income (32). These are also recorded net of tax. Here again the columns distinguish

between significant components. Incomes from Public Property (321) include royalties, land taxes, rents and beach dues; Subsistence Incomes (322) are defined to include the imputed value of all output produced and consumed on own-account;[42] and Other Mixed Property Incomes (323) are comprised of income from unincorporated enterprises, rent and interest incomes accruing to persons.

The third element of gross factor income shown are Direct Taxes (33). These are sub-divided (331,332 and 333) to correspond to the factor incomes from which they derive. Direct taxes on Profits are further sub-divided as between those on national (3331) and those on foreign (3332) controlled firms. A column is included (3333) to record the revenue foregone as a result of tax holidays granted as another subsidy under the development programme.

The fourth recorded element in the B3 matrix is Depreciation (34). This is sub-divided between Depreciation on nationally-controlled businesses (341) and Depreciation on foreign-controlled businesses (342).

Finally, we record Corporate Profits (35), net of tax. The subdivisions distinguish Retained Profits (351) from Distributed Profits (352).

Retained profits are sub-divided into their national and foreign components on the criterion of locus of control. Distributed profits are divided between profits accruing to nationals and profits accruing to foreigners on the basis of ownership of equity. These estimates are to be made on the basis of information relating to ownership and control of corporate business. Estimates of Depreciation are to be dealt with in a similar manner.

It is convenient at this point to notice that the information on the ownership and control of capital assets required for the above estimates are to be recorded in Matrix A5 x B1.

IV - Composition of Supply (A1 & A2 x B4)

This set of rows and columns shows the composition of total supply. The sum of domestic inputs (B1), imported inputs (B2), and value added (B3) equals the gross value of output of producing sector and is recorded in the non-additive column Gross Value of Domestic Output (B10 + B20 +B30). The valuation of output is at "producer" value, i.e. value of output as it leaves the factory or farm.

In the appropriate rows of A1, under column-head B41 are recorded imports of commodities similar to the output of a domestic producing sector, but destined exclusively for final use. This column, therefore, allocates so-called competitive final imports corresponding to supplying sectors. The imports are at c.i.f. values.

The next two columns (B42 & B43) record respectively taxes and distribution margins charged on all final goods.

Column B421 records customs duties levied on all final imports. B422 records the customs duties foregone as a result of incentive concessions granted to importers of capital goods. In B423 are entered excise and sales taxes on all final goods, domestic and imported. These are recorded net of consumer subsidies.

Columns B43 record distribution margins. The margins on domestic supply is entered in B431 and represents the difference between producer value and consumer outlay. The margin on imports for final use are placed in Column B432. The split between B431 and B432 is important for reasons of statistical convenience. The two sets of margins are better estimated separately because domestic and imported commodities typically flow through different channels of distribution. The split is also interesting for reasons of economic analysis. Column 432 shows the amount of revenue accruing to the commercial class which is engaged in the importation of final goods of a type which can be locally produced. It also permits identification of the sectors in which conflicts over import-substitution policy are most likely to exist between the new manufacturing and the old commercial interests.

The sum along any row of columns B41, B421 & B432, gives the total market value, inclusive of margin and duty of competitive final imports; the market value of domestic output is obtained by adding columns B423 & B431 to B10 + B20 + B30. When the two are summed, we then obtain the value of total supply at market prices which is equal to total demand for each-row.

To obtain the Aggregate Supply of all commodities it is necessary to add the non-competitive final imports to the supply of domestic goods and competitive final imports. The former are recorded in Row A2 under column B41. The associated customs duties are shown under column B421 and the distribution margins under column B432. These Non-competitive Imports may be classified as required (e.g. into Essential and Luxuries). It may be noted that commodity aid under international or bilateral arrangements are included as a type of non-competitive import. Also included are tourist expenditures incurred by nationals temporarily abroad.

The Treatment of Distribution Services

Purchases of commodities by intermediate sectors are everywhere entered net of distribution margins. Thus purchased domestic intermediate inputs in the columns B1 are shown net of distribution margins. The associated distribution services are bought by the purchasing sectors under column 125.2 Distribution margins on imported intermediate goods are shown under column B23, while distribution margins on all final goods are shown under columns 43.

We note that the distribution margins on imports refer only to local distribution costs. Distribution charges incurred in transporting the goods to the country are included in the c.i.f. valuations of imports. We have noted that it may be important to show external freight and insurance charges separately from the f.a.s. value of imports where they can act as a limitation on industrialization programs.

We choose to treat all distribution as intermediate purchases. This means that all final demand sectors purchase goods inclusive of distribution margins. The sum of the totals of the four columns, B125.2, B23 and B431 and B432 equals the value of output of the distribution sector. B125.2 and B23 are distribution margins on domestic and on

imported intermediate inputs respectively; B431 and B432 are distribution margins on domestic output and on imports of final goods respectively.

The Treatment of Indirect Taxes and Subsidies

Since we have treated royalties, rents, licenses, property taxes and similar returns to public property as factor incomes, indirect taxes on domestic output are confined to excise and sales taxes. Excise and sales taxes are, however, unlikely to be significant, since in most countries they are incompatible with current public policy of encouraging the use of local materials and protecting home production. Taxes on intermediate goods may therefore be netted out against subsidies to producing sectors which are entered in column 223. Sales and excise taxes on final goods are shown under column B423.

We have noted that customs' duties on intermediate imports are shown under column B221, while custom duties on final imports are located in column B421.

We re-iterate that in this treatment of indirect taxation, aggregate supply of each industry is entered at market valuation on rows A1 under column B40; non-competitive imports are similarly shown at market valuation under column B40 on rows A2.

The Composition of Demand (A1 and A2 x B5 + B6

Final Demand

Final Demand is recorded in columns B5. Since demands generate revenues for suppliers, the entries are positive. The structure of demand is described by a sub-division into six categories.

1 -The Traditional Export Sector (B51)

Final Demand of the Traditional Export Sector is split into demand for Fixed Capital Formation (511) and demand for Current Consumption (512). The latter column shows how far the firms in the sector retain their traditional character as self-sufficient institutions which not only produce or import most of their own intermediate supplies but also provide directly for consumption needs of their employees.

2 - The Traditional Residentiary Sector (B52)

Final demand of the traditional residentiary sector is divided into the demand for fixed capital formation of private business (5211) and two categories of final demand of the public sector (5212, 5221). Column 5212 records purchases of construction, machinery and equipment of the government capital account. This account is defined to include capital expenditures relating only to administration buildings, community

centres, water and sewerage systems, health, housing and welfare services, "non-dynamic" public transportation, roads not regarded as having developmental significance and public facilities not elsewhere specified. In other words, only a part of public purchases on capital formation is included. The more important remainder is placed elsewhere.

New construction undertaken on Government account by the Public Works Department through the direct employment of labour and purchase of materials is shown as a sale by Traditional Public Utilities (128) to the final demand sectors which purchase Capital Formation for the Government.

Under column 5221, are recorded all final current government purchases except those associated with the maintenance of the armed forces.

3. The New Dynamic Sector (B53)

Final demand of the new dynamic sector is divided into three components. First, there is Fixed Capital Formation in "Commodity Production"(531). These purchases of construction, machinery and equipment are further divided into sub-columns. These record the value of purchases by the manufacturing sectors (5311) and by the tourist industry (5312).

Secondly, there is Infra-structure Investment (532). This includes capital expenditure relating to electric, natural gas and nuclear power, to telephones, to harbours and airports, to land development and irrigation, to industrial estates including government-owned factories, to government hotels, to buildings and equipment for educational purposes, and to highways and access roads for the exploitation of agricultural, forest and other natural resources. These are subdivided into expenditures undertaken by Dynamic Government (5321) and outlays by Utility Industries (5322).

Thirdly, there is the column identifying an element which may be of increasing significance in public expenditures under the typically unstable conditions of Plantation Company. This is Military Purchases (533). Under this column we record directly all military purchases of goods and services, except the payroll. This latter item is shown to be purchased from government administration (127). This treatment isolates the bill of goods associated with military expenditures from other government purchases of goods and services.

4. Households (54)

Current consumption of households comprises all personal consumption with two exceptions. These are consumer goods and services provided directly by the traditional export sector (512) and by the government (5221) on behalf of their employees.

Household expenditures are disaggregated in a manner which is intended to illuminate the structure of final demand. First, there is a distinction between "high income" and "low income" categories. It is a common presumption that the structure of demand of the higher income groups differs significantly from that of the rest of the population. The intention of the accounts is to explore the degree to which the assumption is valid in the various territories of the Caribbean.

Secondly, we separate "urban" from "rural" consumers. Differences in structure of demand on this account may not conform to the "high income - low income" dichotomy. Finally, there must be a split between "market" and "non-market" categories. Estimates of income in kind, which do not pass through the market must in any case be made in the construction of the tables.

We combine these distinctions so as to produce a classification of consumer demand which is exhaustive. The five components are additive. First there is Organised Wage and Salary Consumption Expenditure (5421). These are the outlays associated with the factor incomes of unionized labour and other workers who are well placed to bargain for their share of the product. Typically these workers are to be found both in the towns and in industrial or agro-industrial complexes established in rural areas by mining and sugar corporations. From this group, we isolate the presumably "pace-setting" Expenditures of Executive Grades under column 5423. The distinction may be useful for Household Budget Surveys aiming to test the validity of hypotheses regarding the "demonstration-effect".

Next we distinguish Low Income Consumption Expenditures in Urban Areas (5422) from Low Income Consumption Expenditures in Rural Areas (5424). Finally, to arrive at total consumption, we estimate Non-Market Consumption in Column 5425.

5. Inventory Changes (55)

This element of final demand is self-explanatory. It may be either positive or negative. There is, however, likely to be difficulty with some important commodities, including sugar, alumina and petroleum products because the absence of normal marketing conditions makes it difficult to establish accurate valuation of stocks.

6. Rest of the World (56)

The external demand for commodity exports is shown in three sub-sectors: Exports to the Metropolis (5611); Exports to the Caribbean (5612) and All Other Exports (5613). For this purpose the Metropolis is defined as all these countries with which the Caribbean has "traditional" ties of trade, investment and finance. Other exports could usefully be further sub-divided to show those going to Latin America.

Valuation problems mentioned in connection with inventory changes recur in connection with exports.

Intermediate Demand from Domestic Production

The sum of all intermediate demand for the output of each of the producing sectors is recorded in the column B6. The entry in any one cell B6 is the sum of the corresponding column in the matrix Al x Bl.

LOWER SECTION OF THE ACCOUNTING FRAMEWORK

The entire lower section of the Table is devoted to the accounts of the income-disposal sectors. We have indicated that the section falls into three parts representing respectively, the Receipts (A7 x B2 to B4), the Payments (A7 x B5), and the Transfers (A7 x B7) of these sectors.

The rows show eleven accounts in four groups representing Households, Government, Savings and Investment, and the Rest of the World.

Households

The Households Sector (A71) is conventional except in so far as it is defined to exclude the direct provision of consumer goods and services to employees by the Traditional Export Sector and the Government.

Government

The Government Sector (A72) records all revenues and all current and capital expenditures on public account.

Savings and Investment

There is no single row representing the conventional Savings and Investment Account. Instead, three separate accounts are recorded for separate Savings and Investment Sectors. By this means we acknowledge some of the distinctive features of the process of accumulation in Plantation Economy: the limited scope of the national capital market, the tendency for savings to flow towards specific investment uses, and the decisive importance of traditional links with the metropolis in the mobilisation and allocation of savings.

The first of the three Savings and Investment Accounts is The Resident Private Savings and Investment Account (A731). This Sector is the one which finances the investment expenditures of nationally-controlled enterprises.[43]

The second account is the Non-Resident Traditional Savings and Investment Account (A74211), which finances the investment

expenditure of foreign-controlled corporations operating in the Traditional Export Sector. The third account is the Non-Resident New Dynamic Savings and Investment Account (74212) which finances the investment expenditures of foreign-controlled Corporations in manufacturing, tourism and public utilities.

The Savings Investment Account of the Government is not here shown as a row but as a column (B72).

The degree of disaggregation achieved by this classification is regarded as a minimum. Some of the fragmentation characteristic of Plantation Economy remains disguised. Thus it would be useful to distinguish further sub-groups. For example, the Traditional Savings and Investment Account may be split so as to isolate important corporations or groups of corporations, to differentiate mature industries from expanding industries, or to identify investments with different market orientations. The resident Private Savings and Investment Account could profitably be broken into family-business accounts and corporate accounts. The Non-Resident Savings and Investment Account might be usefully divided into accounts for export-seeking and import-substituting industries.

Rest of the World

Here too, we have not followed the conventional procedure of treating all transactions on a single row. Instead, we employ six categories which are meant to acknowledge some of the institutional conditions within which Plantation Economy participates in the international economy. We have suggested elsewhere that such economies typically form part of metropolitan systems (Overseas Economies), that the bulk of their trade and payments is effected within that framework, and that there tends to be a high degree of specialization on the part of the constituents of the system. We therefore split the Overseas Economy into Metropolis (7423) and Commonwealth (7424). The former represents the centre of the system and is usually the locus of corporate head-offices while the latter represents peripheral or hinterland countries also attached to that centre.

Countries outside the metropolitan system are also split according to their apparent specializations. Rival Metropoles are identified on Row 7431 and Other Countries on row 7432. The latter is defined to exclude countries with which the Plantation Economy is likely to have extensive trade and payments once it passes from

passive to active participation in the international economy. Hence we include a row for Caribbean (741).

Finally, we include a row for International Agencies (744). These are defined to include government organisations of countries which operate in a manner similar to the special agencies of the United Nations.

VI - Receipts of Income-Disposal Accounts (A7 x B2 to B4)

Receipts from Intermediate Imports

The receipts yielded by Imports of Intermediate Inputs in B21 accrue to Caribbean, Metropolis, Commonwealth, Rival Metropoles, and Other Countries according to the sources of supply of the imports. An indication of country specialization is given by the match of different commodity types given by the third digit in B2 with the flow of income to different rows. Customs Duties on imports (B 221) and Subsidies to producers (B223) are respectively receipts and payments (i.e. negative revenues) on Government account (A72). Imports of business services (B24) yield revenues to the Metropole and to Rival Metropoles which typically provided patents, licences, and consultant services. They also accrue to International Agencies which make some of the same services available. The finance in this case is assumed to be provided by unilateral transfer from the Rest of the World in Cell A744-B74.

Receipts from Factor Incomes

"Organised" Labour Incomes (B311) are receipts by Households. Where foreigners are employed, there may be a corresponding flow of income to the Metropolis if a portion of salaries is deposited there.

Other Wage and Salary Incomes (B312) accrue solely to Households, while Income from Public Property (B321) accrue only to the Government Account. Subsistence Income (B322) and Other Mixed Property Incomes (B323) are both divided between Households and the Resident Private Savings and Investment Account. The division is to be based on an estimate of the allocation of such incomes between consumption and investment.

Direct Taxes (B33) flow into the Government Account. An exception is found in the case where because of differential rates of corporation tax, foreign-controlled businesses pay part of their income tax to the metropolitan government.

Depreciation allowances on businesses controlled by nationals or by Government (B34I) are credited partly to the Resident Private Savings and Investment Account and partly to the Government Account. Depreciation

allowances on foreign-controlled businesses (B342) accrue to the two Non-Resident Savings and Investment Accounts.

Retained Profits (B351) accrue to the Resident Savings and Investment Account or to the two Non-Resident Savings and Investment Accounts according to the locus of control.

Distributed Profits accruing to Nationals (B3521) are composed of corporate profits, and the profits or losses of the Traditional and New Dynamic Public Corporations. The first component goes to Households, the second to Government. Distributed profits going to foreigners (B3522) are credited to the Metropole, Commonwealth and Rival Metropoles.

Receipts from Final Imports

Imports of Final Goods, (B41) generate receipts for six external accounts. Commodity aid is included and is considered to generate a matching income to International Agencies which again, is assumed to be covered by a unilateral transfer from the Rest of the World (B74).

VII - Payments by Income-Disposal Accounts, (A7 x B5)

Capital Formation

Fixed Capital Formation of the Traditional Export Sector (B511) is bought either by the Resident Private Savings and Investment Account or by the Non-Resident Traditional Savings and Investment Account. The purchases of goods and services for direct consumption by the employees of the Traditional Export Sector are also financed out of the corresponding Non-Resident Savings and Investment Account (A74211). This procedure is not entirely a matter of accounting convenience. These expenditures are a sort of essential overhead for large foreign corporations operating in hinterland economies and recruiting key personnel in the metropolis. For these corporations, the overhead has also been an investment in securing an adequate and stable supply of local labour. It is necessitated by their position as total "social" institutions needing to perform many quasi-governmental functions including the provision of welfare services.

Fixed Private Capital Formation of the Traditional Residentiary Sector (B5211) is financed by the Resident Private Savings and Investment Account. Government purchases on both capital and current account (B5212 & 5221) are financed by the Government Account.

Fixed Capital Formation for Manufacturing and Tourism (B531) are undertaken both by the Resident Private and the Non-Resident Dynamic Savings and Investment Accounts. Infra-structure investments (B532) are financed in major part by the Government Account but also by the Non-Resident New Dynamic and the Resident Private Savings and Investment Accounts.

Consumption

Military Expenditures (B533) are financed from the Government Account. Household Consumption (B54) is paid for by the Households Account. Inventory Change (B55) is charged to all three Savings and Investment Accounts.

Exports

Commodity Exports (B56) are paid for by the foreign accounts concerned. Here Commodity Aid contributed to International Agencies and included in column B5613 is assumed to be charged to the Account of the International Agencies with a corresponding transfer in the balance of payments.

Customs Duties (B421) on imports of final goods are a receipt by the Government Account. Excise Duties and Sales Taxes (B423) on all final goods also flow to the Government Account.

It is evident that all the receipts in this lower part of the Table correspond to payments in the upper part. All column sums where receipts are shown are therefore zero.[44]

VIII - Transfers Between Final Using Sectors (A7 x B7)

In order to show the transfer of purchasing power between the income disposal accounts it is necessary to include a set of columns representing Sou-Sou Account[45] and accounts for Established Financial Intermediaries, for Government Savings and Investment and for the Rest of the World. For any of these accounts (columns), an inflow of funds is recorded with a negative sign and an outlfow with a positive sign. Where two transactions in one cell require the same sign we do not, it may be noted, repeat the sign.

Sou-Sou Savings and Investment Account (B711)

The inclusion of a Sou-Sou Savings and Investment Account is an acknowledgement of the transfer implication of any increase in the cash holdings of persons, given the monetary system typical of Plantation Economy.

In practice sou-sous involve an accumulation of all-purpose cash. Usually, the fund is made up of contributions to a 'Box' by different individuals, but here we include the limiting case of one-man sou-sous so as to encompass all household cash accumulations. When a

'hand' is drawn, one part of it is spent on consumption and investment. The other part is transferred by Households to the Sou-Sou Savings and Investment Account in cell A71-B711. This residual is the incremental hoarding of currency for the public other than banks and financial intermediaries. This is tantamount to a loan to the Note-Issuing Authority. Where, as is characteristic of either the formal or informal regulations in Plantation economy, the currency is based on a "Metropolitan Exchange Standard"[46] and is therefore fully backed by metropolitan securities, it follows that Households are lending to the Metropolis through the intermediation of the Issuing Authority.

Where this Authority is a private bank, the transactions can most conveniently be recorded in the Accounting Framework through the Resident Private Savings and Investment Account. A positive entry is made in cell A731-B711 and an equal negative entry is made in cell A731-B712. Where the Authority is a Currency Board or a Central Bank, it is registered by a positive entry in cell A72-B711 and a corresponding negative sign in A72-B72.

The Sou-sou Account can thus be seen to record the receipt and disposition of those Household savings which are not deposited with the

established financial institutions. Yet it is quite distinct from the "self-financing" investment component of Subsistence and Mixed Property Incomes. Its distinguishing characteristic is that the assets are held in currency only.

Established Financial Intermediaries Account (B712)

The Account for the Established Financial Intermediaries shows the mechanism by which private national savings are made available to investors. It has already been noted that under the typical currency regulations, Sou-Sou cash savings in effect flow into this Account and out again to the Metropolis. Household savings also flow in by way of bank deposits and contributions or premia of one sort or another paid up to non-bank intermediaries.

The spare funds of nationally controlled business which accrue to the Resident Private Savings and Investment also flow into this Account as deposits.

The typical national business is an unincorporated enterprise, usually a family business in the commercial or service trades. Seldom is it a manufacturing enterprise of the kind which creates for itself many opportunities for sustained investment and growth, though there may be periodic expansion or replication of existing establishments.

Investible surpluses cannot be channelled into the Traditional Export Sector. The typical firm in that sector rules out this possibility.

Moreover, the businessmen have only limited access to external avenues of investment. In this context, the financial intermediaries constitute the natural depository for their spare funds. The transfer is here registered by a negative entry in cell A731-B712.

The typical financial intermediary in a Plantation Economy has its Head Office in the Metropolis. This is true in the case of Commercial Banks and Hire Purchase Companies, Insurance Companies and other non-bank intermediaries. Although they are controlled by nationals, Friendly Societies and Credit Unions are, in effect, part of this sector too, since in their financial operations they are effectively collecting agencies for the other intermediaries. Given institutional arrangements by which the links between financial intermediaries and their metropolitan Head Offices are stronger than the relations between intermediaries, the result is that funds from this Account tend to flow to and from the Metropolis as a matter of course. This is here shown by a positive entry in cell A7423-B712. Funds also were between this Account and the Accounts of Commonwealth and Rival Metropoles.

It is an aim of public policy to mobilize and retain national savings. To this end, attempts are being made in some Caribbean countries

to provide a wider range of acceptable securities from both the public and private sectors. With the aid of Central Bank regulations, it is hoped to establish markets where, without any alteration in the form of private financial organisation, the conditions of liquidity, profitability and security would induce intermediaries to raise their local assets ratio. The Account is therefore shown to be transferring funds to the Resident Private Savings and Investment Account (A731-B712) and to the Government. The latter transaction is effected by a positive entry in A731-B712 and a negative entry in A731-B72.

Finally, the Account of the Established Financial Intermediaries is shown to be making transfers to the Caribbean. In practice, these transfers are effected through the intermediation of the metropolitan money market. What is postulated is that before there is any net transfer of funds from the Metropolis to the Caribbean, the financial intermediaries switch surplus funds from one territory to another. It is therefore useful in measuring the real dependence of the region on metropolitan finance, to isolate what are in effect intraregional transfers. In these Accounts we register transfers of this nature by a positive entry in cell A7423-B712, a matching negative entry in A7423-B74, and an equal positive entry in A741-B74.

Government Savings and Investment Account (B72)

The Government Savings and Investment Account recorded in column 72 is in essence the loan account of the public sector. In cell A72-B72 the positive entry registers the uncovered balance between Government revenue and its total expenditure on goods and services. The Account describes the manner in which Government development lending and the deficit balance in cell A72-B72 are covered by Government borrowings.

Possible sources of borrowing acknowledged in the Loan Account include: sale of securities to Households (A71), to Banks (A731) and to the Savings and Investment Account relating to the large corporations in the Traditional Export Sector (A74211). They also include the issue of bonds on the metropolitan money market (A7423), loans from Commonwealth (A7424) and Rival Metropolitan (A7431) Governments and from international lending Agencies (A744).

There are three positive entries representing loans out of the account. They go to increase the available funds of the Resident Private (A731) and the Non-Resident New Dynamic Sectors (A74212) and they flow

to the Metropolis (A7423). The first two items are in direct support of the development effort. The third is the increase in official foreign exchange holdings.

To complete the Account there are six positive entries representing servicing of debt held with Households, the Resident S/I A/C, the Metropolis, the Commonwealth, Rival Metropoles and the International Agencies: and there are three negative entries representing servicing of the loans made to the Resident Private and Non-Resident New Dynamic Accounts and to the Metropole.

The Rest of the World Account (B74)

The Rest of the World Account is shown in Column 74. The entries record the transactions between each of the Income-Disposal Accounts and the rest of the world. Thus, they represent the balance of payments. There are, however, two distinct types of entries in the column. In two cells there are no entries at all. This is because the revenue and expenditure account of the government (A72) and the Resident Savings and Investment Account (A731) do not enjoy direct access to external markets.

Of the Cells which do record transactions with the rest of the world, three involve domestic accounts. First, there are A71-B74 showing Household Income from factor employment abroad and other transfers. Secondly, there are A74211-B74 and A74212-B74 showing capital flows associated with non-resident investment. These entries are meaningful items in the balance of payments.

The six remaining cells register transactions for external Income Disposal Account: for the Caribbean, the Metropole, the Commonwealth, Rival Metropoles, Other Countries and International

Agencies. The entries are merely balancing items deriving from transactions elsewhere in the Accounting Framework. Transactions between producing sectors and the external world are registered along the six rows where most of the current balance of payments items are to be found. Capital transactions are recorded under the columns representing two more domestic accounts which involve transactions in the external capital market. These are the Financial Intermediaries' Account (A712) and the Government Savings and Investment Account (A72). The statement of the balance of payments is, therefore, to be constructed from the entries in the three cells of column 74 which represent domestic accounts and from all the entries along the six rows registering transactions for external Accounts.

We are now in a position to summarise all of the Accounts in the Matrix A7 x B7 of the Accounting Framework.

A71 Household Account

RECEIPTS

INCOME EARNED IN THE DOMESTIC ECONOMY

B31 Employment Income (net of tax)

311 "Organised" Labour Income, including Supplementals

312 Other Wage and Salary Income

B32 Current Household Consumption

FROM Property (net of tax)

322 Subsistence Income

323 Unincorporated Profits, Rent and Interest

B35 Distributed Profit and Interest

3521 Distributed Profits accruing to nationals from domestic business _____

SUB-TOTAL: _____

INCOME EARNED IN THE EXTERNAL ECONOMY

B74 Interest and Dividends from foreign investments

Earnings of Nationals employed abroad _____

SUB-TOTAL _____

A71. Household Account

RECEIPTS

TRANSFERS OF INCOME

B72	Social welfare payments	
	Interest and repayment on public debt held by households	
TOTAL RECEIPTS		

A71. Household Account

PAYMENTS

PURCHASE OF GOODS AND SERVICES

B542	Current expenditure on purchased goods and services including subsistence consumption	_____

PERSONAL SAVINGS

B711	Sou-sou Savings	
B712	Deposits with Banks, payments for insurance premiums, employer contributions to pension plans, etc.	
B72	Purc hase of Government Savings Bonds and government contributions to pension funds, etc.	_____
SUB-TOTAL		_____
TOTAL PAYMENTS		_____

A72. Government Revenue and Expenditure Account

RECEIPTS

CURRENT REVENUE

B33 Income and Corporation Taxes

	331	Income taxes on employment income
	332	Income Taxes on mixed property income
	3331	Corporation taxes on nationally-controlled business
	3332	Corporation taxes on foreign-controlled business
(B3333)		(Corporate income taxes foregone)

Import Duties and Excise Taxes

	B221	Duties on imported intermediate goods
	B421	Excise duties and sales taxes on final goods
	B423	Duties on imported final goods
	B223	Subsidies (negative)
(B222)		(Import duties foregone)
(B422)		(Import duties foregone)

A.72 Government Revenue and Expenditure Account

RECEIPTS

CURRENT REVENUE

Royalties, Rents and Profits

B321	Royalty and rental income from public property
B3521	Profits (or losses) of public corporations
SUB-TOTAL	

DEPRECIATION

B341	Nationally Controlled Firms (Dynamic Corporations and Utilities)

CAPITAL TRANSACTIONS

B711	Increase in private non-bank holdings of currency
B72	minus Transfer of above item to government savings and investment account
B72	Excess of Government Expenditure on all goods and services over Current Government Revenue

TOTAL RECEIPTS

A72. Government Revenue and Expenditure Account

PAYMENTS

PURCHASE OF GOODS AND SERVICES

B52	5212	Purchase of fixed capital formation
	5221	Current government expenditures
B53	532	Purchase of infra-structure investment
	533	Military expenditures

TOTAL PAYMENTS

A.731. Resident Private Savings and Investment Account

RECEIPTS

FROM PRODUCING SECTORS

B322	Investment of subsistence economy
323	Self-financing investment from mixed property income
3511	Retained profits of nationally-controlled business
341	Depreciation of nationally-controlled business

FROM CAPITAL TRANSFERS

B711	Sou-Sou Savings
B712	Loans from financial intermediaries
B72	Public development loans

TOTAL RECEIPTS

A731. Resident Private Saving-Investment Account

PAYMENTS

PURCHASES OF GOODS AND SERVICES

BUSINESS INVESTMENT

B511	Fixed capital formation: sugar, other export agriculture	
B5211	Fixed capital formation residentiary	
B531	" " " manufacturing, tourism	
B532	" " " infra-structure	
B55	Inventory change	
SUB-TOTAL		_____

TRANSFERS

B712	Deposits with banks (incl. sou-sou)	
	Service on Loans	
B72	Service on loans	_____

TOTAL PAYMENTS _____

A74211 Non-Resident Traditional Saving & Investment Account

RECEIPTS

FROM THE DOMESTIC ECONOMY

342 Depreciation allowance credited

3512 Retained Profits credited

B72 Repayment of Loans by Government

TRANSFERS FROM HEAD OFFICE

B74 Inflow of new capital to cover difference between new reserves credited and expenditure on the account of the domestic (hinterland) operation

TOTAL RECEIPTS GROSS SAVINGS

Minus
Depreciation allowances credited

Equals

NET SAVINGS

A74211 Non-Resident Traditional Saving-Investment Account

PAYMENTS

B51 & B55 PURCHASE OF GOODS AND SERVICES

B511 Gross fixed capital formation

B512 Current sector consumption

B55 Inventory change

LOANS TO DOMESTIC ECONOMY

B72 Loans to government

B74 TRANSFERS TO HEAD OFFICE

Excess of credited increase in reserves over expenditure on the account of the domestic (hinterland) operations which show surpluses _____

TOTAL PAYMENTS GROSS INVESTMENT _____

Minus

Capital Consumption _____

Equals

NET INVESTMENT _____

A74212 Non-Resident New Dynamic Savings & Investment Account

RECEIPTS

FROM THE DOMESTIC ECONOMY

B342	Depreciation allowances credited	
B3512	Retained profits credited	
B712	Borrowing from established financial intermediaries	
B72	Loans from government	

TRANSFERS FROM HEAD OFFICE

B74	Inflow of new capital to cover difference between new reserves credited and expenditure on the account of the domestic (hinterland) operation	

TOTAL RECEIPTS	GROSS SAVINGS	
	Minus	
	Depreciation allowances credited	
	Equals	
	NET SAVINGS	

A74212 Non-Resident New Dynamic Saving-Investment Account

PAYMENTS

B51 & B55 PURCHASE OF GOODS AND SERVICES

B53 Gross fixed capital formation

B55 Inventory change

REPAYMENT OF LOANS

B712 To Financial Intermediaries

B72 To Government

B74 TRANSFERS TO HEAD OFFICE

Excess of credited increase in reserves over expenditures on goods and services for those domestic (hinterland) operations which show surpluses

TOTAL PAYMENTS GROSS INVESTMENT

Minus

Capital consumption

Equals

NET INVESTMENT

B711. Sou-Sou Saving-Investment A/C

INFLOWS

From Households: A71 Sou-Sou Savings

OUTFLOWS

To Financial Intermediaries

B712 Increase in currency hoarded*

To Metropolis: A7423 Increase in currency hoarded*

*A loan to the note-issuing authority treated either as a positive transfer to Resident Saving and Investment Account (A731-B711) followed by a negative transfer to Financial Intermediaries (A731-A712); or as a positive transfer to Government (A72-B711) a matching negative transfer to the Government Savings-Investment A/C (A72-B72) and a matching positive transfer from there to the Metropolis (A7423-B72).

B712. Account of Established Financial Intermediaries

INFLOWS

From Households:	A71	Deposits with banks, payments for insurance premiums, etc.
	A731	Increase in hoarding of currency by persons where private banks are note-issuing authorities
From Government:	B72	Interest and repayment re government securities, routed through A72 by positive entry in B72 and negative entry in B712
From Res. Private S/I A/C:	A731	Deposits with bank and non-bank intermediaries by local business interests on Loans
From Metropolis:	A7423	Transfers from Head Office
Commonwealth	A7424	including transfers from other
Rival Metropoles	A7431	Caribbean countries
TOTAL INFLOWS		

B712. Account of Established Financial Intermediaries

OUTFLOWS

To Government S/I A/C:		
	B72	Purchase of Government Securities. Routed as a transfer through A72. (Positive entry) to B72 (Negative entry)
To Resident Private S/I:		
	A731	Loans
To Non-Resident New Dynamic S/I A/C:		
	A733	Loans
To Metropolis:	A7423	Transfers to Head Office including
Commonwealth	A7424	transfers to other Caribbean
Rival Metropoles	A7431	countries
TOTAL OUTFLOWS		

B72. Government Savings and Investment A/C

INFLOWS (Loans to Government)

From Households:	A71	By purchase of savings bonds, etc. and by government contributions to employee pension funds, etc.
	A72	By increase in household holdings of currency through operation of Sou-Sou
From Banks:	B712	By purchase of government bonds by banks, treated as a transfer from Banks to Resident S/I Account and a further transfer from the resident S/I A/C to the Government S/I Account
From Non-Res. Trad. S/I A/C:		
	A74211	By purchase of government bonds
From Metropolis:	A7423	By loans raised **in the Metropolis and**
Commonwealth	A7424	Interest on foreign assets
Rival Metropolis	A7431	
From International Agencies;		
	A744	Unilateral transfers, soft loans, etc.

TOTAL INFLOWS

B72. Government Savings and Investment A/C

OUTFLOWS

To Households:	A71	Social welfare payments
		Interest and repayment of public debt held by households
To Resident S/I A/C:	A731	Interest and repayment of public debt held by banks
	A731	Development loans to local business
To Non-Resident New Dynamic S/I A/C:		
	A74212	Development loans to manufacturing and tourism
To Metropolis:	A7423	Increase in metropolitan exchange
Commonwealth	A7424	for currency backing and other
Rival Metropoles	A7431	official reserve funds
		Servicing and repayment of debt
To International Agencies:		
	A744	Servicing and repayment of debt

SUB-TOTAL

A72 EXCESS OF PURCHASES OF GOODS AND SERVICES OVER CURRENT GOVERNMENT REVENUE

TOTAL OUTFLOWS

THE BALANCE OF PAYMENTS

RECEIPTS on Current Accounts

EXPORTS

B56	to	Caribbean	(A741)
		Metropolis	(A7423)
		Rival Metrpoles	(A7431)
		Commonwealth	(A7424)
		Other Countries	(A7432)
		International Agencies	(A744)

FACTOR INCOMES

B74	Earnings on Assets held in Metropolis by financial intermediaries	(B712)
B72	Earnings on foreign assets by Government	(A7423)
B74	Employment Income (Remittances)	(A71)
	from Caribbean	
	Metropolis & International Agencies	
	Commonwealth	
	Rival Metropoles	

RECEIPTS ON CURRENT ACCOUNT

DEFICIT ON CURRENT ACCOUNT

TOTAL

THE BALANCE OF PAYMENTS

PAYMENTS on Current Account

IMPORTS

B21 **Intermediate Imports** (c.i.f.)

from:	Caribbean	(A741)
	Metropolis	(A7423)
	Rival Metropoles	(A7431)
	Other	(A7423, A7432)

B4 **Final Imports** (c.i.f.)

from:	Caribbean	(A741)
	Metropolis	(A7423)
	Rival Metropoles	(A7431)
	Other	(A7424, A7432)
	International Agencies	(A744)

B41 **Visible Service Imports**

from:	Caribbean	(A741)
	Metropolis	(A7423)
	Rival Metropoles	(A7431)
	Other	(A7424 & A7432)

B24 **Imports of Technical and Managerial Services**

from:	Metropoles	(A7423)
	Rival Metropoles	(A7431)
	International Agencies	(A744)

THE BALANCE OF PAYMENTS

PAYMENTS on Current Account

FACTOR INCOMES

B311 Wage and Salary Income

to:	Metropolis	(A742)

B3331 Direct Taxes on Corporation Profits

to:	Metropolis	(A7423)
to:	Rival Metropoles	(A7431)

B3522 Distributed Profits

to:	Metropolis	(A7423)
	Commonwealth	(A7424)
	Rival Metropoles	(A7431)

PUBLIC DEPT. SERVICE

B72 Debt Servicing by Public Sector

to:	Metropolis	(A7423)
	Commonwealth	(A7424)
	Rival Metropoles	(A7431)
	International Agencies	(A744)

INCREMENT TO CAPITAL RESERVES OF FOREIGN CONTROLLED BUSINESS

B3512 Retained Earnings

of:	Non-Resident Traditional S/I A/C	(A74211)
	Non-Resident New Dynamic S/I A/C	(A74212)

TOTAL CURRENT PAYMENTS

THE BALANCE OF PAYMENTS

INFLOWS on Capital Account

B712 TRANSFERS BY PRIVATE FINANCIAL INSTITUTIONS

from:	Caribbean	(A741)
	Head Office	(A7423)
	Commonwealth	(A7424)
	Rival Metropoles	(A7431)

B72 INFLOWS ON GOVERNMENT ACCOUNT

Monetary

	Reduction in foreign exchange reserves	(A7423)

Non-Monetary

	New Government Borrowing	
from:	Metropolis	(A7423)
	Commonwealth	(A7424)
	Rival Metropoles	(A7431)
	International Agencies	(A744)

B74 INFLOWS ON BUSINESS S/I A/C

New Inflow of Direct Investment

to:	Non-Resident Traditional S/I A/C	(A73211)
	Non-Resident New Dynamic S/I A/C	(A73212)

Debenture Borrowing

by:	New Dynamic S/C A/C	(A73312)

THE BALANCE OF PAYMENTS

INFLOWS on Capital Account

B351 Retained Earnings

of:	Non-Resident Traditional S/I A/C	(A74211)
	Non-Resident New Dynamic S/I A/C	(A74212)

TOTAL CAPITAL INFLOW

THE BALANCE OF PAYMENTS

OUTFLOWS on Capital Account

B712 TRANSFERS BY PRIVATE FINANCIAL INSTITUTIONS

to:	Caribbean	(A741)
	Head Office	(A7423)
	Commonwealth	(A7424)
	Rival Metropole	(A7431)

B72 OUTFLOWS ON GOVERNMENT ACCOUNT

Monetary

Increase in reserves of currency authority	(A7423)
Increase in other foreign exchange holdings	(A7423)

Non-Monetary

Repayment of Loans

to:	Metropolis	(A7423)
	Commonwealth	(A7424)
	Rival Metropoles	(A7431)
	International Agencies	(A744)

B74 OUTFLOWS ON BUSINESS S/I A/C

Surplus of New Capital Reserves

from:	Non-Resident Traditional S/I A/C	(A74211)
	Non-Resident New Dynamic S/I A/C	(A74212)

THE BALANCE OF PAYMENTS

OUTFLOWS on Capital Account

B74	OUTFLOWS ON BUSINESS S/I A/C	
	Liquidation of Debenture Debt	
	by: New Dynamic S/I A/C	(A74212)
TOTAL CAPITAL OUTFLOW		_____
DEFICIT ON CURRENT ACCOUNT		_____
TOTAL		═══════

APPENDIX I

LIST OF ROWS AND COLUMNS OF IDEAL TYPE ACCOUNTING FRAMEWORK FOR PLANTATION ECONOMY FURTHER MODIFIED

ROWS:

A 1. Producing Sectors (See listing of producing Sectors)

A 2. Total Final Imports (non-competitive)

211 Automobiles and parts

212 Other Durables

213 Other Commodities

22 Services (Tourist, etc.)

[Essential]

[Luxuries]

A 3. Employment or occupational classification

311 Nationals (no's)

311 Nationals (work-weeks)

32 Foreigners (no's)

A 5. A Capital Stock (value of assets)

51	Nationally Controlled
52	Foreign Controlled

A 5. B Final Demand

51	Essential Final Demand
52	Luxury Final Demand

A 7. Final Income Disposal Accounts

71	Households
72	Government
731	Resident Private Savings-Investment Account
741	Caribbean
74211	Non-resident Traditional Savings-Investment Account
74212	New Dynamic Savings-Investment Account
7423	Metropolis
7424	Commonwealth
7431	Rival Metropoles
7432	Other Countries
744	International Agencies

COLUMNS:

B 1. Domestic Inputs (See listing of Producing Sectors)

[B 10.] [Total Domestic Inputs]

B 2. Imported Inputs (c.i.f.)

211 Food

212 Fuels

213 Chemicals

214 Fibres

215 Building Materials

216 Metals

219 Other

[Freight and other external cost margins on 21]

221 Import Duties on Intermediate Imports

[222 Import Duties Foregone on Intermediate Imports]

223 Subsidies to Industries

23 Distribution Margins on all Intermediate Imports

24 Licensing fees, royalties, patents

[Sub.Tot. Competitive Imports]

[Sub.Tot. Non-competitive Imports]

[B 20.] [Total Imported Inputs of goods and services inclusive of margins and duties.]

B 3. Value Added

	311	"Organised" Labour Income (including supplementals)
	312	Other Wage and Salary Income (including supplementals)
	321	Income from Public Property
	322	Subsistence Income
	323	Other Mixed Property Income
	331	Tax on all employment incomes
	332	Tax on all mixed incomes
	3331	Corporation Tax on Nationally-controlled Firms
	3332	Corporation Tax on Foreign-controlled Firms
[	3333	Income Tax Foregone]
	3401	Depreciation on Nationally-controlled Firms
	3402	Depreciation on Foreign-controlled Firms
	3511	Retained Profit in Nationally-controlled Firms
	3512	Retained Profit in Foreign-controlled Firms
	3521	Distributed Profits accruing to Nationals
	3522	Distributed Profits accruing to Foreigners

[B 30.] [Total Gross Value Added, G.D.P.]

B 4. Composition of Supply

[B 20. & 30.] [Domestic Output]

41 Imports of Final Goods, c.i.f.

[Freight and Other External Cost Margins on 41]

421 Customs Duties on Final Imports

422 Customs Duties Foregone on Capital Goods

423 Excise, Sales Taxes and Subsidies on Final Goods

431 Distribution Margins on Domestic Output for Final Use.

432 Distribution Margins on Final Imports

[B 40.] [Aggregate Supply at Market Value of Domestic Output and (final) Imports]

B 5. Final Demand

511 Fixed capital Formation in Traditional Export Sector

512 Consumption within Traditional Export Sector

5211 Fixed Capital Formation in Residentiary Sectors

5212 Government Capital Formation

5221 Government Current Consumption

5311 Private Fixed Capital Formation in New Dynamic Manufacturing

5312 Private Fixed Capital Formation in Tourism

[531 Total Private Fixed Capital Formation in New Dynamic Sector]

532 Infrastructure Investment

533 Military Expenditures

5421 Urban High Income Consumption Expenditure

5422 Urban Low Income Consumption Expenditure

5423 "Executive" Consumption Expenditure

5424 Rural Market Consumption Expenditure

5425 Rural Non-market Consumption Expenditure

[542 Total Consumption Expenditure]

55 Inventory Change

5611 Exports to Caribbean Countries

5612 Exports to Metropoles

5613 All other exports

[B 50.] [Total Final Demand]

B 6. Sales to Intermediate Sectors

B 7. Transfer Columns

711 Sou-sou

712 Established Financial Intermediaries

72 Government Saving/Investment Account

74 Rest of the World

APPENDIX II

CLASSIFICATION OF PRODUCING SECTORS IN AN IDEAL TYPE ACCOUNTING FRAMEWORK FOR PLANTATION ECONOMY FURTHER MODIFIED

11. Traditional Export Sector

111. Sugar

111.1 Sugar cane growing

114.11 Estates (plantation)

114.12 Farmers (peasant)

111.2 Sugar Milling

111.3 Sugar Refining

111.4 Other Products

114.41 Molasses

114.42 Rum

114.49 All Other

111.9 Own Account Services

114.91 Construction

114.92 Transport

114.93 Distribution

114.94 Utilities

112.

Bauxite

112.1	Dried
112.2	Calcined
112.3	Alumina
112.4	Aluminium
112.9	Own Account Services

113.

Petroleum

113.1	Crude petroleum
113.2	Petroleum products
113.3	Mineral tar
113.4	Petro chemicals
113.9	Own Account Services

114.

All Other Minerals

114.1	Copper
114.2	Other Minerals
114.9	Own Account Services

115.

Other Agricultural Exports

115.1	Bananas
115.2	Citrus
115.3	Cocoa (in shell)
115.4	Coffee
115.5	Tobacco
115.6	Coconut (in shell)
115.7	Pineapple
115.8	Ginger
115.9	Pimento
115.10	Arrowroot
115.11	Other spices
115.12	Cotton
115.19	Other Agricultural Exports

Non-additive summary

[115]	Plantation
[115]	Peasant

12. Traditional Residentiary Sector

121. Traditional Residentiary Agriculture

121.1 Dairy Farms - commercial large

121.2 Poultry Farms - commercial large

121.3 Meat Animals - commercial large

121.4 Other Livestock Products - non-commercial small

121.41 Honey

121.42 Eggs

121.43 Meat

121.5 Rice and cereals

121.6 Forrestry

121.9 Other Agriculture

121.91 Fruits - large & small

121.92 Vegetables - large & small

121.93 Ground provisions - large & small

121.94 Other - large & small

122. Traditional Residentiary Manufacturing

122.1 Food processing

122.11 Cocoa and coffee

122.111 Cocoa preparations
122.112 Coffee preparations

122.12 Fruit & vegetable processing including canned citrus & juices

122.13 Confectionery & sugar preparations

122.14 Dairy products

122.15 Meat products

122.16 Grain mills including animal feeds

122.17 Bakery products

122.18 Vegetable & animal oils & fats

122.19 Other food products including fish products & manufacturing ice.

122.2 Drinks

122.21 Alcoholic Beverages excluding rum & beer

122.22 Beer & Malt

122.23 Non-alcoholic beverages including flavourings excluding coffee & cocoa

122.3 Tobacco Products

122.31 Stemming & redrying

122.32 Cigars & cigarettes

122.4 Wood Products excluding Furniture

122.41 Sawmill & planing mills

122.42 Millwork

122.43 Boxes & Shooks

122.44 Miscellaneous wood products

122.5 Furniture

122.51 Household furniture

122.52 Wood office furniture

122.53 Public building furniture

122.54 Mattresses & springs

122.55 Other furniture - fixtures n.e.c. - including partitions, venetian blinds & shades

122.6 Non - metallic Mineral products - stone, clay & glass.

122.7 Paper & paperboard products

122.71 Building paper - paperboard mills

122.72 Paper & paperboard products

122.73 Paperboard containers & boxes

122.8 Printing & Publishing

123. Tourism

124. Construction - Residentiary Mining

124.1 Residentiary mining

124.2 Contract construction

[Total Construction including own a/c]

125. Services

125.1 Transportation & Storage

125.11 Railways

125.121 Buses Public

125.122 Buses Private

125.13 Publicoes and Taxis

125.141 Water transport

125.142 Water - commercial

125.15 Trucks - warehouses

125.19 Other ground transport

125.2 Distribution

125.21 Wholesale

125.22 Retail

125.221 Lumber, Building materials, handware, farm equipment dealers.

125.222 General merchant group stores

125.223 Food stores, eating and drinking places.

125.224 Automotive dealers, gas & service stations

125.225 Apparel, accessory stores

125.226 Furniture, furnishings

125.227 Drugs, notions, jewelry, liquor, sports, books, etc.

125.3 Finance

125.31 Banks, insurance & other credit institutions

125.32 Other finance

125.4 Other Services

125.41 Domestic Services

125.42 Personal Services

125.421 Barber shops and beauty shops

125.422 Laundries

125.423 Other personal services

125.43 Business Services

125.431 Acting, Audit. Advertising

125.432 Radio, broadcasting, TV.

125.433 Other business services including repair

125.44 Professional Services n.e.s.

125.441 Legal

125.442 Other professional services (excluding medical)

125.45 Non-Profit Membership Organisations

125.46 Amusement - recreation - including motion pictures

126. House Ownership & Real Estates

126.1 Own Account

126.2 For Rental

127. Traditional Government

127.1 Government Administration including Local Government

127.2 Traditional Public Corporations

128. Traditional Public Utilities (excluding transport)

128.11 Public Health

128.12 Private Health including Doctors and Dentists in private practice

128.2 Water & Sewage

128.3 Public Recreation & Amusement

. New Dynamic Sector

132. New Dynamic Manufacturing

132.1 Textile Mills

132.11 Weaving and narrow fabric mills

132.12 Knitting mills

132.13 Textile finishing except wool

132.14 Yarn & thread mills

132.15 Floor covering mills

132.16 Miscellaneous textile goods

132.2 Clothing & Apparel

132.21 Apparel

132.22 Fabricated textiles n.e.c.

132.3 Leather & Leather Products

132.31 Tanning & finishing

132.32 Shoes & finishing

132.33 Other products - (only footwear cut stock)

132.34 Luggage, gloves, purses & small leather goods

132.4 Rubber & rubber products

132.41 Rubber footwear

132.42 Rubber & plastic products n.e.c.

132.5 Chemicals & Allied products

132.51 Basic chemicals

132.52 Agricultural chemicals

	132.53	Drugs, cosmetics and toilet preps.
	132.54	Paints & allied materials
	132.55	Plastics & synthetics
	132.56	Miscellaneous chemical products
*132.6	Petroleum - Coal Products	
	132.61	Refining
	132.62	Paving-roofing materials
132.7	Metal Products	
	132.71	Primary Metal
	132.711	Steel rolling & finishing
	132.712	Iron & Steel foundries

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* This subsector applies in countries in which there is no petroleum mining, but in which crude petroleum is imported for refining and further manufacture. This is taken to mean that there does not exist the integrated institutional complex (the total economic institution) which distinguishes the Traditional Export Sector. Hence, if there were fabrication of aluminium or other metals produced independently, vertically-integrated multinational enterprise, the activity would be included under the appropriate manufacturing head.

132.713 Non-ferrous rolling and drawing.

132.714 Non-ferrous foundries including secondary non-ferrous metals.

132.72 Fabricated Metal Products

132.721 Metal Cans

132.722 Cutlery, hand tools, hardware

132.723 Heating equipment - not electric

132.724 Structural metal products.

132.725 Bolts, nuts, screw machine products

132.726 Metal stampings & services

132.727 Fabricated wine products n.e.c.

132.728 Fabricated metal products n.e.c.

132.8 Machinery - Electrical

132.81 Electrical distribution products

132.82 Electrical industrial apparatus

132.83 Household appliances

132.84 Electrical lighting & wiring devices.

132.85 Radio/TV receiving equipment

132.86 Communications equipment

132.87 Electrical components

132.88 Electrical products n.e.c.

132.9 Transport equipment

132.10 Other Machinery & Equipment

132.11 Miscellaneous manufactures

132.111 Professional Scientific Instruments

132.112 Ordnance and Miscellaneous

133. Tourism

137. Dynamic Government

137.2 Dynamic Public Corporations

137.3 Education

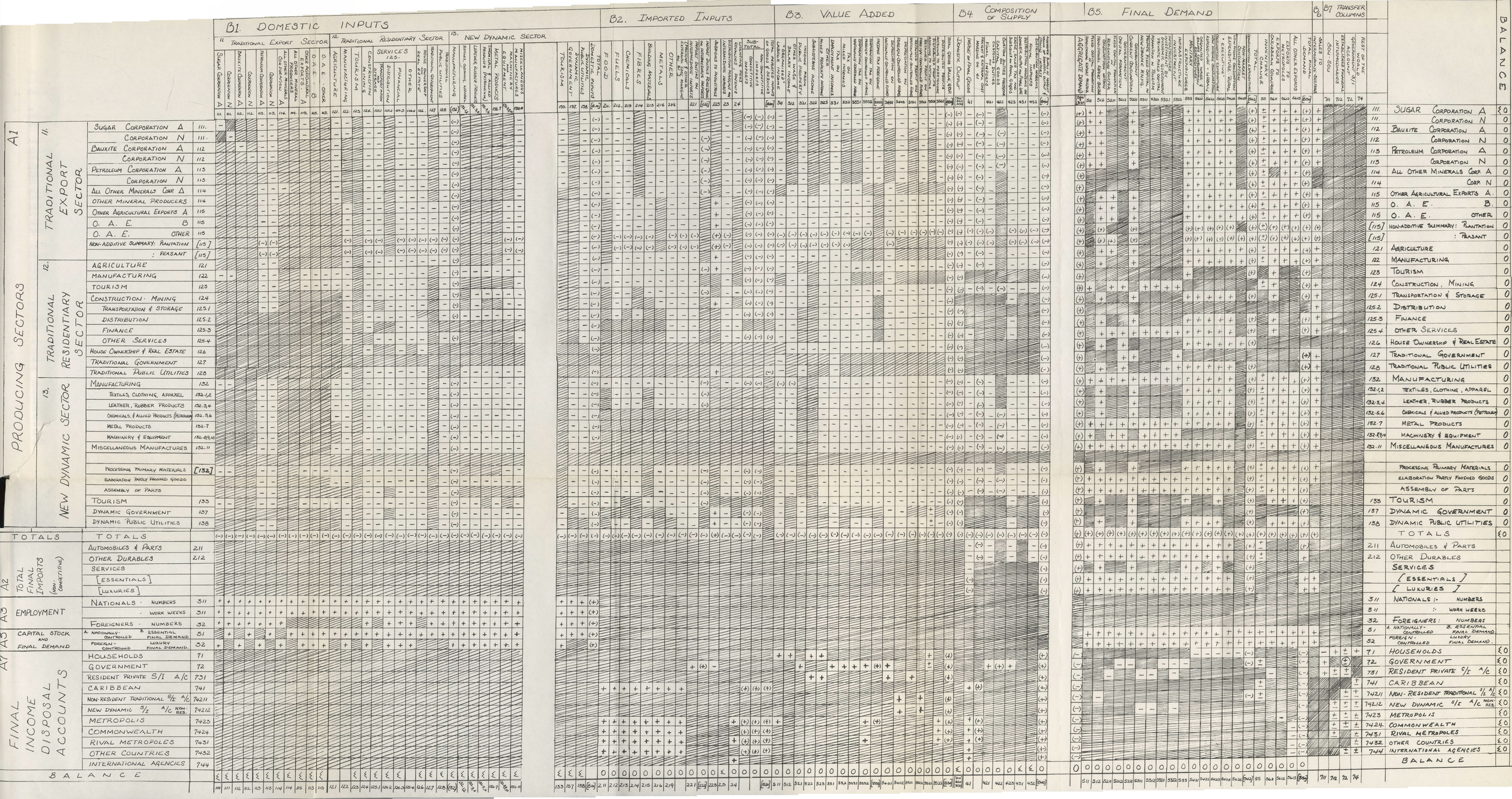
138. Dynamic Public Utilities

138.1 Seaports

138.2 Airports & Airlines

138.3 Electricity

Telegraph, telephone


B1. DOMESTIC INPUTS
B2. IMPORTED INPUTS
B3. VALUE ADDED
B4. COMPOSITION OF SUPPLY
B5. FINAL DEMAND
B6
B7 TRANSFER COLUMNS
BALANCE
A1 PRODUCING SECTORS
A2 TOTAL FINAL IMPORTS (NON-COMPETING)
A3 EMPLOYMENT
A5 CAPITAL STOCK AND FINAL DEMAND
A7 FINAL INCOME DISPOSAL ACCOUNTS
11. TRADITIONAL EXPORT SECTOR
12. TRADITIONAL RESIDENTIARY SECTOR
13. NEW DYNAMIC SECTOR
TOTALS
BALANCE

FOOTNOTES

1. See above p.

2. In the case of Martinique, Guadeloupe and the French islands it is difficult to establish what that means since the territories are in theory departments of the metropole.

3. Among the richer sources. are, for Cuba, Henry C. Wallich, Monetary Problems of An Export Economy, Cambridge, Mass., 1950; International Bank for Reconstruction and Development, Report on Cuba, Baltimore, 1951, and Dudley Seers, Cuba, the Economic and Social Revolution, Chapel Hill, North Carolina, 1964. For the Dominican Republic, Perspectivas de la Economia Dominicana para el Periodo 1967-1968, Oficina Nacional de Planificacion, Santo Domingo, 1966. For Venezuela, E.C.L.A., Economic Bulletin for Latin America passim and especially "Economic Development in Venezuela in the 1950's", March 1960; The Economic Development of Venezuela, International Bank for Reconstruction and Development, 1961.

For Puerto Rico, Junta de Planificacion, Informe Economico al Gobernador; Homans, Gayer and James, The Sugar Economy of Puerto Rico, Columbia University Press, 1938. Reynolds and Gregory, Wages, Productivity and Industrialisation in Puerto Rico, Irwin, Homewood, Illinois, 1965; and Jorge Freyre., External and Domestic Financing in the Economic Development of Puerto Rico, Ph.D. thesis Yale, 1966. Werner Baer, The Puerto Rican Economy and United States Economic Fluctuations, University of Puerto Rico, Rio Piedras, 1962. For the U.S. Virgin Islands, Overall Economic Development Program, Government of the Virgin Islands of the United States, Development Board, 1966.

For Suriname, J. H. Adhin, Development Planning in Suriname in Historical Perspective, Smits, Utrecht, 1961. For the Netherlands Antilles, Statistisch Jaarboek, Government of the Nederlaandse Antillen.

For the French territories, Societé d'Etudes pour le Developpement Economique et Social, Comptes Economiques Legers Des Antilles Francaises Pour La Periode 1949-58, (1961), Comptes Economiques Semi-Detailles Des Antilles Francaises Pour Les Années 1959 et 1960, (1962); Esquisses Comptables Des Economies Des Departements D'Outremer Pour 1961 et 1962 (1962); and Esquisses Comptables Des Departements D'Outremer Pour 1970 (1964). Also Véme Plan, 1966-70, Paris.

The English speaking islands are all covered in the (1938) West India Royal Commission, London H.M.S.O., For the post-war period see, William Demas, Part II Economics of Development in Small Countries, McGill University Press, Montreal, 1965; O'Loughlin and O'Neale, A Survey of Economic Potential and Capital Needs of the Leeward Islands, Windward Islands, and Barbados, HMSO, London, 1963; and Arthur Lewis, Industrial Development in the Caribbean, Caribbean Commission, 1951, (Reprinted from Caribbean Economic Review).

4. Richard Stone, Input-Output and National Accounts, Organisation for European Economic Co-operation, 1961; U.N. Statistical Commission, 1967, Proposals for the Revision of the S.N.A. 1952, Document E/CN.3/356, August 1967 (U.N. Secretariat). Ragnar Frisch, Oslo Channel Model, University Institute of Economics, Oslo, 1962. Dudley Seers, An Accounting System in a Specialised Exporter of Primary Products, Mimeo, 1964.

5. Op. cit., p. 7

6. "All input-output models..... are strictly demand-oriented. From a certain viewpoint this is their fundamental weakness. They can take account of unidirectional influences only". p. 130, T. Gigantes and T.I. Matuszewski, The Representation of Economic Structure by means of Rectangular Input-Output Systems", Fourth International Conference on Input-Output Techniques, (Proceedings), Geneva, 1968, mimeo.

7. "Growth models (even if built on a sectoral breakdown) are inadequate We need instead operational decision models with explicit specification of the large number of parameters that are subject to government control and decision". p.2. Macroeconomic Decision Models With Special Emphasis on Their Applicability in Less Developed Areas", Proceedings of the U.N. Conference on the Application of Science and Technology for the Benefit of the Less Developed Areas, 1962.

8. The assumption that such a pool exists "is not valid in advanced countries and even less valid in underdeveloped ones. There is first the practice of retained earnings. Business savings of the important growth sectors.....are not freely disposable throughout the economy. They are, to a large degree, earmarked for reinvestment

into those same industries.....Even personal savings are not freely available to all sectors. The bulk of these are in the form of institutional savings and the financial intermediaries which control these savings have established patterns of investment". Kari Levitt, p. 70, Comment on "Les Industries Mortrices et la Croissance d'une Economie Nationale" by Francois Perroux in Perroux et al., Problemes Economiques Contemporains, Presses de L'Ecole des Hautes Etudes Commericales de Montreal, 1963.

9. The five "rules of the game" define "spheres of influence" in trade (Inter-Caetera); regulate the division of labour (Muscovado Bias); specify the origin, destination and carriage of trade (Navigation Provision); govern the character of the monetary system (Metropolitan Exchange Standard); and set the terms of marketing (Imperial Preference). Lloyd Best, "Outlines of a Model of Pure Plantation Economy", Social and Economic Studies, September 1968.

10. Ingreso y Producto, Junta de Planificacion, San Juan, Puerto Rico.

11. Memoria, Banco Central de Venezuela; Cuentas Nacionales de la Republica Dominicana, Banco Central de la Republica Dominicana.

12. Informe al Consejo de Ministerios, La Habana, 1959; Memoria, 1958-59, Banco Central de Cuba; Julien Alienes y Urosa, Caracteristicas fundamentales de la economia cubana, 1950, Cuadro No. 17; and Harry T. Oshima, The National Income and Product of Cuba in 1953, Food Research Institute Studies, II, No. 3, Nov. 1961.

13. Phyllis Deane, The Measurement of Colonial National Incomes, Cambridge University Press, 1942; Frederic Benham, The National Income of Jamaica, 1942, Development and Welfare in the West Indies, Bulletin No. 5; A.I. Morais, The National Income of Jamaica, for 1943, 1946, Cental Bureau of Statistics, Kingston, 1948; D.A. Percival and W.P. D'Andrade, The National Accounts of British Guiana, 1948-1951, Daily Chronicle, Georgetown.

14. Nora Siffleet, National Income and National Accounts, Social and Economic Studies, Vol I, No 3; Alfred Thorne, Size, Structure and Growth of the Economy of Jamaica, ibid, Supplement to Volume IV, No. 4; Carleen O'Loughlin, "The Economy of British Guiana, 1952-56, A National Accounts Study", ibid, Vol 8, No. 1, "The Economy of Montserrat", Vol 8, No. 2, The Economy of Antigua, Vol 8, No. 3, "The Economy of St. Kitts-Nevis-Anguilla", Vol 8, No. 4.

15. National Income, Central Statistical Office, Trinidad & Tobago; National Accounts, Income & Expenditure, and National Income and Product, Department of Statistics, Government of Jamaica; Statistical Digest, Bureau of Statistics, Guyana. Studies by researchers include: A. Kundu, "Inter-Industry Table for Guyana, 1959, and National Accounts, 1957-60," Supplement to Social and Economic Studies, Vol. 12, No. 1; C. O'Loughlin, "Problems in the Economic Development of Antigua," ibid Vol. 10, No. 3; Hugh O'Neale, "The Economy of St. Lucia," ibid, Vol. 13, No. 4; Ione Marshall, "The National Accounts of British Honduras," ibid, Vol. 11, No. 2; R.L. Bonnett, "The National Income and National Accounts of Barbados," ibid, Vol. 5, No. 3; and Jeanette Bethel, "A National Accounts Study of Barbados," ibid, Vol. 9, No. 2.

16. Societe d'Etudes pour le Developpement Economique et Social, op. cit., 1961, 1962, 1964. See also, Roland Jouandet, "Notes Sur les Revenus en Martinique....." Caribbean Studies, 1966.

17. Statistisch Jaarboek, loc cit.

18. U.N. Statistical Yearbook.

19. See Dexter Rose, A Framework for Revising the National Accounts of Jamaica, Department of Statistics, Kingston; Alfred Thorne, "Revisions and Suggestions for Deflating Gross Product Estimates," Social and Economic Studies, Vol. 9, No. 1; Jeannette Bethel, "Some National Income Aggregates for Jamaica, at Constant Prices," ibid, Vol. 10. No, 2; and Frank Rampersad, "An Integrated System of Real and Financial Accounts," ibid, Vol. 11, No. 2.

20. "The income approach is ..... barred ..... for want of a sufficient coverage of the population by income-tax statistics and through the lack of unemployment insurance and employment exchanges and their statistics." Alfred Thorne," Size, Structure and Growth of the Economy of Jamaica," Supplement to Vol. IV, No. 4, Social and Economic Studies.

21. Jeannette Bethel, A National Accounts Study of the Economy of Barbados, loc. cit, p. 219.

22. The discussion below is based on the documentation given in note 16.

23. Societe d'Etudes, op. cit, 1962.

24. Ibid, 1961, p. 4.

25. None of these tables has as yet been officially published but for Trinidad and Tobago, see A.A. Francis in Research Papers, No. 2, Central Statistical Office, Port of Spain. There is also A.A. Kundu, "Inter-Industry for the Economy of British Guiana, 1959 and National Accounts 1957-60," Supplement to Social and Economic Studies, Vol. 12, No. 1.

26. Estadistica Industrial de la Republica Dominicana, Oficina Nacional de Estadistica, Division de Publicaciones, Santo Domingo.

27. Classification and Aggregation of the Input-Output Tables for Puerto Rico, Puerto Rico planning Board, 1966. See also, Proposed Questionnaire for Estimating Input-Output Relations in the Manufacturing and Other Sectors, 1963, Planning Board, 1966. 1966.

28. Classification and Aggregation, p. 5.

29. The manufacturing sector contributes approximately 24% of G.D.P.

30. Ibid. p. 2.

31. Report of a Seminar on the Simultaneous Production of Input-Output Tables and National Accounts in the Caribbean, CODECA, Hato Rey, Puerto Rico, forthcoming.

32. George Cumper "Expenditure Patterns, Kingston, Jamaica, 1954," Social and Economic Studies, Vol. 7, No. 2, 1958. p. 165. See also The Differentiation of Economic Groups in the West Indies, Social and Economic Studies, Vol. 11, No. 4 1952; and "An Experimental comparison of some Alternative Methods of Computing Demand Elasticities ." Social and Economic Studies. Vol. 15, No. 2, 1966.

33. Donald J. Harris, "Econometric Analysis of Household Consumption in Jamaica," Social and Economic Studies. Vol. 13, No. 4, 1964.

34. Leroy Taylor, "Consumers Expenditure in Jamaica, An Analysis of Data from the National Accounts, (1832-1960) and from the Household Budget Surveys, 1938-1958. ISER, Jamaica, 1964.

35. Nassau A. Adams, "An Analysis of Food Consumption and Food Import Trends in Jamaica, 1963," Social and Economic Studies, Vol. 17, No. 1, 1968.

36. Ibid. p. 12.

37. During the course of 1967, the Accounting Framework was presented before two Conferences of Caribbean Economic Statisticians. Representatives from statistical agencies from both the Hispanic and Anglo Caribbean agreed on the desirability and the feasibility of adjusting some of their data collection and collation to the needs of the Framework. At the same time, it became clear in discussion that data already available from the agencies could be organised to yield estimates of the entire set of entries required to complete the Table. See, Report of the Second Conference of Commonwealth Caribbean Statisticians, Government Printer, Georgetown, 1967. Also, Report of a Seminar on the Simultaneous Production of Input-Output Tables and National Accounts, CODECA, Hato Rey Puerto Rico, forthcoming.

38. Dudley Seers, "The Role of Merchandise Trade Statistics in Statistical Policy," Social and Economic Studies, Vol. 4, No. 2, 1955.

39. A beginning towards such a data bank has been made by this Project at the Centre for Developing Area Studies, McGill University, Montreal. External trade statistics (for three Caribbean countries and for the period 1954-64) have been recorded on computer tapes.

40. Both Education and Health have in fact been greatly expanded as part of the development effort. Both may therefore be legitimately considered as new dynamic activities. The decision to treat Health as Traditional and Education as Dynamic reflects a view that the latter is more of an investment being more directly aimed at an expansion of the productive capacity of the economy through an increase in the supply of knowledge and skills.

41. Its purchases of supplies are all final and are therefore in columns showing government consumption or investment in Part IV of the Table.

42. Only in an exceptional Plantation Economy is this item significant. The so-called subsistence sector, contrary to classical assumptions, has bere been formed by the destruction of employment in the comparatively "modern" plantation sector. Its members therefore not only have a taste for imported consumption goods but also have very little tradition of craft. This we show by altogether disallowing the possibility that some subsistence income may flow from the manufacturing sector.

43. This and the other two Savings and Investment Accounts have been defined in terms of the operative control of the enterprise undertaking the investment.

44. The column-sums of Distribution Margins on Intermediate Imports (B23) and on Final Imports (B43) are not matched by any receipt because they represent intermediate purchases.

45. This type of informal financial intermediation is practised throughout the region. Sou-sou is its name in Trinidad. In Jamaica it is known as 'Pardner', in Guyana as 'Box', in Barbados as 'Meeting Turn', and in Puerto Rico and the Dominican Republic as 'Sam'. This is a generalization of the "Sterling Exchange Standard".

MULTINATIONAL CORPORATIONS AND MINERAL INDUSTRY IN THE CARIBBEAN

The New Mercantilism: Multinational Corporations and Mineral Industry in the Caribbean.

" ... the three stages in the history of the American Hinterland bear a correspondence to the dominant metropolitan unit of enterprise."
Best and Levitt: Externally Propelled Growth in the Caribbean: Selected Essays, p.10

Since the turn of the nineteenth century countries in the Caribbean have become major world producers of important mineral commodities. In petroleum, the most important mineral resource in world production and trade, Venezuela is the third largest producer and the world's largest exporter. Trinidad-Tobago, though a relatively small producer, is an important refining centre, as are the tiny islands of the Dutch Antilles lying off the Venezuelan coast.

In bauxite which is the ore of aluminium, Jamaica, Surinam and Guyana are respectively the first, third and fourth world producers, and the Caribbean region produces collectively about forty-five percent of world output.

For these countries, the mineral industries play a critical part in determining the level of economic activity. All the countries named above are open, structurally dependent economies and thus dependent on the level of exports and capital inflows. Their mineral industries either dominate[1] or contribute an important share[2] of exports and are or have been the single most important recipients of direct foreign investment. This is the case even after the qualification that the actual payments of these industries to the Caribbean economies are only a fraction of their imputed export value. For in all cases, the mineral industries are the single most important taxpayers, and thereby finance levels of public expenditure which are the chief influences on the maintenance and growth of national income[3].

The value of these industries as a field of analysis, however, does not derive only from their importance in world production and in the respective Caribbean economies. It it their institutional characteristics and their effects on Metropoles and Hinterlands alike which afford fertile ground for profitable investigation. For these industries are all operated by the modern form of metropolitan enterprise which has come to be known as the Multinational Corporation (MNC). These units are now the typical units of economic organization[4] in the North Atlantic Metropoles and thereby the chief agencies of the continuing and pervasive economic influence of the North Atlantic over the American Hinterland.

In this respect, the petroleum and bauxite industries of the Caribbean bear certain similarities to the sugar industries established in the American Hinterland, precisely because of the structural similarities of the Mulitnational Corporation of

the twentieth century to the Plantation-Merchant House unit of the eighteenth century. We hope to show that there are significant differences as well. These differences arise, on the one hand, out of the importance of the processes of planning and technology in the MNC of the present age, and on the other hand, out of the attempts by Governments in the Hinterland economies to influence the process of economic growth in these economies.

In this essay we shall attempt, as a preliminary, to show the conditions of emergence of mineral industry in the metropoles and of the domination of such industries by vertically integrated corporations which come to incorporate Hinterland economies into a network of multinational corporations. Then, in more detailed fashion, we try to show some of the effects of mineral industry on Hinterland economies, especially as they relate to the typical unit of organisation.

A. Mineral Industry in the Metropole and the Emergence of the Multinational Corporation

The conditions in which petroleum and bauxite/aluminium emerged as major metropolitan industries have to be discussed

in terms of technological, structural and organisational change in the metropolitan economies; in particular, that of the United States.

Technological developments have the effect of making mineral resources susceptible to commercial exploitation. In effect, technology creates natural resources in that a technical change can make a valuable commodity out of a worthless piece of earth. Specifically, in the cases under consideration, we have the breakthroughs in the techniques of discovering, recovering and refining crude petroleum; and the development of techniques for beneficiating bauxite ore for the recovery of alumina and electrolysing alumina for the extraction of aluminium metal. The developments all took place in the latter part of the nineteenth century.

Here we have established an important condition under which mineral industry operates. This condition is that it is metropolitan technology which defines the possibilities of commercial mineral exploitation.[5]

Structural change in metropolitan economy in the era of mature metropolitan industrialisation has the effect of creating highly income-elastic demands for the end-products of these minerals. As industrialisation and the use of mechanically-driven machinery spreads throughout the land masses of Europe and North America, the demand for power grows enormously. Petroleum fuel is highly mobile both within and between countries. It displaces incrementally, as a source of power, water and coal with their restricted transportability.

Similarly, as the metallurgical and metal-using industries expand, aluminium, with its lightness in relation to strength and other attractive properties, begins to compete successfully with older metals such as copper, lead, zinc and steel for the incremental market for metals.[6]

Here we have established a second important condition under which mineral industry operates. This is that it is the metropolitan market which permits the possibilities of large and growing sales.

This has three implications of significance for us. One is that it is the secular and cyclical movement of metropolitan purchasing power which conditions the demand for mineral commodities. A second is that it is the income-elasticity of demand for a specific commodity group (fuels, metals) which further influences this demand; and the third, that the demand for any specific commodity (petroleum, aluminium) is further influenced by substitution of one commodity for another within the group as a whole. It is also important to note here that technological development, within and without these industries, is an important determinant of income-elasticities for commodity groups and the subsitution of one commodity for another. [7]

On the organisational level, firms are formed to exploit the opportunities afforded by the original technical breakthroughs. Some are formed to extract the mineral, others to refine it, and still others to market it. [8] They work local deposits and sell to others who supply local markets - within the metropolis.

As consumption grows, however, the market expands in space, in time and in complexity. To the firm, survival becomes identical with growth. To maintain its relative position, it must grow at least as fast as the whole industry. Growth requires a constant struggle for existing and incremental markets - a struggle, in fact, for domination of the industry as a whole. And domination requires maximum control over the instruments of production, maximum control over the instruments of marketing, and the appropriation within the firm of the processes of technology, creation and application.

Vertical integration from production to transport to refining to elaboration to marketing - follows naturally from these necessities. The marketing branch or affiliate cannot afford the uncertainty of dependence on a different firm for supplies of refined or processed products - it makes

long-term planning of marketing strategy difficult, if not impossible. The refining firm cannot afford dependence on others either for outlets for its products or supplies of the crude material - it can and may be "sandwiched" by "deteriorating terms of trade". And the crude producer's output of the mineral is valueless unless it is absorbed by a refinery.[9]

Vertical integration not only means that each unit supports the other within a matrix of commodity interdependence, but within a matrix of financial and accounting interdependence as well. At the simplest level, profits made by one unit can finance expansion in another unit. At a more sophisticated level the price of the commodity at each stage of transformation can be manipulated to pressure competitors and to minimise the total tax liability. Thus the vertically integrated firm can inflate the price of its own crude and reduce the price of its own refined products to "sandwich" an independent producer.[10] Profits can be shifted from one state, where the tax regime is tight, to another, where the tax regime is generous, and so on.

The emergence of vertical integration establishes two further conditions under which mineral industry operates. The first is that each unit of the vertically integrated enterprise serves the needs of the corporation to which it belongs. It has neither independent activity nor initiative. Production in the short run, expansion over time, the price it "pays" for inputs and "receives" for its output are all determined exogenously.

The second condition to which vertically integration gives rise is that the "terms of trade" for each unit of the enterprise is determined by the corporate head. This follows naturally from the previous condition.

The coincidence of the organisational feature of vertical integration with the existence of a rapidly growing market in volume and in space gives rise to a second important feature of the corporation: that of large size. The growth of the market permits the design and construction of larger and larger physical units of production and transport. The growth of technology which increases the amount of capital in relation to labour

confers large cost advantages on large production units. And the vertical integration of a number of large producing units within a single enterprise means that large size becomes a normal feature of the corporation.

In addition to economies of scale in the producing units which make it up, large size confers crucial advantages on the corporation as an institution. The first of these is in respect of technological research and development. These processes are costly, risky, and have a long gestation lag. It is, therefore, subject to significant economies of organisational scale. The large corporation can spread the costs of its research and development expenditures over a large volume of sales; it can spread the risks over a large number of innovations and it can be assured that previous innovations will be entering its sales stream while current ones will take some years to mature.[11]

This establishes another condition under which mineral industry operates, which will be of significance for the Hinterland. This is that the processes of technology creation and application which take place

within the Metropole, are appropriated to the specific institution of the corporation.

The second advantage of large size is that it enhances the competitive position of the corporation - its ability to crush challenges to its corporate domain, as it were.

The large firm can afford to cut prices, drive a smaller competitor out of business and recoup its losses in the next round. It can afford to purchase marginal or inefficient or merely small producers, and reorganise them or simply shut them down.

Thus, the typical corporation attains national size, dominating in whole or in part metropolitan production and marketing; growing always out of the dynamics of demand for its product and the compulsions of its own survival. At this point it begins to look abroad, on both the output and the input side.

On the output side, it must become international inasmuch as the market is becoming international . As the

product is traded between countries the same necessities which gave rise to the extension of the firm from the local to the national level now compel it to become international - ultimately, multinational. To secure control over export markets - the domestic markets of other nations in the metropolitan world - marketing, refining and production abroad must be brought, so far as it is possible, within the corporate frontiers.

On the input side, the firm is driven overseas to find and secure deposits of the raw material for two reasons. First, because it needs the raw material for its own production needs; second, to prevent competitors from getting them.

Foreign supplies of the raw material may be necessary for the simple reason that domestic reserves may be inadequate to assure long-term growth.[12] Even if the latter are plentiful, the Metropolitan Government may enforce conservation policies which have the effect of depressing the permitted rate of growth of depletion. Or foreign supplies of the raw material may be of a higher quality, or cheaper to extract.

Perhaps the most important advantage of foreign supplies, however, lies in the way they enhance the strategic position of the Multinational Corporation. By increasing the quantity and broadening the geo-political spread of its raw material sources, the MNC widens its options. Cost, fiscal and commercial conditions are likely to change from time to time in the countries of production, refining and marketing. By broadening the geo-political spread of its supply sources, the MNC can draw raw materials from Country A where costs are lowest, or B where the relative tax rate is low, or C, which is near a new refining centre or market, or D, where a new technology can be incorporated into new capacity.

What, in fact, happens is that as the firm grows it is continually adjusting its input mix by geographic source to achieve a "least cost" combination for the total quantum of raw materials required. The only constraints on its freedom to do so arise out of Government intervention. Governments may impose a minimum rate of exploitation as the price of concessions to work the material, or they may impose a maximum rate for any given time period in order to conserve reserves. They may also oppose

the introduction of new technology where labour is displaced.

But even where such constraints do operate, the firm's capacity to optimise its input mix may not be seriously jeopardised. For because its output and, therefore, its input requirements are growing overtime, it can adjust its <u>incremental</u> input mix to achieve the least cost combination, given the constraints.

It is the multinationalisation of the supply sources of the vertically integrated MNC which creates the mineral industry of the Hinterland economy. Thus, these firms find petroleum in Venezuela and Trinidad-Tobago, bauxite in Guyana, Surinam, Jamaica, and Hispaniola. They set up subsidiaries within these Hinterlands to extract these materials.

On the following page the Diagram attempts to set out the essential organisational and production structure of the MNC in mineral industry. At the head, based in some particular Metropole, is the Head Office or "brain" of the MNC from which decisions flow to a multinational network of subsidiaries concerned with all stages

of the operation from the raw material to the marketing of the finished product. The basic objective of the operation is the maximisation of profit of the entire unit in the long run.

This means, of course, that for each component of the unit profit maximisation for that particular component is not a relevant objective. In terms of the communications flow, the component merely supplies its parent with all relevant accounting information and receives in return its instructions about the level of output, the manner of its production and the method and geographic direction of its disposal. In terms of the commodity flow the component receives a portion of its inputs through the intermediation of the parent and often on its own carriers. In turn, it produces the commodity or carries out the service required of it, disposing of its output either directly to another component of the unit or to a non-firm customer, as required by the parent.

Profit maximisation of the entire unit in the long run also means that the firm's activities resolve themselves into a number of actions which are either unconnected with, or

contrary to short-run profit maximisation. Thus, we may see Firm X buying out Firm M, whose costs are higher and rate of profit lower than those of X, merely because X's marketing position is enhanced thereby. Or we may see X acquiring deposits of the raw material in excess of its current and prospective needs, because in so doing it prevents Firm Y from having access to these deposits.

One of the elements of a strategy of long-run profit maximisation is the diversification of supply sources, and of markets, so that geo-political risk may be minimised. Another element is the diversification of commodity mix, so that the risks of specialisation in one commodity, which may be displaced by technology, are also minimised.

Mineral commodities have tended to experience three stages of growth of demand and output. In the first, the rate of growth is high, as the commodity displaces others in its own commodity group and the commodity group itself is experiencing a high growth rate. In the second, the rate of growth levels off because the displacement possibilities have

been exhausted, or because the commodity group as a whole is experiencing a levelling-off in its rate of growth, or because of a combination of both. In the last stage, the rate of growth declines because of displacement by a new commodity, or decline in the growth rate of demand of the group as a whole, or a combination of both. Frequently, if not always, it is technological progress which signals the timing and duration of each stage.

Thus, petroleum displaced, incrementally, coal and water power at a time when the demand for power was growing rapidly, but is itself coming under pressure from nuclear power at the present time. Aluminium has displaced incrementally other metals but is itself coming under competitive pressure from plastics.

Within a mineral commodity, the role of a particular raw material in the production of a particular end-product is itself subject to change under the impact of technological progress. Thus, bauxite ore may be displaced by high-alumina clays as a raw material for the extraction of aluminium metal.

For the firm, the strategy is to minimise the risks of specialisation over the long run. But it must also maximise the possibilities which specialisation affords for growth. Thus, the strategy often results in specialisation in a particular commodity when its growth potential is highest, and diversifying into a new commodity or commodities as the potential of the previous commodity declines and the new one grows.

Since it is technological progress which exerts a critical influence on the process of growth and displacement of particular commodities, and since the firm internalises the development and application of technological progress, it has some degree of control over the process of commodity growth and displacement. But, within the industry it has a small number of large and powerful competitors, themselves engaged in Research and Development. And outside of the industry there are other industries competing for the markets of the industry in question, dominated too by large technology-oriented firms.

Thus, the firm must decide, for any given planning period, on the allocation of its technological effort between that designed to

expand the market for its own brand and, therefore, product; and that designed to displace its own product by another one.[13] Where its Research and Development in raw materials is concerned, the effort must be allocated between that designed to extract and refine the raw material more cheaply, and that designed to displace the raw material by another.

The strategy of long-run minimisation of the risk and maximisation of the growth potential of commodity specialisation is serviced not only by Research and Development. It is also serviced by financial strategy. Specifically, the firm must allocate its financial investments between the commodity or industry where its chief production effort is located, and others which compete with or may displace it. And it must always be ready to shift its capital and its main production effort from one commodity or industry to another. Thus, the process of growth for the firm involves a process of continual allocation and reallocation of its capital and its technological effort between raw materials, commodities, and commodity groups.

B. Mineral Industry and Caribbean Economy

In Caribbean economy, the Mineral Industry is comprised of a number of subsidiaries of Multinational Corporations. Each subsidiary is but one component of an MNC whose typical features and behaviour were briefly discussed in Section A.

The behaviour of the Mineral Industry of any one Caribbean economy is but the statistical aggregate of the behaviour of the subsidiaries which comprise it. The relevant unit of analysis is the subsidiary and through it, the MNC to which it is tied.

The industry thus differs quite basically from the "industry" to be found in textbooks used for First Year Economics University courses. It is not just that there is an absence of perfect competition, but rather that the classification of the industry with reference to the degree of competition is irrelevant. Nor is it that each firm in the industry will not attempt to equate Marginal Revenue with Marginal Cost in order to maximise profits; but rather that each subsidiary, qua subsidiary, simply does not

pursue the objective of profit maximisation.

Most important of all, no one subsidiary in the industry can be treated as a "representative" firm in the sense that all other subsidiaries will be subject to the same directions from its own MNC's. Analytically, the behaviour of one cannot be multiplied by the number of subsidiaries in the industry to produce an approximation of the behaviour of the industry as a whole.

It is important, at this point, to comment upon the usual assertion that mineral industries in Hinterland economies were set up by foreign capital because of the paucity of domestic savings in such economies.

Inasmuch as the foreign companies operating these industries have in most cases recovered and repatriated their original investment many times over, it would be easy to show that, in the purely arithmetical sense, Hinterland economies could have owned the industries from the outset by borrowing on foreign money markets to set them up, and using the profits to

liquidate the indebtedness and then expand the industry. It is also possible to argue that, in many cases, the capital could have been mobilised domestically had the institutional structure been geared to this purpose.

The difficulty, of course, would have been that the Hinterland economy might not have had access either to the technology or to the market of the Metropole inasmuch as both were controlled by vertically integrated corporations concerned, in Galbraith's words, to "eliminate the market" in order to "(convert) an external negotiation and hence a partially or wholly uncontrollable decision to a matter for purely internal decision."[14] In other words, the absence of a free market in the commodity and the technology associated with it would have made it difficult for the Hinterland to buy the technique, produce the raw material and sell it on the Metropolitan market.

Had Hinterland economies, in historical fact, actually attempted to establish these industries and met with these difficulties then it could be argued that they were frustrated by Metropolitan economic organisation. But in this case, there is no formal reason

why Hinterland entrepreneurs could not themselves have established vertically integrated Multinational Corporations to extract and refine the raw material and to market the finished product through their own marketing network in the Metropoles. In this event, the technology could have been acquired in the same way that new firms in the Metropole were themselves acquiring it, the capital by borrowing, and the market by vertical integration into the Metropolitan market.

In historical fact, the problem was that Hinterland economies simply lacked this kind of institutional initiative. The emergence and growth of vertically integrated MNC's in the Metropoles was simply one stage in the evolution of metropolitan economic organisation and, therefore, the product of a peculiar economic and social historical experience.[15] It is not just that Hinterland economies lacked this experience, but rather that their experience was one of structural and insitututional domination by Metropolitan economic organisation. One result of this was a distortion of indigenous institutional initiative where relationships with the Metropoles were concerned.[16]

Thus, the basic reasons why mineral industries in the

Hinterland have either been established or came to be dominated by foreign capital must be sought not so much in such factors as lack of capital, technology and markets, but rather in the institutional history of Hinterland and Metropolitan economies, and the nature of the relationships between them, especially insofar as these relationships are institutionalised.[17]

In this Section, we attempt to show some of the effects on mineral industry in the Hinterland which follow from the basic institutional fact that each "firm" in the industry is a single component of a Multinational vertically integrated enterprise. We discuss some of the effects so far as output determination of the mineral for the Hinterland is concerned. We discuss some of the consequences for income determination in the Hinterland. This is followed by a discussion of the effects on the economic transformation of the Hinterland especially insofar as the Government of the Hinterland attempts to use tax revenues generated by the mineral industry to promote such transformation.

(i) Output Determination

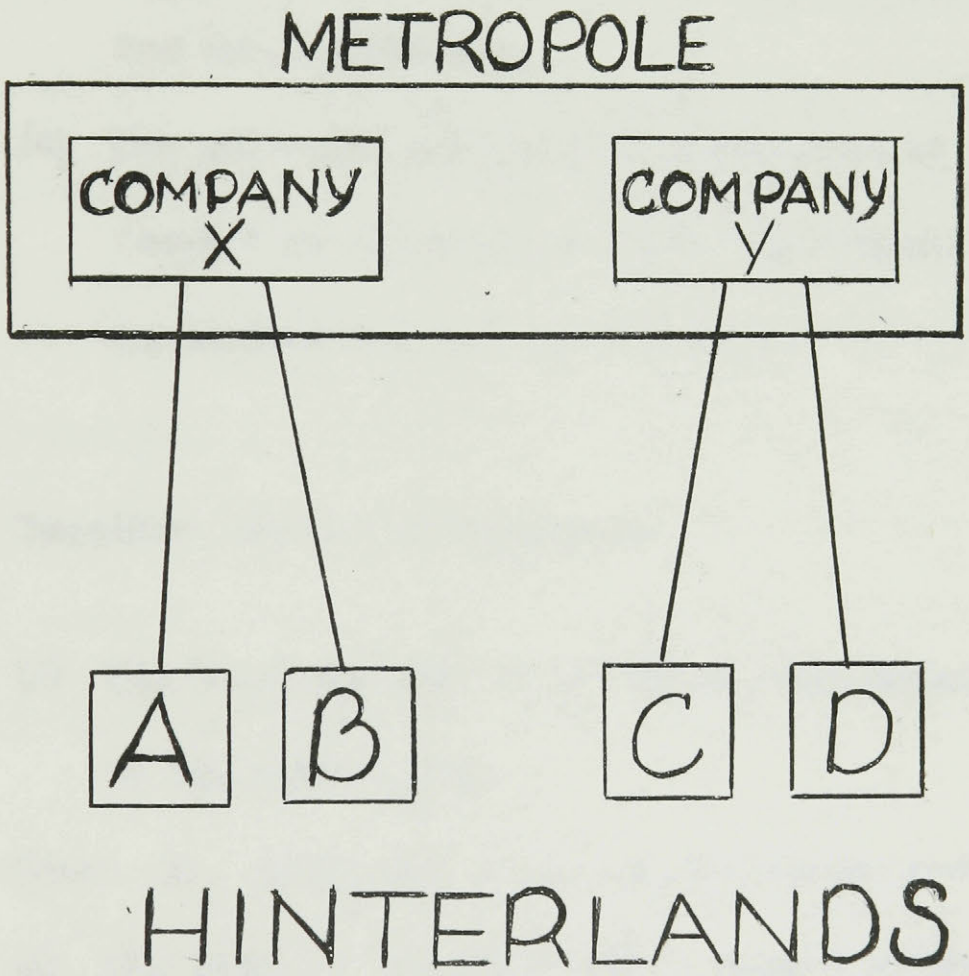
The first stage in the activity of metropolitan enterprise in the Hinterland is the appropriation of land thought to contain

the mineral. This is similar to the stage of "engrossment" by the plantation of the previous era.[18] It may take the form of outright purchase but more often that of rights, negotiated from the Government, to prospect areas of land for deposits. As part of the concession, the Government usually undertakes to give a mining lease or such other administrative sanction as may be required to extract the mineral if it is actually found. This will be necessary as most Hinterland laws, reflecting their colonial origin, vest nominal ownership of minerals in the Crown or the State.

Usually, though not always, we can expect the Company, which we shall call X, to pursue an active and aggressive policy of prospecting, exploration and acquisition of real estate. For, having selected the particular Hinterland country, which we shall call A, as a field of operation, X must appropriate within it as many deposits of the mineral as it can within its technical and financial constraints. This is necessary in order to widen the options open to it and, equally important, to reduce the options open to competitors by keeping deposits out of their control.

For purposes of the analysis of output determination, it is useful here to make the assumption that X comes to own all the deposits

of the mineral in A. We assume, too, that X has one other source of the raw material - a subsidiary which owns the entire industry of Hinterland country B. We add the assumption that X has one competitor - Y - who also sells the end-product on the Metropolitan market and draws raw materials from Hinterland countries C and D. A simple diagram below illustrates the nature of the relatio-ships.



It is our concern, here, to discuss the influences on the level and rate of growth of output achieved by any one Hinterland country - in this case, A. These influences all derive from the

institutional framework of the industry. In summary, they are:

(1) The level and rate of growth of total income in the metropole.

(2) The income-elasticity of demand for the end-product.

(3) The structure and movement of relative prices as between the end-product, its substitutes, and its complements.

(4) The price and cross-price elasticities of demand for the product, and with respect to its substitutes and complements.

Together, these four determine :

(5) The level and rate of growth of total consumption of the end-product.

Given (5), production in A is further determined by :

(6) The share of the end-product market commanded by Company X ;

(7) The ratio of raw material to end-product, from which X's total raw material requirement is derived;

(8) The "tax-paid" cost, inclusive of risk, of delivering raw material from A to company-owned refineries, as compared with the cost of delivering it from B.

So far as the first five influences are concerned, their importance and significance can easily be seen from the discussion in Section A. It is sufficient to recall here that they mean that it is metropolitan income,[19] technology, and prices which define the ultimate marketability of the Hinterland's mineral resources.

The significance of (6) is that it is the competitive success of X in relation to Y which further conditions the possible output which A can achieve. If X's share of the market is growing, then its own production growth rate will exceed that of consumption of the end-product; if its market share is declining its rate of growth of production will fall behind the growth rate of consumption of the end-product, and so on. This entails all the dimensions of corporate activity which determine its relative success as a corporation: productive efficiency, technological dynamism, marketing, and raw material strategy, etcetera.

While the peculiar advantages or disadvantages of A as a raw material producer for X may contribute to its relative

competitive success, all the other factors which contribute to this may be completely unconnected with A's mineral industry. Thus, it may be a matter of purely historical accident for A if the MNC, which happened to acquire its mineral deposits -X-, gains a growing share of the end-product market because of its technological dynamism, or loses ground to Y because of the latter's superior marketing techniques.

(7) is of importance inasmuch as the general direction of technological progress has been to reduce the ratio of raw material required to produce a given quantum of finished product. If the raw material: end-product ratio falls over time then the rate of growth of derived raw material demand falls behind that of the rate of growth of demand for the end product.

Given the output of the MNC and the ratio of raw material to end-produce, the derived demand for raw material is determined. The company is now faced with the need to adopt the "least cost" combination of production in A and B for the fulfil ment of its raw material requirement.

This means that A "competes" with B for the fulfil ment of X's input requirements. Suppose that the following Table represents

the lowest long-run average cost of producing specified quantities of the material in A and B respectively.

Country A			Country B		
Rate of Output	AC	TC	Rate of Output	AC	TC
1	100	100	1	60	60
2	95	190	2	50	100
3	88	264	3	35	105
4	78	312	4	42	168
5	66	330	5	58	290
6	56	336	6	75	450
7	49	343	7	93	651
8	44	352	8	112	896
9	48	432	9	132	1188
10	60	600	10	153	1530

NOTE : All cost figures in these Tables are meant to represent "tax-paid" cost.

In A, long-run average costs decline more slowly and reach their lowest level at a higher rate of output than in B, whose cost advantage lies in the lower levels of output. Under such cost conditions, and

cet. par., B will be at an advantage where X's input requirements are low, and A will have the advantage where X's input requirements are high. The following example illustrates this.

Requirement: 5 units

Total Cost of Satisfying Requirement by Different Combinations :

A	B	TC
0	5	290
1	4	268
2	3	295
3	2	364
4	1	372
5	0	330

Requirement: 10 units

Total Cost of Satisfying Requirement by Different Combinations :

A	B	TC
0	10	1530
1	9	1288
2	8	1086
3	7	915
4	6	762
5	5	705
6	4	584
7	3	493
8	2	492
9	1	512
10	0	600

Least Cost Combination :

Rate of Output :	Requirement :	
	5	10
A	1	8
B	4	2

Suppose now, for purpose of analysis, that X's second source of raw material was not Hinterland B but rather Hinterland C, which has lower long-run average costs over all ranges of output. Now A would be "competing" with a different Hinterland through the framework of the company, and would end up with a lower rate of output, whatever the requirements. The following example helps to bring this out :

Cost Conditions : Country C

Rate of Output	AC	TC
1	80	80
2	74	148
3	65	195
4	53	212
5	44	220
6	39	234
7	34	238
8	38	304
9	46	414
10	57	570

Requirement : 5 units		
A	C	TC
5	0	330
4	1	392
3	2	412
2	3	385
1	4	312
0	5	220

Requirement : 10 units		
A	C	TC
10	0	600
9	1	512
8	2	500
7	3	538
6	4	548
5	5	550
4	6	546
3	7	502
2	8	494
1	9	514
0	10	570

Least Cost Combination :

Rate of Output :	Requirement :	
	5	10
A	0	2
B	5	8

Thus, cet.par., a Hinterland's output is determined by its cost conditons relative to those of other Hinterlands within the particular company which happens to own its industry. For the same structure of relative cost conditions, a different institutional combination of Hinterlands with MNC's will give rise to a different structure of production as between Hinterlands supplying the input requirements of the MNC's, and, therefore, a different rate of output for each Hinterland.

Of the various factors influencing production costs for the mineral in the Hinterland, two are worth mentioning as being of particular significance. One is the nature of the geological or geophysical occurrence of the mineral, which influences the ease with which it can be extracted, and, therefore, the costs. The other is the volume of reserves : large reserves make it possible to install large-scale equipment and, therefore, to enjoy the cost advantages of economies of scale, which are important in mineral industry. Both the nature of the occurrence of the mineral and the amount of it available in one deposit or in one country are little more than geological accidents, although technological progress can have the effect of reducing extraction costs and increasing the recoverability of low-grade reserves.

In additon to the structure of relative production costs for different Hinterlands within the MNC, however, there are a number of factors which influence output-determination for Hinterland mineral industry.

One of these is the cost of delivering the mineral to company-owned refineries, assuming the latter to be located in the Metropole. Although A may have a cost advantage relative to B over a certain range of output, it may be a longer distance away from X's refineries. The comparison for X is the costs of delivering various combinations of A's and B's output to its own refinery. Given vertical integration, A's output is not available to any refinery but only to those owned by X, at least in the pure case.

Thus, a low-cost Hinterland may be penalised merely because it happens to be far from the refineries owned by the MNC which happened to have acquired its mineral deposits. This can occur even where the Hinterland is proximate to a refinery owned by another MNC - say, Y - because X, for reasons of its own, does not wish to sell raw materials to its own competitor; or because Y is unwilling to buy it. It can also occur even where

reserves and potential output in A are large enough to justify the construction of refineries within the country, but A is unwilling to construct such refineries, because its existing refineries are working below capacity, or it does not wish to accept the political risk of locating refineries in A.

This brings us to a factor which does not express itself in terms of money cost differentials at all; the factor of risk. One of the essential elements of X's raw material strategy has to be the minimisation of the risk of expropriation or disruption of supply. This reinforces the tendency for X to maintain plural sources of raw material supplies, each one an insurance against another. Thus, A may be blessed with output at the expense of B because it is politically "safe"; or penalised because its Government is judged likely to pursue a policy of stringency towards or nationalisation of foreign capital.

Hinterland Government may, of course, intervene in the process of output determination by requiring a minimum level of production of X as part of the price of mining the raw material. This introduces a constraint under which X operates. A specified portion of its input requirements have to be met by "mix" which is determined by

contractual arrangements with Hinterland Governments. The remainder of the requirement is met by the "least cost" combination, after consideration of transport cost and political risk. But it is unlikely that such Government intervention, at least in the early phases of the development of the mineral industry, will be sufficiently severe as to seriously constrain the freedom of the MNC to decide on the actual level and rate of growth of output. At most, it introduces a "floor" to the output level in each Hinterland.

What happens to the level and rate of growth of output of A's mineral industry, therefore, is the sum result of the operation of all these factors. The only influence of the Hinterland itself on its own output is through relative production cost and Government-stipulated minimum output levels. For the remainder, whether it experiences a high, moderate or low growth rate is the accidental result of the combination of a number of factors completely exogenous to the conditions prevailing in its economy.

If we then relax the assumption that the industry of A is owned by one single company, we move closer to conditions which

actually prevail in the real world. Most Caribbean mineral industries consist of a number of wholly-owned subsidiaries of MNC's.[20] The output of each subsidiary is decided upon by its parent MNC within the framework of the factors already listed. Clearly, some subsidiaries can experience a growing output while others decline; some a high growth rate and others a low one, and so on. Thus, for MNC X, A may be a low-cost supplier and thereby the locus of the bulk of X's input requirements; while for Y, A may be a high-cost supplier and merely used as a "reserve", and, therefore, Y's output drawn from A may stagnate. Or A might suffer because X, which draws the bulk of its output from A, is losing ground in the end-product market to Y, which uses A only as a "reserve" supplier.

The total output of the mineral in the Hinterland is the statistical aggregate of the supplies drawn from it by the MNC's operating in the industry. Each subsidiary producing the raw material occupies a different position in its parent's supply network, and each parent company differs in its size, rate of growth, refining, production and marketing position.

Moreover, over time all the factors which determine the level and growth rate of output in the Hinterland will be continously

changing. Within the Hinterland, absolute "tax-paid" production costs may change as higher levels of production and thereby economies of scale are achieved, or lower-quality deposits have to be worked, or the Government increases the rate of tax. Production costs in other Hinterlands will be changing too, so that the whole structure of relative production costs between Hinterlands for each MNC will be changing. So, too, will be the position of each MNC - its size, rate of growth, and so on.

In some cases a number of fortuitious factors may give rise to the Hinterland experiencing a high rate of growth of output - a veritable "Golden Age", to adopt the terminology of plantation economy. This can happen, for instance, when the co-existence of huge reserves of the mineral with proximity to the companies' chief refining centres, induces the chief companies in a rapidly-growing industry to draw the bulk of their incremental input requirements from one particular Hinterland country.

The very existence of a "Golden Age", however, brings in its train the prospect of secular stagnation. For the higher the rate of output is the shorter the life of the industry, inasmuch as reserves are being more quickly depleted. Moreover, the existence

of the "Golden Age" actually sets up pressures for the companies to "plan" the eventual stagnation of the particular Hinterland from which they are drawing such a rich harvest.

For one thing, "tax-paid" production costs may actually increase in the Hinterland as it achieves ever higher levels of output. For, although economies of scale may be operating to reduce costs, two other factors may be operating in the other direction. As mineral deposits near to the surface are worked out, mining may get more costly. More overburden has to be removed from bauxite; "artificial" means have to be used to bring the oil to the surface. The second factor will be for the Hinterland Government to increase its tax rate over time, especially as the "Golden Age" demonstrates the value of the mineral to the companies.

Whether "tax-paid" production costs do increase relative to other Hinterlands or not in the "Golden Age", the companies must nonetheless plan to reduce their dependence on, and eventually displace, the particular Hinterland. Such dependence is risky; for the Hinterland Government, aware of it, might impose tighter and tighter controls over the companies. In any case, since reserves are being depleted rapidly the companies must put themselves in a position to ensure supplies from other Hinterlands and other materials

once the reserves in that Hinterland are eventually exhausted.

Thus, the companies are likely to seek out and "engross" other Hinterland countries, one of which may be destined to enjoy its own "Golden Age" at sometime in the future. In addition, their technological effort is likely to include a continuous investigation of the possibilities for extracting the end-product from other raw materials. The purpose of this will be to put themselves in a position to displace all Hinterland countries producing the raw material, should economic or political factors require it.

If a "Golden Age" does materialise, therefore, it is not likely to be a permanent feature of the economy of the Hinterland. In the economies under investigation, its duration seems to be of a period of about thirty years.

(ii) Refining

The second stage of operation concerns the construction of processing capacity for Hinterland crude and the decision as to whether it will be located in the Hinterland or in the metropolis.

In fact, several factors make for the overwhelming tendency to carry out the bulk of refining or processing within the metropolis. In terms of the internal economics of the company, it may simply be preferable to expand existing refineries to absorb Hinterland output. This may yield economies of scale both in capital costs and in operating costs. Thus, initially Hinterland crude is absorbed by metropolitan plant because it is simply cheaper to do so.

After a point, however, new refineries have to be built for Hinterland crude because of the growth of output there. The existing refineries reach their maximum capacity and, moreover, the company wants to incorporate the latest technical advances into its new refinery capacity.

Making for processing in the Hinterland will be the transport economies of weight-reduction. Even this only holds in the case of bauxite; in the case of petroleum, refined products are actually more costly to ship than the crude equivalent.

Making for processing within the metropolis, however, will be the crucial factor of security. If crude is shipped from the Hinterland to a domestic refinery, then disruption of supplies from

the Hinterland can be handled relatively easily by substituting crude fromasubsidiary unit in another Hinterland. If the refinery is located at the source of the crude within the Hinterland that "turns sour", then the company loses far more capital assets and its ability to service its hard-won markets in the short run is seriously sabotaged.

Porcessing within the metropolis also gives the company flexibility with regard to its input mix from various Hinterland subsidiaries. Thus, the company can adjust crude output from its various subsidiaries according to changes in the respective fiscal and commercial regimes, local costs, political climates, and so on. A refinery erected in one Hinterland subsidiary might commit the company to use crude only from that subsidiary, as the local Government might object to crude being imported from another Hinterland country while its own crude lies in the ground.

Finally, there will be the wishes and policies of metropolitan Government itself, which generally will favour metropolitan processing for reasons both of security and of maximising value-added at home. Specifically this policy takes the form of higher tariff rates on imports of the finished product than on the crude

material, and probably forms of hidden Governmental pressure.

(iii) Direct Income Effects on Hinterland Economy.

The direct income effects of Mineral Industry on Hinterland economy can be analysed with the aid of the "Accounting Framework for Plantation Economy Further Modified." In summary, the chief ways in which the industry contributes to local incomes is by means of :

(a) local purchases of goods and services,

(b) wages and salaries paid locally, and

(c) taxes paid locally.

The remaining items of Gross Output :

(d) imports of goods and services,

(e) depreciation and

(f) net profits, accrue abroad;

the last two items because of the fact that the industry is foreign-owned.

When the first three items are summed, they give a total of the local incomes created directly as a result of the operation

of the industry. Expressed as a proportion of the Gross Value of the industry, this yields what we shall call the "local share" in the industry.[21] In most of the industries under examination, the "local share" is well below the Gross Value of output, the actual range being between ten and sixty percent. The reasons for this derive partly from the technical and partly from the institutional characteristics of the industry.

During periods when the companies are establishing capacity for the extraction, transport and (perhaps) processing of the mineral within the Hinterland, local purchases of goods and services tend to be substantial. The domestic construction and building materials industries are greatly stimulated. These periods, however, tend to occur at particular times during the industry's operation and are not, of course, a permanent or continuous feature. And, apart from local capital expenditures, local purchases of goods and services tend to be small, absolutely and relative to the Gross Value of output.

In general, extractive industry does not use a substantial quantity of intermediate goods: the chief inputs are labour, capital and technology. Moreover, insofar as intermediates are

required, there is a strong tendency for them to be imported; more specifically, to be supplied from the metropolitan countries in which the MNC's which own the industry are located.

The general underdevelopment of manufacturing industry in the Hinterland is only one contributory factor to this. The institutional organisation of the industry - the fact that it is operated by Multinational vertically integrated firms - also contributes to it. For in many cases, the parent firms have integrated <u>horizontally</u> into the production of intermediate inputs for each stage of production. Thus, where it supplies itself with inputs for its own mining in the metropole it is likely to supply itself for Hinterland mining as well.

But even where it does not itself produce the inputs, the parent firm will normally act as the intermediary through which the subsidiary in the Hinterland acquires the inputs. Thus, the locus of purchase is, in fact, the metropole, and it is, of course, natural that the parent firm will buy from those suppliers with which it is most familiar, and who may, in fact, be the traditional suppliers for the particular company. This will have an added advantage within the terms of the firm's accounting in that since vertical

integration usually includes ownership of the shipping facilities for the mineral from Hinterland to Metropole, the company can ship inputs to its subsidiary on its own empty ships on the Metropole-Hinterland run.[22]

The strength of the tendency for intermediate inputs to be imported can be seen clearly where substantial intermediates are, in fact, purchased for Hinterland production. This occurs where some processing of the mineral takes place locally, for processing or refining usually requires some amount of materials. In such cases, in empirical fact, we shall find that a high proportion of these materials is imported.

The second main item in the "local share" is wages and salaries paid locally. This, also, tends to form a low proportion of Gross Output. Mineral industry typically is highly capital-intensive. To mine bauxite and to bring oil to the surface requires specific and highly specialised mechanical equipment. The result is the employment of a low ratio of labour to capital and a low ratio of labour to output. Typically, the numbers employed in the industry form but a small proportion of the labour force of the country. Wage rates, in the first instance, may be low as the low productivity and

low wages elsewhere in the economy make labour available to the industry on generous terms. But even where wage rates rise over time and come to be considerably in excess of those elsewhere in the economy, the low labour/capital ratio results in a low proportion of wages to Gross Output.

The third main item in the "local share" is tax payments by the industry. It is this item which has the greatest potential for variation from country to country and for one country from time to time. For tax payments are, in essence, determined by negotiation between the companies and Hinterland Government. Typically, the two main types of taxes are royalties and income taxes.

Royalties are paid per unit of mineral produced : they are a form of payment to the State for the use or depletion of its mineral resources. They may or may not be "tied" to the price of the mineral, however determined. Income taxes are paid on net profits; but net profits are the difference between revenue and costs, after deduction of capital allowances. There are, thus, two important areas over which negotiation must take place.

The first, and often the most important, is over the price

to be used in valuing the product. Since the firm merely transfers the product from one of its branches or subsidiaries to another, the price used does not represent the amount actually received by the subsidiary in the Hinterland. It is rather an accounting item over which the parent firm can and usually does have a great deal of flexibility so far as its level is concerned. Without Government intervention, the parent will simply set it so as to minimise its total tax payments to Hinterland and Metropolitan Governments. If the tax regime in the Hinterland is low, relative to that of the Metropole, then the parent will probably price the product high in order to shift profits to the locus of the low tax regime, and vice versa.

In few cases, if any, however, do the parent's pricing arrangements lead to a satisfactory level of tax revenue for the Hinterland Government. Even, for instance, where the Hinterland tax rate is low it is quite feasible for the parent to price the product low at Hinterland ports and high at Metropolitan ports, shifting profits to its own shipping subsidiary which is incorporated in a tax-free third country. And even if the product is priced high to take advantage of a low tax regime in the Hinterland, this means that the total payments to the Hinterland Government will be low

relative to Gross Value, because of the low tax rate.

The Government, therefore, normally has to intervene to secure tax arrangements which yield a revenue commensurate, in its view, with the value of the industry. In doing so, it will be hindered by a number of factors which arise out of the organisation of the industry. Most of the technical information needed to place a just price on the product will be in the hands of the firms themselves. The Government may have to use "reference prices"; i.e., prices used for the mineral in other parts of the world for actual marketing transactions in the mineral. But such reference prices may be hard to obtain or refer to a very small part of world output or to grades of the mineral which are different from those characteristic of the mineral found in this particular country. And, in bargaining with the firms which have alternative Hinterland suppliers, there is always the danger that too high a tax rate will induce a shift to alternative suppliers at the expense of future output in the Hinterland.

The second major area of negotiation is over the manner and extent of capital allowances which will be treated as tax

deductible. One such question concerns whether such expenses as exploration and drilling expenditures will be capitalised and amortised or deducted as a current operating cost. Governments usually prefer the former practice, companies the latter. Another concerns whether the Hinterland Government will grant the companies the same generous "depletion" allowances of their domestic (metropolitan) operations. Such allowances may be given by the Metropolitan Government on the grounds that the companies are producers of wasting resources. Frequently, too, the companies bargain for accelerated depreciation allowances on the grounds that practice in the Metropole or in other Hinterlands justify them.

Thus, even where tax rates are relatively high - say, fifty percent and over - it does not follow that the "local share" will necessarily be high as well. The single most important influence on the "local share", given the fact that the capital is foreign-owned, is the capital/labour ratio employed. Since these industries are usually capital-intensive, the share of net profits and depreciation in Gross Output is usually high and since these accrue abroad the "local share" is typically well below the Gross

Value of output. Thus, capital-intensity in conjunction with the fact of ownership by Multinational, rather than local, firms are the chief factors responsible for the low local share.[23]

One important question relates to what happens to the "local share" over time - i.e., whether local purchases, wage and tax payments as a proportion of Gross Value rise, fall or remain the same.[24] Because, however, of the "incalculability of Gross Value" arising out of the arbitrariness of the pricing of output, it might be preferable to consider the question in terms of what happens to local payments <u>per unit of physical output</u> over time.

It is quite feasible for the wage component of Gross Output to fall over time because of the tendency for capital/labour substitution to take place, reflecting the general direction of metropolitan technological progress. This would have the effect of reducing labour input per unit output; and, even if wage rates do rise, the wage cost per unit of output may well fall.

Countering this tendency will be the actions of the Government in the Hinterland. The Government, aware of the fact

that the real foreign exchange contribution of the industry is well below the export value assigned to it, may move to secure increases in the "local share". This may take the form of requiring that intermediates be purchased domestically so far as it is feasible;[25] almost certainly it is likely to increase the tax "take" over time.[26] This can result from raising the rate of income tax, or the level of royalty; or renegotiating the pricing arrangements or adding new taxes; or a combination of all.

When the Hinterland Government succeeds in making out of the industry a major taxpayer, the significance is more than merely that the "local share" and total foreign exchange contribution of the industry will rise. An important implication is that the tax payments now become the chief way in which the industry creates income for Hinterland economy, through their importance as a means of financing Government expenditure. The economic wedding of the institution of Government to the fortunes of the Multinationally operated mineral industry, via tax revenues, has, as we shall see, important implications for the functioning of Hinterland economy as a whole.

(iv) Effects on Income growth, and economic transformation

Mineral industry in hinterland countries, wherever it reaches a relatively large size, usually plays a leading part in income generation in these economies. Thus, having discussed the factors influencining the direct income contribution of the industry to hinterland economy, we need to analyse the effects of this contribution on the level and rate of growth of national income. It is also necessary to discuss the effects of the industry's operation on the rate of economic transformation as distinct from the rate of income growth.

At the first stage of the analysis the relationship of the local payments of the industry to national income could be viewed in terms of a simple Keynesian multiplier relationship between the former and the latter.

At the second stage the total local payments of the industry would be disaggregated into its main components of taxes, wages and local current and capital expenditures. The disposition of the income created by each between consumption and investment, and domestic and import expenditure would then be analysed and the effects on the rate and pattern of economic growth of such disposition discussed. The distribution of local payments between its main components would then

be examined over time in order to analyse the effects of the expansion of the industry in terms of the secular movements in its tax, wage and other payments and the different effects of each on the local economy.

At the third stage the behaviour of other variables in Hinterland economy would be analysed in order to show their importance to the effects of the mineral industry. Of these variables the most important are the marginal propensity to import, the marginal propensity to invest, the trend in the wage rate, and the trend in the price level.

At the final stage the interaction of the mineral industry with the local economy would be discussed to give a total picture of the effects of its operation on the rate of growth and the rate of transformation. We would ask such questions as: What is the effect, if any, of the mineral industry on the propensity to import? On the trend in the wage rate? Does the operation of the industry result in persistent structural dependence or does it promote economic transformation as reflected in the rapid growth, diversification and interdependence of agricultural and manufacturing output?

All of this analytical ground will be covered in the treatment which follows. The method, however, will be first to outline the conceptual schema which have been developed by previous writers for the purpose

of analysing the effects of mineral-export industries on 'underdeveloped' economies. These schema are those developed by Dudley Seers out of the experience of the Venezuelan petroleum industry, by Clark Reynolds for the case of the Chilean copper industry, and by Lloyd Best for policy prescriptions for the Guyanese economy, which is dominated by sugar and bauxite export industries.

This having been done, we shall discuss the way in which the specific institution of the Multinational vertically integrated corporation affects the variables isolated by these writers as those which are critical in determining the contribution of the mineral industry to income growth. Then we shall examine certain ways in which the mineral industry's operation affects the success of Government attempts to use revenues derived from the industry to promote economic transformation.

(i) The Seers' Model

In his "Mechanism for an Open Petroleum Economy"[23] Dudley Seers outlines a model for an economy, the essential characteristics of which are:

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27. Social and Economic Studies, June 1964

1) Exports consist largely of petroleum

2) Such exports are very profitable

3) Government expenditure is very largely financed by petroleum revenues

4) The petroleum companies are foreign-owned.

The model is concerned not with the rate of income growth, but rather with short-period trends in employment for such an economy. This follows from the fact that many such economies enjoy relatively high and growing per capita incomes side by side with persistent mass unemployment.

The petroleum sector by itself does not create much employment. But it largely finances Government expenditure, which is a major source of employment. And expenditure by petroleum and Government workers on domestic output creates secondary and tertiary rounds of income and employment within the economy.

The trend in employment therefore depends on:

1) The trend in exports.

2) The tax rate.

3) The trend in the wage rate.

4) Profit margins in domestic industry.

5) The propensity to import.

The growth of employment will be favoured (other things held constant) by a high rate of growth of exports, or a rise in the tax rate, or a low rate of growth in the wage rate, or a fall in profit margins in domestic industry, or a fall in the propensity to import; and vice versa.

Paradoxically, however, an export boom will not result in a substantial rise in employment because other things will not remain constant. An export boom will generate higher tax revenues for the Government. But it will also trigger demands for wage increases by petroleum workers. The petroleum companies will not resist these demands strongly; since profits are rising, since wages are a small proportion of costs, and since wage increases are partly paid for by lower tax payments. The "Internal demonstration effect" of these wage increases will trigger similar demands by workers in the public sector and in the rest of the economy. The result is that the new waves of income created by the booming petroleum sector tend to be enjoyed by the existing employed in the form of higher wages rather than by the unemployed in the form of new jobs.

Moreover, the propensity to import may also rise as a result of an export boom. Since wage rates go up, so do domestic costs

and prices, giving a price advantage to imports. (The high structure of domestic costs and prices will also make difficult the promotion of manufacturing exports). Also pushing up the import propensity will be the growing inequality of income distribution due to the fact that the bulk of the population is left out of the consequences of the boom, in conjunction with an assumption that the higher income groups have a higher propensity to import than that of the population as a whole. The shift in population from rural to urban areas, where the propensity to import is also higher, will also, in the model, cause the propensity to import to rise.

In Seers' model, therefore, boom conditions in the mineral export sector not only do not generate substantial direct employment, but also inhibit the generation of indirect employment through the direct and indirect effects of petroleum wages on the rest of the economy. The model also incidentally provides a partial explanation for the poor performance of manufacturing industry in such economies.

(a) The "Reynolds" Analysis

In order to analyse the role of the Chilean copper industry in the economic growth of that country, Clark Reynolds proceeds in the following way: [28]

"The first step.....is to define the structure of the industry and its integration into the domestic economy through inputs of local factors of production, raw materials, and share of the government in factor returns. All of these relationships will influence the behaviour of the industry as a determinant of economic growth through the following steps,

a) Exogenous determination of the value of production of the export industry (V) through conditions of demand for the world market. V may also be affected through changing conditions of supply in the domestic economy as a by-product of growth and changing technology.

b) Local participation in V through inputs of domestic factors of production and taxation as measured by 'returned value' ($\bar{R}$). (This share may be a function of growth to the extent that prices of local factors of production rise or fall relative to foreign inputs and the price elasticity of demand for these factors. Also, the tax share, as a reflection of the capacity of the government to tax the export industry, may be a function of the level of economic and political development.)

c) Multiplier effects of 'returned value' in the rest of the economy (if excess capacity exists) and the channeling of $\bar{R}$ into domestic capital formation. (The extent to which $\bar{R}$ is directed into capital formation will depend upon the components of 'returned value', that is, payments for local labour, capital, land taxes, and duties, and the marginal propensity to invest of the recipients of this income.)

"d) Foreign participation in V through returns to investment (V - R minus imports by the industry) and resulting net investment in the export industry (C) as well as in other sectors of the domestic economy. (This source of domestic growth is in conflict with that of (a), (b), and (c), to the extent that local participation in V tends to lower the profit share and, hence, the marginal efficiency of investment and capital formation in the export sector.)

e) Local participation in $\bar{C}$ through payments to domestic factors of production on capital account (c).

f) Multiplier effects of local expenditures on capital account (C) (if excess capacity exists) and the channelling of C into additional domestic investment. (Again this depends on the marginal propensity to save and invest of income recipients).

g) Additional 'returned value' generated by the expansion of capacity (C) and resulting increases in V. This induced increase in $\bar{R}$ may then contribute to the growth of GNP through the multiplier and through its effect on the marginal propensity to invest in the economy as described in (c) above."

This framework thus focuses on the extent to which new investment in domestic industry takes place out of the income created by the mineral export industry. In that sense it is similar to Best's application of the Seers' model for policy purposes in the case of Guyana.

Best's Application of the Seers' Model

In an early formulation of the problem of industrialisation and

growth in the Caribbean, Lloyd Best adapted the Seers model, which is concerned with short-term changes in employment in open petroleum economies, for the purpose of formulating long-term economic development policy guidelines for the Guyanese economy.[29] In this economy, like most other Hinterland economies, the process of income creation is dominated by exports. Substituting sugar and bauxite for petroleum in Seers' model, the export industries provide the first stage of income creation in this economy. Then the policy problem

> "......is one of finding that balance between consumption and investment expenditure out of income earned in the export sector which will keep the propensity to import down, and induce sufficient feasible investment to ensure that domestic output balances with the consumption of domestic produce at a level of prices and a distribution of income which is just right... Given the limitations on the size of the injection from the export sector, the problem is one of ensuring maximum investment and efficient use of resources in the dependent domestic sector. This is what sets the boundaries for consumption and the propensity to import and assign wage and price policy, and tariff, fiscal and monetary policies, their roles."

It is clear that all three formulations have a number of factors in common. In the first place the mineral export sector is seen as

important to, if not dominant in, the process of income creation in these economies. Secondly they focus attention on certain key variables within the domestic economy whose behaviour determines the effect of the initial injection of income from the export sector on income and employment. The most important of these are the marginal propensity to invest, the marginal propensity to import and the wage rate.

Our concern here is to make some observations about the way in which multinationally operated mineral industry affects the size of the original injection of income, and the extent to which this injection serves as source of income growth and a catalyst for economic transformation in the economy.

The export trend and the price trend

As has already been seen, the level and rate of growth of mineral exports by the Hinterland country is a function of a number of factors which derive from conditions in the metropolitan market for the end-product and are transmitted to the Hinterland via the specific institution of the Multinational Corporation. The most proximate and relevant determinant of the export trend is not, therefore, so-called "marketing conditions", but rather corporate decisions by MNCs based in the metropole.

The most immediate influence on the price trend is the growth of world output relative to world demand for the end-product. So far as output is concerned, it was suggested earlier (see page) that there are three stages in the rate of growth over time: high, stable, and declining. These correspond to the stages of income-elasticities of demand for the commodity group as a whole and the stages of substitution of the commodity for others within the group.

These stages tend to be correlated with similar movements in prices. In the early stage, when the rate of growth of demand is high, prices tend to fluctuate widely with an upward trend. At this time capacity is small and costly to expand. The industry's technology is as yet underdeveloped. The risks attached to exploration, refining, and marketing are high: they have not yet been virtually eliminated by vertical integration and concentration of ownership.

Over time, however, the industry grows not only in terms of output, but also in terms of technological and organizational development. There emerges the characteristic pattern of a small number of large, vertically integrated corporations with considerable financial and technological power. Being small in number, they can 'plan' their output to meet the needs of the market with a fair degree of

accuracy. Being powerful, they have the financial and technological capacity to increase their production and marketing apparatus at the required rate and spread. Being vertically integrated, they can adjust to short-term fluctuations in demand with little difficulty. Thus, price fluctuations tend to be less severe and even if demand is still growing rapidly the upward trend in prices is checked.

Over time, the existence of huge profits in the industry attracts a growing number of small, competing firms into it. Paradoxically, they may be able to take advantage of the large size of the giants, which makes the latter indifferent to or incapable of taking advantage of small-scale production and marketing opportunities. Moreover, the internationalisation of the industry and the growth of its international mobility induces a systematic, world-wide search for its mineral resource. A situation of relative scarcity may be transformed into one of relative abundance, as new, large-scale, low-cost sources are discovered. At the same time, the rate of growth of demand has either stabilised or begins to decline; reflecting either the state of the demand for the entire commodity group, or the growing competition from other commodities within the group. So prices may begin a slow downward slide.

The absolute size of "local payments"

The absolute size of the mineral industry's "local payments" and therefore its initial injection into the income stream, is a function of the volume of output and the extent to which any given volume of output gives rise to taxes, wages and local purchases. (It is interesting to note here that where local payments as a proportion of Gross Value is 50 percent or less, as is often the case, a rise in the proportion to 100 percent would have the same income effect on the local economy as a doubling of output with the local share remaining unchanged.)

The institutional form of the industry influences both the volume of output and the amount of "local payments" to which the output gives rise. The influence on the volume of output has already been discussed. The influence on the size of "local payments" for any given output can be discussed in terms of taxes, wages and local purchases.

Taxes are the result of the bargaining process between Government and companies, within the framework set by the movement of prices and costs. In some instances, the price of the mineral may itself be subject to bargaining. But even when a reasonable pricing

arrangement has been worked out, it frequently happens that the time when the Hinterland Government is increasing the tax rate corresponds to the time when the price trend for the industry is stabilising or even declining. In the early years of the industry when prices were moving steadily upward, the Hinterland Government had not yet imposed a high rate. At this time the companies were able to argue that the risks of exploration and production were great, and the Government did not have the technical expertise to bargain strongly with the companies, nor did it see the industry as a major potential source of public revenue.

So that when prices are rising the tax rate may be low; when the tax rate is raised to high levels prices may have levelled off or may begin to fall. Nevertheless, the coincidence of growing output and a rising tax rate over time frequently results in a substantial secular growth of tax revenues. The same may not hold for wage payments and local purchases. The tendency for capital to be continually substituted for labour over time will mean that the growth of output is accompanied by less than proportional increases in labour input and, frequently, a fall in labour's share of Gross Value. To some extent, this is due to the inherent technical characteristics

of extractive industry. But to some degree, it may be due to the organisation of the industry too.

Within the Hinterland country, conceived as a self-contained economic unit, capital will usually be relatively scarce and labour relatively plentiful. If relative factor prices reflected relative opportunity costs, then capital would be dear and labour cheap; other things being equal, the factor-proportions employed in activities would reflect this structure of factor prices, given the technical constraints prevailing within each activity.

The unit of investment in the mineral industry is, however, the MNC based in the metropole. It has access to the rich and highly-developed capital markets of the Metropole and, moreover, to its own internally generated funds. Capital will, therefore, not be a scarce factor to the MNC - or at least not as scarce as it is to the Hinterland economy as a self-contained unit.

Moreover, Hinterland labour will lack the industrial tradition and industrial training of Metropolitan labour. The MNC may, thus, itself have to bear the costs of this training for the workers whom it

hires. Thus, to the MNC, capital may in fact be cheap and labour dear, reinforcing the general direction of metropolitan technology of increasing capital/labour ratios.

As for local purchases, since extractive industry employs few intermediate materials, the potential importance of this item over time will depend on the extent to which processing of the mineral takes place within the Hinterland. It is the growth of processing, therefore, rather than that of raw material output, which frequently sets the permissive conditions for the growth of "backward linkages" between the mineral industry and the rest of the economy. And even where processing does take place, we have already suggested that purchases of the required intermediates locally be inhibited by the fact that the agency of provision is the Head Office, which may supply its subsidiary from its own plants or its own traditional suppliers.

The use of tax revenues to promote transformation

It follows from the foregoing that, characteristically, tax payments become the chief form through which the mineral industry creates income within the Hinterland economy. Where this happens, it is also typically the case that these tax payments are the single

most important form of Government revenue, and may dominate the fiscal picture.

The emergence of the mineral industry as a major taxpayer is frequently accompanied by a growing interest on the part of Hinterland Government in the active promotion of economic development. In effect, therefore, what happens is that the industry's tax payments become a principal source of finance for "Development Expenditure" which is the chief means used by the Government to implement policies designed to promote the transformation of the economy.

The principal objectives of these policies are the rapid growth and diversification of agricultural and manufacturing output. The ends are the achievement of full or near-full employment and the growth of living standards for the mass of the population.

Invariably, in the real world of Caribbean economies dominated by mineral industries, these policies are meeting with severe difficulties and their ends are far from being achieved. Our intention here is to identify those difficulties which arise out of the operation

of mineral industry itself. The discussion which follows applies in varying degrees to the economies of Venezuela, Jamaica, Trinidad-Tobago, Guyana and Surinam. The material and documentation is drawn from Venezuela and Jamaica.

Development Expenditure

In the first place, the effective utilization of "Development" expenditure requires a thorough assessment of the potential of the economy and of the areas where expenditure should best be concentrated to realise this potential. The most likely areas are:

i) Education of the specific type required to realise the country's economic potential. This means a strong emphasis, particularly in post-primary schooling, on agricultural and technical education; and a structuring of higher education and research in those technological fields needed to systematise the growth and application of technical progress.

ii) The promotion of a rapid growth of output and productivity in agriculture, of those products in which the domestic market deficit is not only large but likely to grow over time.

iii) The promotion of manufacturing industry with maximum linkage effects: backward to agriculture and to indigenous raw materials, and laterally within manufacturing itself.

iv) The establishment of infrastructure specifically designed to service the desired structural and geographic pattern of commodity output growth.

The sudden abundance of mineral revenues consequent on the raising of the tax rate and the growth of mineral output[30] may, however, remove the "scarcity" incentive for the Government to carefully think out its development priorities and allocate expenditure accordingly. It may spend in all sectors at the same time in the belief that a many-fold increase in expenditure on, say, education and agriculture, without a careful assessment of what is required, represents substantial progress.[31] Or it may not work out its policies and expenditure in each sector in such a way as to make them mutually consistent and self-supporting. Thus, the expansion of education may take the form simply of increasing the number of children passing through the traditional colonial educational system which was geared for administrative rather than agrarian and technical tasks.[32] Or spending on agriculture may encourage the traditional crop pattern rather than those products which can be used as raw materials in manufacturing industry.[33]

Worse still, the Government may settle for entirely short-term ends by spending heavily on public works to create employment and income for the unemployed and underemployed.[34] While the development of the economy will require infrastructural works, the Government may establish these as an end in itself rather than to service some

particular pattern of commodity and geographic output. Thus, existing road and port systems may be expanded and modernised, large and imposing public buildings erected. These may, however, only reinforce the pre-existing bias in the infrastructure on coastal, as distinct from interior, facilities, and facilities designed to service a colonial import-export pattern of economy.[35] Many, if not most of these mistakes have been made by Governments which have lacked the abundance of tax revenues but which have used funds available from foreign aid or even commercial borrowing to spend in the ways discussed above. Certainly, however, a situation where the Government has abundant revenues for "Development" expenditure is different from one where it is accountable to an aid-donor or knows that it has to repay its commercial loans and finance commercial debt charges as well. Abundant revenues set a permissive condition for the effective utilization of "Development" expenditure. But their very abundance may militate against their proper utilization.[36]

Moreover, the development of both the agricultural and the manufacturing sectors may be frustrated by difficulties which arise out of the operation of the mineral sector itself.

Agriculture

The agricultural sector of these economies is frequently characterised by a "dualistic" pattern of land distribution and land use. A small number of landowners, individual and corporate, own the bulk of the farmland and often the land of highest quality. [37] This is the result of European colonization in which the colonisers appropriated within "haciendas" and "plantations" the bulk of the good quality land. In Latin America, these farms tend to be concerned mainly with extensive ranching. Large areas are either completely unused or devoted to unimproved pasture, with great scope for increasing productivity. In the English-speaking Caribbean, many of these farms continue to specialise in the cultivation of cane and frequently the milling of raw sugar is also carried out by the so-called "estates" which combine the features of farm and factory. This is encouraged by the highly favourable price and quota supports available under the Commonwealth Sugar Agreement. Underutilisation of arable land is also a frequent feature of these large farms in the English-speaking Caribbean. [38]

At the other end of the land-owning spectrum are a large number of tiny holdings frequently on land of inferior or marginal quality. These are owned principally by the descendants of the indigenous population,

in the case of Latin America; and by the descendants of freed African slaves and Indian indentured labour, in the case of the English-speaking Caribbean. These holdings are characterised by high man-land ratios, low levels of capitalisation, little application of advanced technology, and a high degree of soil exhaustion and soil erosion. The pattern of production includes those export crops for which marketing is well organized, and domestic foodstuffs such as roots and grain and small stock, which are suitable for farm consumption as well as for sale on local and national markets.

Although the greatest scope for increasing farm output and productivity exists in the large farm sector, the Government may itself be controlled by landed interests unlikely to initiate any Government intervention into the freedom of the large farmers to farm as they like, or at least by interests unwilling to bear the political costs of a radical land reform programme. On the other hand, the bulk of the rural population is to be found on the small farms, and they form a strong interest group to be catered to under political systems of universal or near-universal adult suffrage. The Government, therefore, attempts to reconcile its economic objective of raising farm output with its political objective of retaining the support of both small and large

farmers, by leaving the system of land tenure and land distribution basically untouched but extending considerable assistance to the small farm sector.

This assistance takes a number of forms. There is extension of farm "credit" which is frequently never repaid and, therefore, constitutes outright grants. There are crop subsidies and perhaps price supports and also organized marketing. The agricultural extension services are expanded; and there is the provision of such "infrastructure" as access roads, domestic and irrigation water supplies, and electricity.[39]

There may also be a "land reform" scheme which does not consist of establishing Government control over the large estates and settling the rural population on them, but rather of distributing Government-owned lands. The effect of these schemes is usually to extend the spatial existence of the small farm sector without altering the agricultural system in any fundamental way.[40]

By and large such Government programmes fail to result in any significant growth of output in the small farm sector, and therefore in

the incomes of the mass of the rural population. There are, of course, a number of factors which contribute to this. Our concern is with those factors which arise specifically out of the operation of the mineral industry. In fact, the operations of mineral industry affect peasant agriculture both on the supply side and the demand side.

On the supply side the supply of both labour and land to the sector may be affected. The supply of labour to peasant farmers consists mainly of family labour and landless workers. Because of the low productivity of peasant farming the average wage of the farm worker and the average real income (in cash and in kind) of the farm family are low. Where the spread between farm and non-farm incomes is narrow and incomes in general are not growing fast, then farm workers are normally content (though not necessarily satisfied) with their low incomes.

The introduction of mineral industry creates a class of relatively highly-paid mineral workers. The tax revenues of mineral industry finance the growth of relatively highly-paid public employment in Government services and public works. Service activities emerge in the mining areas and the capital city. Wage employment for categories of workers ranging from skilled through semi-skilled to unskilled is now

available at wage rates which make it possible for the rural labourer to earn a higher income for the same labour time or the same income for less labour time. Thus both the rural wage workers and the younger members of the farm family leave the farms and flock to the mining enclaves and the urban areas[41]

After a few years it becomes clear that there are simply not enough jobs to absorb existing unemployment, the natural growth of the labour force and migrating farm labour at one and the same time. Open unemployment, therefore, grows. But by this time the change in the aspirations of rural labour has become permanent. People may simply prefer to be completely unemployed than accept low-wage, low-status and "dirty" jobs in the rural sector. Mineral industry is an important contributing factor to this.

Mineral industry may also affect the supply of land. Large areas are parcelled out to the companies for exploration and the holding of mineral reserves.[42] This may take the form of Government leases or mining rights or outright sale by landowners. Where land previously not used for agriculture is involved, the effect is to reduce the acreage held principally for purposes of farming. The companies may be required by

Government regulation to maintain the productivity of the land but this might mean maintenance at the pre-existing low level of productivity. In any event, since the land is held principally as reserves for mining and as a means of reducing mineral supplies to competitors, its tenant's long-run main objective has nothing to do with the maximisation of its productive potential.

Mineral industry also affects the demand for agricultural products in certain characteristic ways. Traditionally, peasant production is a mix of (i) crops produced for the world market for which marketing is usually highly organized, and (ii) crops produced for farm consumption and for the sale of surpluses on domestic markets. The latter category includes such crops as roots, pulses and cereals, and usually have a low and skewed nutritional value as reflected in a high starch and low protein content.

The emergence and growth of mining and urban occupational groups creates demands for new and different types of food. Such groups demand meals which are more balanced in composition and with a higher nutritional content, and closer to the meal-pattern of North American middle-class society to which such groups are actively aspiring. Thus, the growth of consumption is often marked by high and sometimes

more-than-unit income elasticities for such items as beef and other livestock meats, dairy products, fruit and vegetables. Such commodities, too, are frequently demanded in processed, canned and packaged forms. Items traditionally produced by peasant agriculture, on the other hand, frequently experience low, declining and sometimes negative income-elasticities.[43]

The rapid growth of consumption demand of certain food items in excess of domestic output gives rise to large and growing deficits in these items on the domestic market. In a situation of foreign exchange scarcity imports would not be easily available to fill the deficit and domestic prices would tend to rise, encouraging a reallocation of resources toward the production of these items. The relative abundance of foreign exchange provided by the mineral industry, however, means that in the absence of any specific protectionist policy by Government the supply of imports is fairly elastic and foreign produced food products pour in to satisfy a large part of incremental domestic consumption.[44] The easy availability of imports and of foreign exchange to finance such imports thus removes the pressures which might otherwise operate, via rising food prices and via Government policy, for the growth and structural change in farm production for the domestic market.

Thus, mineral industry affects the success of the attempt at agricultural transformation on both the supply side and the demand side. Its effects will also be felt on the attempt at development of manufacturing industry.

Manufacture

For one thing, the buoyancy of foreign exchange earnings weakens the incentive to develop a manufacturing sector based on indigenous inputs. On the one hand, since agricultural development is not conceived in terms of promoting inter-industry linkages, this sector does not provide inputs for manufacturing. On the other hand, since foreign exchange earnings are buoyant, foreign exchange is not perceived as a scarce resource which should be rationed so that the establishment of plants based on imported intermediates is not seen as involving a recurrent claim on a scarce input.

For another thing the effect of the mineral industry is to create a high wage structure throughout the economy as a whole. Workers in manufacturing gauge their wage rates by those prevailing in the mineral industry. The mineral industry workers, in their turn, gauge their wage rates by those of mineral industry workers in the

metropolis. This process is institutionalised through the international trade union organisations under which metropolitan unions, to inhibit competition from "cheap labour" in the Hinterland countries, provide the latter with assistance of various kinds and encourage the raising of Hinterland wage rates to Metropolitan levels.

Wage rates in the mineral industry thus will be much higher than in the rest of the economy, and further, there will be a persistent tendency for them to rise, following the pattern set by metropolitan wages and also because of the low resistance of the companies. Wages in manufacturing, which often facilitate an occupation-by-occupation comparison, will tend to follow the pace set by mineral wages. In manufacturing industry, however, wages form a higher proportion of costs than in mining; so that the high and rising wage structure will contribute to a high and rising cost structure.

This will have two effects of importance to the objectives of economic policy. First, the ability of domestic manufacturing to compete successfully with imports will be severely weakened. The Government, in order to maintain output and employment in manufacturing, may feel obliged to give it heavy tariff and quota

protection from imports. This will entail some political costs in the form of protests by domestic consumers and pressures from the import trade.[45]

Secondly, the rising absolute price of labour may bring about a rise in its price relative to that of capital. This is not only because the "openess" of the economy means that investors are operating within the international capital market, where the price of capital may be stable or rising more slowly than that of domestic labour. It is also a likely consequence of the fact that Government policy is to encourage foreign investors engaged in direct investment in manufacturing locally. In effect, this means that MNC's engaged in manufacturing are induced to locate branch-plants within the country, so that the same conditions which operate to make capital the cheap and labour the expensive factor to the mineral MNC, will hold for those engaged in manufacturing. The result is that capital-intensive techniques of production are likely to be adopted, and capital-labour substitution may take place over time in response to the persistent tendency of wage rates to rise. The manufacturing sector is, therefore, unlikely to generate substantial absolute or incremental employment.

The final difficulty attending the development of manufacturing arises out of the structure of domestic demand for manufactured goods. The widening gap between farm and non-farm incomes, and the emergence of high-income occupational "enclaves" within the economy means that the bulk of monetary purchasing power is concentrated in the hands of a relatively small number of consumers with incomes considerably in excess of the national average.[46] These consumers have high propensities to consume sophisticated household and recreational durables such as motor-cars, furniture and fixtures, sound and visual equipment, so that incremental demand is felt most strongly for such goods.[47]

Moreover, the structure of demand is highly diversified by product and by brand, because of the importation of taste from North America.

The manufacture of such durables is fairly capital-and-technology-intensive. Insofar as domestic capacity for their production does exist, this is likely to be of the "assembly-plant" type based on imported intermediates; partly because of the Government's reliance on foreign capital to set up "branch-plant" operations, partly

because the consumers' attachment to foreign brands can be maintained only if the brand continues to be based on its original materials rather than on indigenous inputs.

The result is that incremental consumption serves to stimulate the demand for imports or domestic goods based on imports.[48] The demand stimulus for the development of manufactures based on indigenous inputs is dampened, as it is for the simpler and less differentiated types of manufactures such as textiles and clothing, which have often served as critical leading sectors in the early stages of development for the Metropolitan countries.

Thus the Government's attempts to serve as a catalyst for the transformation of the economic structure meet with scant success. Agricultural output and incomes stagnate while imports of food continue to rise. The sector becomes a permanent drain on the public budget and a contributor, in effect, to the growth of open unemployment. Manufacturing may grow slightly faster than the total product. But it has few links with the rest of the economy, does not generate substantial employment, is high-cost, and therefore relies on Government protection to secure the domestic market, and is dependent on the growth of money demand financed directly or indirectly by the mineral sector.

The pattern of growth

The sectors which do prove attractive to both domestic and foreign capital and where output and capacity respond readily to the growth of national demand, are those service sectors ancillary to the expansion of the mineral and Government sectors and of imports. These are the import trade internal transport construction and personal services.[49] The import trade grows because of the rapid growth of import demand for food and consumers' durables, and internal transport grows to carry out the physical distribution of these commodities. Commercial and personal services such as banking, insurance, and recreational facilities also expand. The construction industry grows out of the stimulus provided by the public works programme, and the construction of commercial structures such as office buildings and other structures required by the expansion of these service industries. The promotion of housing schemes for the middle-income groups benefiting from the income growth will also give a fillip to the construction industry. The growth of this industry will, in turn stimulate the building materials industries - cement, iron and steel, and timber - depending on the availability of the appropriate natural resources and the activity of the Government and domestic entrepreneurship.

The result of all this is the emergence of a structure of demand and of production which is critically dependent on a steady generous infusion of foreign exchange and of public expenditure provided by the mineral industry.[50] If output and prices in the mineral industry remain buoyant, a veritable "Golden Age" of rising total and average incomes will ensue; but one that is characterised by the persistence and possibly, growth of structural dependence, inequality of income distribution and large-scale unemployment. In terms of the external accounts, this is reflected in the continued dominance of mineral exports in total exports; and a structure of imports dominated by food, consumer durables or the intermediates for their local assembly, motor-cars and transport equipment.[51] The ratio of imports to national income remains at a high level, or may actually rise.[52] In terms of the national accounts, it is reflected in the heavy weight of the mineral, Government and service sectors in the Gross Domestic Product by Industrial Origin; and a growth rate strongly correlated with the performance of the mineral sector.

The Government soon finds, moreover, that the abundance of revenues relative to expenditure consequent on the revision of tax agreements and the buoyancy of the mineral sector does not last for

very long because of the rapid growth of its recurrent expenditure commitments. The heavy extension, by "Development" expenditure, of Government services sets up recurrent costs in such forms as salaries of school teachers and medical workers and the maintenance of fixed assets such as roads. The per unit money costs of these services grow as workers organised in labour unions with powerful political influence bargain successfully for wage increases under the pressure of the "internal demonstration effect" provided by the upper echelons of the bureaucracy and the mercantile and professional employees, and also because of the connection with Metropolitan unions.

At the same time the Government must continually expand the real level of services with successive Development programmes as population grows and neglected geographic areas of the country demand that services be extended to them. Recurrent expenditure thus rises faster than population growth - which itself is in the region of three percent per annum - because the Government must not only provide for population growth, but also catch up with the huge backlog of unprovided services while at the same time the unit money costs of services are growing.

Within a short number of years, therefore, recurrent expenditure catches up with recurrent revenue while the Government is still caught in the compulsion of Development "gamesmanship" which requires that each "Programme" be bigger than the last. At this point is likely to choose one or a combination of the following three options. (i) Increase the level of domestic taxation (ii) "stabilise" wage costs by legislative action designed to check the power of organised labour and (iii) begin substantial borrowing on domestic and foreign money markets.[53]

Such pressures cause Government and public alike to take a second look at the position of the mineral sector. Of the three influences on its tax yield over time: the output trend, the price trend and the tax rate only the tax rate is formally within the control of the Government. And this cannot be raised significantly once more without seriously jeopardising the output trend, as the companies may simply draw more from other Hinterlands. In fact, the deceleration of drilling and the output rate of growth may already have begun. And this in turn exposes the ignorance of the Government with respect to the extent of reserves and its dependence on the foreign companies for information and the determination of reserves of the country's principal natural asset.

Thus, the fundamental dilemma of mineral industry in the Hinterland becomes increasingly evident to Government and public alike. This dilemma is that the basis of income-generation in the national economy and of the activity of the public section is almost completely outside of Government and national control. Mineral industry is likely to come under a second evaluation. The concern this time will not be exclusively with its role as a source of Government revenue, though this will continue to be a major pre-occupation of the Government. But the Government will also be interested in establishing control over the way in which the country's chief natural resource is produced and marketed.[54] The question of ownership and control as distinct from tax payments will begin to assume importance.

This development marks a second stage[55] in the erosion of the uninhibited use by Metropolitan enterprise of mineral resources in the Hinterland, and the associated growth of intervention by Hinterland Government. Whether it results in a basic change in the relationships between Hinterland economies and metropolitan enterprise in mineral industries, and in other industries, depends largely on whether all Hinterlands take collective, coordinated action in the field. In the

absence of collective action, the MNC's are likely to respond merely by "shifting terrain" - locating incremental activity in new Hinterlands anxious to have the largesse of tax revenue and willing to cede a large degree of control over their mineral resources in return.

NOTES

1. In the cases of Venezuela, Trinidad-Tobago, the Dutch Antilles and Surinam, where the shares of mineral exports in total exports are all over eighty percent.

2. In the cases of Jamaica and Guyana where the shares are between thirty and fifty percent.

3. See Appendix Table 1.

4. Galbraith calls them the "modern large corporations". This nomenclature omits one of their most important properties for Hinterland economies - the fact that they are multinational and that the chief agencies by which the economic relationships between Metropolitan and Hinterland countries are institutionalised. See his The New Industrial State. Houghton Mifflin Company Boston, 1967, p.9.

5. So long as there is no indigenous technological development in the Hinterlands. The significance of this, as we shall see, is that the resource base and export potential of the Hinterland is defined in terms of a foreign technology.

6. Historically, the "Golden Age" for petroleum began from the turn of the Century while that for aluminium began from around the end of World War II.

7. This, as we shall see, will have a critical effect on the ability of specific Hinterlands to maintain and expand exports of specific mineral commodities.

8. This was characteristic of the petroleum industry but not of the aluminium industry where vertical integration was a feature of the industry from the outset.

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9. Galbraith discusses the process of vertical integration in terms of the corporation's need to supercede the uncertainty of the market. Thus:
"... the planning unit takes over the source of supply or the outlet; a transaction that is subject to bargaining over prices and amounts is thus replaced with a transfer within the planning unit. Where a firm is especially dependent on an important material or product - as an oil company on crude petroleum, a steel firm on ore, an aluminium company on bauxite ... - there is always danger that the requisite supplies will only be available at inconvenient prices ... As viewed by the firm, elimination of a market converts an external negotiation and hence a partially or wholly uncontrollable decision into a matter for purely internal decision."
op.cit., p.28, (emphasis ours)

10. Since that part of its crude which it uses is "sold" to itself.

11. For a discussion of "The Imperatives of Technology", see Galbraith, op.cit., Chapter 11.

12. This happened fairly early in the life of the North American bauxite industry.

13. Since its competitors, both within and without the industry, will themselves be engaged in such Research and Development, and the firm must be in a position either to enhance its own position by innovation, or to prevent its own position from being eroded by imitating the innovation of another firm.

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14. Op. cit. p.28

15. At least so far as most of the America's were concerned. See the discussion of this experience in these Selected Essays by Best and Levitt, Chapters on "Early Metropolitan Industrialization", "Mature Metropolitan Industrialization" and "The New Mercantilism." See also their discussion of why "independent entrepreneurs" find it hard to compete with vertically integrated corporations in mineral industry, p.89.

16. In discussing why Chile's copper industry, which was started in the early nineteenth century on a small scale by Chilean entrepreneurs, came to be dominated by foreign capital, Clark Reynolds comes upon the dilemma of explaining the development in terms of lack of domestic capital, He says, "The large capital investment and the long gestation period required for operations of the size and efficiency of (foreign) companies B and C apparently placed such ventures beyond the scope of the scarcely developed Chilean capital market". But then, "That investable funds were available domestically is unquestionable, if for no other reason than the existence of extremely high profits from nitrate which were accruing to Chilean entrepreneurs." Thus, there were other reasons : "Two conspicuously successful English companies were demonstrating that sustained investment in Chilean copper mines, with vertical integration of the industry to include smelting, could be profitable over a long period. As in the United States, profits gravitated to those in control of smelters ... Meanwhile, from 1900 to 1910, a revolution occurred which further enhanced the value of a large-scale, vertically integrated operation in Chile ... employing highly capital-intensive techniques of extraction, concentration and smelting ... There were few men in Chile at the turn of the century who had contacts abroad with the large investment consortia and who were aware of the development in copper technology and their

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potential application to Chilean mining ..." (My emphasis). He is, thus, forced to find the reasons in terms of the advantages of vertically integrated operations and the lack of domestic entrepreneurs with the required knowledge and market outlets, thus, perhaps unwittingly, contradicting his earlier statement that: "These lands... (so called underdeveloped countries)... often possess vast natural resources yet lack domestic savings, and, as a result, are made subject to the flow of foreign capital and the vicissitudes of the world market for the establishment of export industries ..." "Development Problems of an Export Economy", by Clark Reynolds in Essays on the Chilean Economy by Mamalakis and Reynolds. Yale, 1965, pp.220,212, 213, 214, 204.

17. Note here the continuation of the pattern in the manufacturing sector in the form of "branch-plant" organisation. This historical connection between the institutions in one phase and the terms on which institutions are established in the next, provides the rationale for the differentiation of activities between the "Traditional Export", "Traditional Residentiary" and "New Dynamic" sectors in the "Accounting Framework for Plantation Economy Further Modified".

18. See Best and Levitt in these Selected Essays, p.22.

19. In the pure case, where the entire output of the end-product produced from the mineral is marketed in the Metropole.

20. Note here the close resemblance to pure plantation economy. "Accordingly, the hinterland economy is comprised of a single sector, fractured into plantations, each a self-contained, self-sufficient, "total" institution." Best and Levitt, Selected Essays, p.19.

21. Clark Reynolds calls this the "returned value" of the industry. Op.cit., p. 204.

22. Note here the similarity with the sugar plantation operating as a unit within the joint-stock trading company in the previous era. See Best and Levitt in these Selected Essays, p. 19.

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23. Clark Reynolds finds precisely the same features in the Chilean copper industry. Op.cit., pp.235 - 240.

24. For a treatment of the case of Chile and Copper, see Reynolds, op.cit., Chapter I.

25. In the Chilean case, this had impressive results in terms of increased local purchase, thus perhaps demonstrating that the previous smallness of local purchases by the companies was not due principally to the "underdevelopment" of the Chilean economy. See Reynolds, op.cit., pp. 251 - 254.

26. Reynolds traces the successive stages of the evolution of the Government "take" from the copper industry in Chile from four to twenty-five percent of Gross Value between 1925 and 1959. Op.cit., Chapter I.

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27. Social and Economic Studies June 1964.

28. Op.cit. p. 321 - 322

29. See his "Economic Planning in Guyana" in Andic and Matthews (Ed) The Caribbean in Transition Institute of Caribbean Studies, 1965, p. 58 - 76.

30. In Venezuela in 1948/49, the imposition of new taxes combined with the growth of output raised oil revenues to over ten times the level of six years earlier. Between 1948 and 1957, 15,000 mn. Bls. were yielded by the industry in taxes. In Jamaica, similar developments raised the revenue paid by the bauxite industry in 1959 to forty-five times its 1955 level. See "Economic Developments in Venezuela in the 1950's" in E.C.L.A. Economic Bulletin for Latin America, Vol. V No. 1, p. 21, 23, and this writer's Foreign Investment and Economic Development in Jamaica since the Second World War. Ph.D Thesis, (Unpub.) University of London, 1966, p. 64. 163-167.

31. The Government of Jamaica's A National Plan for Jamaica, 1957-67. (Kingston, the Government Printer 1957) which was to be financed largely by bauxite revenues, is a good example of this.

32. Ibid. Chapter on Education

33. Ibid. Chapter on Agriculture.

34. In Venezuela between 1948 and 1957 "Government expenditure went mainly into super-highways, office buildings, hotels, apartment blocks and monuments" E.C.L.A. Op. cit. p. 24

35. In Venezuela in the 1950's "... nearly all (Government) expenditure was poured into areas already most highly developed...from the coastal areas the interior was usually more difficult of access than the ports of the United States."
Ibid. pp. 24, 22.

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36. Thus, in Venezuela in the 1950's, "Because there was no proper appraisal of resources, and little effort was in fact made even to collect and tabulate the basic statistics necessary for choosing between possible programmes, projects for public investment appeared to be selected without evaluation of their economic implications, or assessment of the needs of different regions.....
It is also true that revenue was wasted, because tender prices for Government contracts were often the higher for excessive profits and administrative irregularities; the techniques of construction were generally extravagant, and costs were at times further increased by rushing projects."
E.C.L.A. Op. Cit. p. 24, 23

37. In Venezuela, less than one percent of the landholdings accounted, in 1950, for two-thirds of the total productive area. See "Economic Developments in Venezuela in the 1950's" in E.C.L.A. Economic Bulletin for Latin America, Vol. V., No. 1, p. 22. In Jamaica, in 1943, farms of over 200 acres numbered 1.4 percent of all farms but occupied 66 percent of all farmland.

38. In Venezuela in 1950 "Much land which could be cultivated was either being used as extensive natural pasture or not at all." In Jamaica in 1963 it was estimated that "between 150,000 and 200,000 acres of land in farms of 500 acres or more are either idle or grossly underutilized in relation to their potential."
E.C.L.A. Op. Cit. p. 21 and Government of Jamaica Five Year Independence Plan, Kingston, the Government Printer, 1963, p. 113.

39. The concentration of Government assistance on the small farm sector has been more marked in Jamaica. See A National Plan, 1957-67 and Five Year Independence Plan, 1963-68.

40. For Venezuela, see E.C.L.A. Op. Cit. p. 48-49.
For Jamaica, see Five Year Independence Plan, Chapter on "Land Reform."

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41. In Venezuela in the 1950's "The coastal cities have grown more crowded, while land suitable for farming continues to lie fallow, and there has even been a labour shortage in some rural areas."
E.C.L.A. Op. Cit. p. 22-23

42. In Jamaica, by 1956 the bauxite companies had acquired over 151,000 acres of land, about 9 percent of the total land area. The area owned by them has increased substantially since then.

43. In "An Analysis of Food Consumption and Food Import Trends In Jamaica, 1950-1963." Social and Economic Studies, March 1968 Nassau Adams estimated the income elasticities for Meat and Dairy Products at around 1.4 and 1.1 respectively. For Root Crops, a traditional peasant product, the income-elasticity was estimated at -0.5 See page 9. In Venezuela maize, which is primarily a smallholders' crop, suffered from an accumulation of stocks in the 1950's because "people with rising incomes, especially those moving into the cities, have switched from the traditional corncake, to wheatbread, causing a decline in maize consumption." E.C.L.A. Op. Cit. p. 47

44. In Venezuela, this was true for certain food items but not of food as a whole. The existence of a large cattle-rearing sector made possible the satisfaction of incremental demand with domestic supplies. See E.C.L.A. op. cit. p. 46-48. In Jamaica, however, the ratio of imports of food to consumers expenditure on food rose from 16.1 percent in 1950 to 24.5 percent in 1963.

45. See Seers, Op. Cit.

46. In Jamaica in 1958 the upper 10 percent of households accounted for 43 percent of household income. See E. Ahiram "Income Distribution in Jamaica, 1958" in Social and Economic Studies.

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47. See E.A. Brown, H. Brown, and N. Girvan "Patterns of Consumption and Possibilities for Change" in Report on the Regional Conference on Devaluation, I.S.E.R. 1968.

48. For an analysis of the Jamaican case, see Girvan, op. cit. p. 374-410.

49. For the Jamaican case, see Girvan, op. cit. p. 377-398. For Venezuela see E.C.L.A. Op. Cit. p. 45-52.

50. Venezuela, E.C.L.A. Op. Cit. p. 21, 22. Jamaica, Girvan, Op. Cit. PP. p. 410-414.

51. Jamaica, Ibid., p. 398-410.

52. In Jamaica, the ratio of retained commodity imports to the GNP rose from 28 percent in 1950 to 34 percent in 1963.

53. The Jamaican experience, with the 1957 Plan which was to be financed mainly by bauxite revenues, followed by the 1963 Plan financed mainly by borrowing and new taxation, is a good example of this. See Girvan, op. cit. Chapter Two. In Venezuela, "Over 15,000 million bolivares were collected in taxes from the petroleum industry in the ten years from 1948 to 1957 .... despite these revenues, the Government fell heavily into debt..." E.C.L.A. Op. Cit. p. 23

54. See the latest (1968) Venezuelan terms for new concessions, under which the companies are "agents" for the Government, which will have a say in the determination of output and in marketing. See also the development of Chilean Government intervention in that country's copper industry, Reynolds, Op. Cit. p. 208-209.

55. The first stage is that when the Government negotiates special pricing and tax arrangements with the companies.

THE NATIONAL CAPACITY TO IMPORT

THE NATIONAL CAPACITY TO IMPORT

The income terms of trade is a measure of the capacity of an economy to benefit from external trade. Although this measure is useful, it does not distinguish foreign exchange earnings accruing to the national economy from those accruing to the domestic economy. The latter includes foreign exchange earnings the uses of which are not subject to the decisions of nationals or their government, and the expenditure for capital formation which creates new liabilities for the nation.

From the Accounting Framework, we can define several measures of external purchasing power available to the economy.

1.) The Domestic Capacity to Import

This is the conventional Income Terms of Trade index as used at present in the literature. Under this concept, the "export basket" consists of all goods and services exported by the domestic economy; likewise, the "import basket" contains all imported goods and services.

2.) The Net Domestic Capacity to Import

This measure is based on the value of exports of goods and services by the domestic economy excluding imported intermediate inputs embodied in these exports, i.e. on the "net value of exports." The import basket which relates to these net domestic exports accordingly excludes those imported intermediate inputs.

3.) The Current National Capacity to Import

Under this concept, we attempt to obtain a measure of the capacity to import of the national economy, i.e. after all pre-emptive charges against export earnings have been met. Mainly, we deduct from the "net value of exports" such charges as remitted and retained profits of foreign-owned companies as well as the capital consumption allowances of those companies. Other changes in available foreign exchange, such as private remittances from abroad (unilateral transfers of income from non-residents to residents) are also taken into account. We are, however, still dealing only with the "current" operations of the economy; hence, the effects of long-term borrowing (capital inflows)

are not considered. For the purposes of this paper, the net amount of foreign exchange which remains available after these deductions - as a residue - to the normal residents of the country has been called "national export earnings." The relevant import basket will also only contain those goods and services available to the national economy; hence, imported intermediate inputs to be embodied in exports are excluded.

4.) The Extended National Capacity to Import

The capacity to import in any given year or sequence of years may be significantly increased by private and government borrowing abroad. Insofar, however, as borrowed funds are spent on imports of machinery and equipment by foreign-owned enterprises, they are not available for the purchase of consumer goods by the national economy; this "import content of borrowing" is therefore deducted from total capital inflows is added to national export earnings, we obtain "extended national export earnings" and the Extended National Capacity to Import is based on this value. Imported intermediate inputs to be embodied in exports are, of course, still excluded from the import basket.

It can be seen that we define one measure which excludes foreign exchange obtained by national borrowing. This measure we call the National Capacity to Import. The purpose of this measure is to estimate the nation's external purchasing power from its current export earnings. Secondly, we define a corresponding measure which includes funds obtained by external national borrowing. This we call the Extended National Capacity to Import. Here the purpose is to estimate national purchasing power which includes foreign exchange obtained by a decision on the part of nationals or their government to incur new external liabilities.

All measures of the capacity to import, sometimes referred to as the income terms of trade, are constructed by dividing a numerator of foreign exchange earnings in current dollars by an appropriate import price index. For the new measures which we have selected we must define both the numerator and the denominator. The National Capacity to Import is initially calculated on a sectoral basis. The Extended National Capacity to Import relates to the whole economy.

National Export Earnings

For each of the nine major sectors of the economy, we calculate National Export Earnings. The transactions of these sectors are recorded in Rows 111, 112, 113, 114, 115, 132, and 133, 138.

Item	Notes
Export Receipts	These are entered under columns 5611, 5612 and 5613 in the Accounting Framework.
minus	
Imported Intermediate Commodity Inputs	Insofar as all export activities carry with them requirements for imported commodity inputs, we net out these imports from the export earnings of each sector. These are found under column 21 in the Accounting Framework. They are to be valued inclusive of external freight and insurance, but exclusive of local distribution mark-up and customs duties.
minus	
Management Fees, Royalties, Licences, etc.	These are imported service inputs and are similarly deducted. (column 24)

Item	Notes
minus	
Distributed Profits after Taxation by Metropolitan Government	Distributed profits from export activity which do not accrue to nationals are deducted. These are found under column 3522 in the Accounting Framework.
minus	
Salaries Remitted	These are salaries of foreign managerial and technical personnel employed in the export sector and remitted abroad. (column 311)
minus	
Retained Profit and Depreciation	Retained profit (B3512) and depreciation (B3402) reserves of enterprises controlled by foreign capital are not subject to disposal by decisions of nationals. Although some of these foreign exchange earnings may be used to incur local costs, and thus may become available to liabilities equal to additions to plant and equipment of foreign corporations. In this respect retained profits of foreign corporations are similar to new capital inflows to these corporations.
minus	
Metropolitan Tax on Income Remitted	Taxes paid to metropolitan government on profits in the export sector (3333)

Sectoral National Capacity to Import

From Sectoral National Export Earnings as defined above, we can calculate the Sectoral National Capacity to Import by dividing each of the current dollar series by an appropriate import price index. This index will be different for each sector. Initially, we obtain import price index series for the following spending units: consumers, government, and domestic producing sectors. For consumers we can construct one import basket for persons receiving high and regular incomes, and another for persons receiving occasional and low incomes. For government, we can construct an import basket which takes into account the import content of government wage and salary payments, as well as imports of capital and intermediate goods typically financed out of current revenues. Here we note that imports of capital goods and construction materials are likely to have a diminishing share in this basket because government capital expenditure has increasingly been financed by borrowing. Several import baskets for domestic producing sectors will have to be estimated and the appropriate one applied. The import price index to be used for each of the nine sectors will be a weighted average of the appropriate series according to the relative share of wages, salaries and profits earned by nationals

taxation receipts by the national government; and domestic purchases in the foreign exchange earnings of each of the export sectors.

Total National Capacity to Import

For the entire national economy we sum sectoral national export earnings. With the adjustments indicated below, we arrive at Total National Export Earnings:

Item	Notes
Sum of National Export Earnings of all Exports Sectors	See above.
plus	
Employment and Property Incomes Earned Abroad	Remittance of funds by nationals resident abroad and similar remittance of property earnings are found in the Accounting Framework in A71 - B74.
minus	
Remitted Profit In The Non-Export Sectors	Remitted profits of foreign-controlled companies engaged in sectors selling to the local market must be deducted.

minus

Retained Profit and Depreciation of Foreign-Controlled Firms in the Non-Exporting Sectors	The treatment of retained profits and depreciation allowances is similar to that suggested for the export sectors.

minus

Payments of Interest Charges and Repayment of Principal on the National Debt.	It is necessary to deduct claims on foreign exchange arising from past public borrowing before we can arrive at the estimate of foreign exchange available to the national economy.

minus

Remittance of other Interest Charges and other Profits from the Private Sector.	This item refers to remittance abroad of property incomes other than those relating to foreign-controlled companies.

The appropriate index of import prices for this measure must be weighted according to the relative importance of imports for personal consumption, for government use, and for intermediate use in the non-export sectors and imports of capital goods other than those purchased by foreign-controlled sectors.

A closer examination of the concepts which we have defined shows that we are drawing attention to the significance of the following factors: the volume and the price of exports; the import content of export

earnings including imported services; the division of output between foreign and nationally controlled firms in the export sector; and the degree to which past capital inflows have set up charges against the national economy in all sectors, including government.

In any year, the gap between export earnings and total imports measures dependence on foreign funds. The difference between the size of the gap as conventionally measured by the Domestic Capacity to Import and the National Capacity to Import as here defined, arises from the fact that the conventional measure disguises the payments which are being made to foreigners out of profits earned in the export sector.

What is more, the assumption that gross business savings of foreign firms are automatically available to the national economy further disguises the new liabilities which are created in the process. The oversight is probably an acknowledgement that no real transfer is involved in the creation of these liabilities.

The divergence between the conventional measure and the one we have here outlined, is an estimate of the changing share of the gains from export activity which accrue to the national economy.

An important area of investigation here is the mechanism by which income is distributed between nationals and foreigners in the mineral and sugar industries. It is in these sectors above all, that the operations of the trades unions, of the tax authorities, and of the accountant of the parent firms, introduce an element of indeterminacy into the sharing of earnings.

It is also of interest to consider possible measures which may be employed by government to improve the national capacity to import. These may include one or more of the following:

(i) Negotiation of better export prices through preferential commodity agreements, or through improved terms of trade between producing establishments and their parent companies.

(ii) Expansion of the volume of output or improvement in access to markets by various forms of assistance to existing industry.

(iii) Development of new export industries by the offer of incentives and by government investment in directly productive activity.

(iv) Substitution of domestic for imported inputs.

(v) Increases in the share of earnings accruing to the national economy by changes in the rates and types of taxes levied on the export sectors.

(vi) Extension of the control by nationals over export earnings by transforming export enterprises into national enterprises, public or private.

Extended National Capacity to Import

The part of the import bill which is not financed by national export earnings is covered by capital inflows. We turn now to consider the national capacity to import which is augmented by such inflows on national account. Here the distinction between borrowing by nationals and by government on the one hand, and direct and other investments by foreign-controlled firms on the other, becomes important.

There are two components of national borrowing. These are government borrowing, and private national borrowing either by individuals or by nationally-controlled firms. The government borrows directly on the foreign capital market, through International Agencies, from the Non-Resident Traditional Savings and Investment Account, and from the financial intermediaries.

In theory, private nationals are also able to gain access to foreign funds through financial intermediaries. It is, however, postulated that the financial system only receives net inflows of foreign funds on occasions when switches are made from surplus to deficit areas in the Caribbean. Where such inflows do occur, it is to be decided which users are drawing on external finance.

This allocation is to be made with reference to the proportion of loans made to each of the borrowers and to the import-content of their expenditures.

National lendings are capital outflows from government accounts or from the national private sector. Capital outflows on government account are increases in currency reserves, increases in other public holdings of foreign assets, and liquidations of national debt. Capital outflows on

national private account are net transfers to head office by private financial institutions.

Insofar as some national funds are lent abroad by the financial intermediaries and the currency authorities while the government has to borrow in the metropolitan money market, the national economy incurs liabilities which do not entail real transfers. This we define as unnecessary borrowing.

Since this type of borrowing entails the creation of both foreign liabilities and foreign assets for the national economy, its importance lies not so much in the difference between service charges and interest earnings, but rather in the conditions which may be imposed upon government by its creditors. These may relate to sources from which imports must be purchased, to the type of projects to be undertaken, as well as to the degree of control which the government may be permitted to exercise over the economy.

The importance of these controls lies in the pattern of imports which they permit or impose. For this reason, it would be misleading to sum the total amount of loans without regard to the so-called strings attached. Such a sum cannot be taken as an accurate

measure of the increase of the national capacity to import arising from government borrowing. Nevertheless, whatever the distortion introduced by the "strings", government borrowing does increase the nation's capacity to import.

To arrive at a true measure of this increase, account must be taken of the effect of the restrictions in shifting resources from investment to consumation, from high priority to low priority investments, or again, from lower to higher priced markets. This requires the use of an import-price deflator which is based on the actual expenditures out of the tied loans. This measure can be compared with the one obtained by using a deflator based on the expenditures which government would have undertaken if free to spend in accordance with its own priorities and in markets of its choice. The difference between two measures of purchasing power is an estimate of the cost of the strings attached to the loans.

Sources and Uses of Foreign Exchange

We now present an account of sources and uses of foreign exchange as an aid to foreign exchange budgeting. The identification of the components of expenditure facilitates the choice of appropriate import

price deflators for each of the three main sources of foreign exchange.

Sources of Foreign Exchange

National Export Earnings

Value of Exports

plus	Incomes from Factors Employed Abroad.
minus	Imported Intermediate Commodity Inputs to Export Sectors.
minus	Remitted Profits of Export Sectors.
minus	Management Fees, Royalties, Licences and other Service Inputs.
minus	Retained Profits and Depreciation of Foreign Controlled Firms of Export Sectors.
minus	Salaries Remitted by Foreign Personnel Employed in all Sectors.
minus	Tax Accruing to Metropolitan Government

National Borrowing

Government Borrowing

from	Metropolitan Capital Markets
from	International Agencies

Government Borrowing - cont'd

from	Non-Resident Traditonal Savings Investment Accounts
from	Financial Intermediaries

Private Borrowing

from	Financial Intermediaries

Direct Foreign Investment

New Capital Inflow to Non-Resident Traditional S/IA/C

plus	New Capital Inflow to New Dynamic S/IA/C.
plus	New Capital Inflow to Traditional Residentiary S/IA/C.
plus	Retained Earnings and Depreciation of Non-Resident Traditional S/IA/C.
plus	Retained Earnings and Depreciation of New Dynamic S/IA/C.
minus	Loans to Government by Non-Resident Traditional S/IA/C.

Uses of Foreign Exchange

Imports

Consumer Goods

(a) competitive

(b) non-competitive

(a) essential

(b) luxury

Capital Goods

(a) competitive

(b) non-competitive

(a) essential

(b) luxury

Intermediate Goods and Services other than those for the Export Sectors

(a) competitive

(b) non-competitive

Remittance of Interest and Profit

Public Debt Service to

Metropolis

International Agencies

Remitted Profit and Interest of all Sectors other than Export Sectors

Retained Earnings of Foreign Controlled Firms not in Export Sector.

Capital Transferred from Non-Resident Saving Investment Accounts

Increase in Reserves on the part of :

Non-Resident Traditional Saving Investment Account

New Dynamic Saving Investment Account

Liquidation of Debenture Debt by New Dynamic Saving Investment Account

National Lendings

Net Capital Outlfow through Financial Intermediaries

Liquidation of Public Debt to Metropolis

Liquidation of Public Debt to International Agencies

Increase in Reserves of Currency Authority (positive or negative)

Increase in other Foreign Exchange Holdings of Public Sector (positive or negative)

Links Between Sources and Uses of Foreign Exchange

It is now possible to relate the three major sources of foreign exchange to the type of external expenditure towards which each is directed.

First, direct investment by foreign firms provides for the import of capital goods used by these firms. Insofar as a certain proportion of investment expenditure undertaken is in the form of local construction activity, these funds also finance the import of building materials associated with this activity, and the import-content of consumer expenditures of workers employed in construction.

Insofar as government loans from International Agencies, as we have defined them, are almost always provided to meet the foreign exchange costs of projects, these funds can be taken to cover certain intermediate and capital goods, and professional services. Funds obtained in the metropolitan capital market may cover imports of consumer goods as well, inasmuch as they are used to pay wages and to procure domestic inputs.

National Export Earnings thus provide for the remaining imported consumer, intermediate and capital goods. This is the basket of imports on which the price index relating to the National Capacity to Import has to be computed.

It is evident that the computation of the index of import prices relevant to the National Capacity to Import requires the disaggregation of the import bill. Admittedly, the exercise will, at best, produce only approximations. Yet these are undoubtedly more refined than the aggregate procedures conventionally employed.

Foreign Exchange Budgeting

It is easy to appreciate the advantage to be gained by setting out the sources and uses of foreign exchange as a series of budget items. Indeed, the usefulness of the approach has already been indicated with respect to the possibilities of increasing National Export Earnings and in evaluating the real gains from government borrowing.

We may now indicate its value in formulating policies with respect to the disposition of these earnings and in regard to national borrowing.

To begin with, expenditures on imports which are to be financed by export earnings and borrowing, are shown in categories which identify possibilities of conserving foreign exchange. Thus,

competitive imports can be substituted, and luxury imports can be eliminated.

The need for this, however, only arises if the amount and type of borrowing which is feasible and desirable, is insufficient to cover the gap between national export earnings and requirements of foreign exchange.

The criteria which determine the level of national borrowing are political as well as economic.

The former set limits on the degree of foreign participation judged to be consistent with national sovereignty. The latter include the extent, the timing, and the degree of certainity of returns from borrowed funds. These in turn depend on the amount of flexibility in the use of funds admitted by the terms of the borrowing.

DATE DUE

DUE	RETURNED
C MAY 2 - 1975	APR 30 1975
MAY 23 1975	JUN 12 1975
JUN 1 1977	JUN 2 1977
MAR 9 1978	
ILL MAR 16 1978	MAR 22 PAID
1981 MAY 26	JUL 23 1981
ILL ML	FEB 25 1985
FEB 23 1986	MAY 5 1986

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